City of San Diego
Development Services

ENTITLEMENTS DIVISION
(619) 446-5460

RECIRCULATED ENVIRONMENTAL IMPACT REPORT

Project No. 42891
SCH No. 2004101032

SUBJECT: **MASTER STORM WATER SYSTEM MAINTENANCE PROGRAM (Master Program):** ~~MASTER~~ SITE DEVELOPMENT (SDP) and COASTAL DEVELOPMENT PERMIT (CDP) for the long-term maintenance of storm water facilities maintained by the Storm Water Division (SWD) of the City of San Diego's Transportation and Storm Water Department (T&SWD). The storm water facilities include a series of natural and/or constructed drainage channels. The Master Program identifies the maintenance activities anticipated to be carried out for each storm water facility. The Master Program also establishes a series of protocols to be carried out during maintenance activities that are intended to minimize impacts related to soil and erosion, water quality, and wildlife disruption.

On an annual basis, the SWD would identify specific maintenance activities to be undertaken the next fiscal year which would then be subject to a Substantial Conformance Review (SCR) process to allow maintenance activities to proceed under the terms of the ~~master~~ permits. The SCR package would include an Individual Maintenance Plan (IMP), Individual Biological Assessment (IBA), Individual Historical Assessment (IHA), Individual Hydrologic and Hydraulic Assessment (IHHA), Individual Water Quality Assessment (IWQA), and Individual Noise Assessment (INA) prepared for each storm water facility prior to maintenance to evaluate the current capacity and the condition and extent of sensitive resources within the facility, and maintenance activity details such as method(s) and equipment to be used, maintenance requirements, and schedule. The SCR package would be evaluated by designated City departments as well as state and federal agencies to confirm that the proposed maintenance activities would be consistent with the Master Program, and that environmental impacts would be mitigated pursuant to the Mitigation Monitoring and Reporting Program. Following the SCR process, the specific maintenance activities would be authorized through one of three of the City's approval processes. If the maintenance activity is fully consistent with the Master Program and PEIR, Process One would apply. If a consistent activity would occur in the Coastal Zone, Process Two would apply. If the activity is not included in the Master Program and PEIR, Process Four would apply.

Applicant: City of San Diego, Transportation and Storm Water Department, Storm Water Division.

The City has prepared a Recirculated PEIR to address modifications to the Master Program which were made subsequent to preparation of the Final PEIR (referred to as the "original" PEIR) for this project dated March 17, 2010. This Recirculated PEIR also includes additional information that has become available since the public review of the original PEIR. Most notably, this Recirculated PEIR includes additional information on water quality effects which are derived from an analysis commissioned by the City after public review of the original PEIR.

Section 15088.5(a) of the CEQA Guidelines requires that an EIR be recirculated for an additional public review when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review, but before certification. Information, resulting in the need to recirculate an EIR can include changes in the project or environmental setting as well as additional data or other information. This recirculation is consistent with the requirements of Section 15088.5(a) of the CEQA Guidelines.

In addition, in accordance with CEQA Section 15088.5(f)(1), the City is requiring reviewers to submit new comments on the Recirculated PEIR. As the comments and associated responses to the original PEIR are included in Appendix A.2, the Final Recirculated PEIR will only include responses to comments submitted during the public review period for the Recirculated PEIR.

FINAL DOCUMENT OCTOBER 4, 2011:

In response to public review and City staff input during and subsequent to distribution of the Recirculated PEIR, minor revisions, clarifications or additions have been incorporated into the document which do not change the conclusions of the Final PEIR regarding the project's potential environmental impacts and required mitigation. The changes are indicated in strikeout/underline format. Additionally, in accordance with CEQA Section 15089, responses to comments received during the public review period of the Recirculated PEIR have been included in the Final PEIR, and are located immediately after the FEIR Table of Contents.

The primary changes and corrections contained in the Final PEIR are summarized below:

1. Section 4.3, Biology has been revised to modify the wetland mitigation ratios to conform to the City's Biological Guidelines. In addition, the PEIR acknowledges that creation of wetland habitat is a mandatory component of wetland mitigation, pursuant to the Biological Guidelines.

2. Chapter 1.0, Introduction of the Final PEIR and Chapter 7.0, Emergency Maintenance of the Master Program have been revised to clarify how the City will handle emergencies under the Master Program.

3. Two of the maintenance protocols in the Master Program have been refined. WQ-9 has been revised to more clearly identify when temporary check dams would be used. BIO-3 now includes a provision to assure that erosion control measures would not endanger wildlife.

4. The references to the Site Development and Coastal Development Permits being "master" permits have been removed to reflect the fact that once these City permits are utilized, they do not have a mandatory expiration date.

The City has determined that the additional information that clarifies, amplifies, or makes insignificant modifications does not require the Final PEIR to be recirculated for additional public review. None of the changes constitute significant new information, as defined in Section 15088.5 of the CEQA Guidelines. Specifically, the changes do not identify new significant impacts or an increase in the severity of the significant impacts previously identified. Furthermore, no feasible project alternatives or mitigation measures were identified during the public review period.

CONCLUSIONS:

This Recirculated Program Environmental Impact Report (PEIR) addresses the potential environmental effects of maintenance activities associated with the proposed Master Storm Water System Maintenance Program (Master Program). The proposed discretionary actions consist of a ~~Master~~ Site Development Permit (City of San Diego), ~~Master~~ Coastal Development Permit (City of San Diego), Section 404 Permit (U.S. Army Corps of Engineers [Corps]), Streambed Alteration Agreement (California Department of Fish and Game [CDFG]), and 401 Certification (California Regional Water Quality Control Board [RWQCB]). If surface discharges of water are involved, maintenance would require a Wastewater Discharge Permit from the RWQCB.

The Recirculated PEIR addresses modifications to the Master Program which were made subsequent to preparation of the Final PEIR, dated March 17, 2010 (hereafter referred to as the "original" PEIR). This Recirculated PEIR also includes additional information that has become available since the public review of the original PEIR. Most notably, this Recirculated PEIR includes additional information on water quality effects which were derived from an analysis commissioned by the City after public review of the original PEIR. A more detailed discussion of these changes is contained in Section 3.5, History of the Project, of the Recirculated PEIR.

In light of the changes to the Master Program, comments received on the original PEIR, and the additional water quality analysis, the City modified the original PEIR and ~~is~~ was ~~recirculating~~ recirculated ~~it~~ for an additional 45 days. Although not required by CEQA, the City included the responses to the comments received on the original PEIR ~~during the public review of the original~~ in the Recirculated PEIR to make this information readily available ~~during the review of the PEIR~~. These comments and corresponding responses are located in Appendix A.2 of the Recirculated PEIR.

In accordance with Section 15088.5(f)(1), the City ~~is requiring~~ required reviewers to submit new comments on the Recirculated PEIR. As the comments and associated responses to the original PEIR are included in Appendix A.2, the Final Recirculated PEIR ~~will~~ only includes responses to comments submitted during the public review period for the Recirculated PEIR.

The Recirculated PEIR addresses the following major environmental issues: aesthetics/neighborhood character, air quality, biological resources, historical resources, hydrology, land use, noise, paleontological resources, and water quality. Direct impacts with respect to biological resources, historical resources, land use policy, paleontological resources, and water quality are considered significant but mitigable. Direct impacts with respect to aesthetics/neighborhood character, air quality, greenhouse gas (GHG) emissions, hydrology, noise, and solid waste disposal are considered not significant. Cumulative impacts related to the following issues would be significant and unavoidable: aesthetics/neighborhood character, air quality, biological resources, GHG emissions, historical resources, paleontological resources, solid waste, and water quality.

SIGNIFICANT UNMITIGATED IMPACTS:

Aesthetics/Neighborhood Character (Cumulative)

The removal of well-developed riparian vegetation associated with natural drainages in order to improve the ability of these drainages to convey flood water would diminish the aesthetic value of the natural drainages. While the direct impact of maintenance on the aesthetic/neighborhood character value would be avoided by preserving mature trees spaced at least 50 feet apart during maintenance, the loss of wetland vegetation in combination with other future development in the City would result in an unavoidable significant cumulative impact, based on the conclusions of the City's General Plan PEIR.

Air Quality (Cumulative)

The proposed Master Program would generate nominal emissions for criteria pollutants but the levels would not exceed the thresholds for criteria pollutants. However, given the importance of air quality, the project would contribute to the cumulatively significant impacts identified in the General Plan EIR. Thus, the proposed project would have significant cumulative impacts with respect to criteria air pollutants which would be unavoidable.

Biological Resources (Cumulative)

The proposed project would result in the loss of wetland and upland habitat as well as associated sensitive plants and animals. Although measures are proposed to mitigate for the direct impacts of maintenance on biological resources, the proposed project would still contribute to the City-wide loss of biological resources anticipated by the General Plan PEIR. Thus, the cumulative impact to biological resources associated with the proposed project is considered cumulatively significant and unavoidable. This conclusion is consistent with the conclusion drawn in the City's General Plan PEIR relative to biological resources.

GHG Emissions (Cumulative)

The GHG emissions produced during maintenance would contribute to the cumulatively significant, unavoidable climate change impacts identified in the General Plan EIR. Thus, the proposed project would have significant cumulative impacts with respect to GHG emissions which would be unavoidable.

Historical Resources (Cumulative)

The proposed project could result in impacts to pre-historic resources located along or within natural drainage courses. Although measures are proposed to mitigate for the impacts to prehistoric resources, the degree to which these measures would be able to reduce cultural resource impacts is unknown. Thus, the cumulative impact to cultural resources associated with the proposed project is considered cumulatively significant and unavoidable. This conclusion is consistent with the conclusion drawn in the City's General Plan PEIR relative to cultural resources.

Paleontological Resources (Cumulative)

Although maintenance activities are not expected to often penetrate areas which exhibit a moderate to high potential for significant fossil deposits, impacts may still occur that would contribute to City-wide impacts. Thus, the project could have cumulatively significant impacts that would be unavoidable. This conclusion is consistent with the conclusion drawn in the City's General Plan PEIR relative to paleontological resources.

Solid Waste Disposal (Cumulative)

The majority of the vegetation and a portion of the sediment removed in the course of maintenance would be taken to local landfills for disposal. Combined with the demand created for landfill space by future development in the metropolitan area, the proposed maintenance activities would have a significant cumulative impact with respect to solid waste disposal. Maintenance protocols are included in the Master Program that would encourage recycling of vegetation, but some of the vegetation (most notably, Arundo) is too fibrous for recycling; in which case, landfill disposal would

be required. Thus, the project impacts with respect to solid waste disposal are considered significant and unavoidable. This conclusion is consistent with the conclusion drawn in the City's General Plan PEIR relative to solid waste.

Water Quality (Cumulative)

Storm water facility maintenance is expected to have both positive and negative impacts on water quality. Negative impacts on water quality would be associated with erosion and sedimentation during and following excavation activities, diminished contaminant removal capacity, introduction of hazardous materials related to the operation of mechanized equipment use (e.g., fuels, etc.), trash generation related to maintenance operations/crews, and the dewatering of dredged material. On the other hand, maintenance may have a positive effect on water quality. Removal of polluted sediment and plant material during maintenance would have a positive impact by removing pollutants that have bonded to these materials. The net effect of maintenance on water quality would be dependent on whether the loss of pollutant treatment capacity would be outweighed by the reduction in contaminants that would occur from excavation of contaminated sediment and plant material.

In light of the fact that cumulatively, potentially unavoidable, significant impacts on water quality were identified in the General Plan PEIR, the Master Program could result in significant cumulative water quality impacts that may be unavoidable.

RECOMMENDED ALTERNATIVES FOR REDUCING SIGNIFICANT UNMITIGATED IMPACTS:

Based on the requirement that alternatives meet most of the basic objectives of the proposed project and reduce significant impacts associated with the proposed project, the PEIR analyzes the alternatives which would reduce the need for regular maintenance of storm water facilities. These alternatives include:

- Raising the channel banks by constructing walls or berms along the top of the channels;
- Diverting storm water in pipes around constrained segments;
- Widening channels to accommodate vegetation; and/or
- Off-site Runoff Reduction.

In addition, the PEIR considers the following No Project Alternatives:

- No Project: No Maintenance Alternative; and
- No Project: Maintenance With Separate Permits Alternative.

Based on the analysis in the PEIR, the No Project: No Maintenance Alternative is considered the environmentally-preferred alternative because it would eliminate all impacts associated with the

proposed project. The Off-site Runoff Reduction Alternative would be the next environmentally preferred alternative but it is considered infeasible, as discussed below.

No Project: No Maintenance Alternative

Under this alternative, the City would not conduct any maintenance activities within the storm water system. Vegetation would grow unchecked within the channels and sediment would not be removed.

Although this alternative would avoid all impacts of the proposed project, the City rejected the alternative because it would not fulfill the basic objective to protect life and property from flooding. The overgrowth within the storm water facilities that would occur from lack of regular maintenance would impede flood waters and cause flooding.

No Project: Maintenance With Separate Permits Alternative

Under this alternative, storm water maintenance would occur pursuant to separate permits issued for individual maintenance projects, as it has been historically done in the City. In addition, a Master Program would not be adopted to guide future maintenance activities. Thus, no comprehensive maintenance protocols and individual technical assessments would be performed prior to maintenance.

This alternative would not result in a reduction of environmental maintenance because maintenance would still be performed. Other potential impacts related to aesthetics/neighborhood character, historical resources, land use policy, solid waste and water quality would be comparable to the proposed project.

Maintenance with separate permits was rejected by the City because it would not provide the comprehensive approach to maintenance which characterizes the proposed Master Program. State and federal agencies with jurisdiction over wetlands have all expressed concern about the way the City has conducted storm water maintenance in the past. Historically, the City has conducted maintenance under separate Streambed Alteration Agreements and Section 404 Permits. As a result, mitigation has been on a case by case basis. These agencies have also objected to the fact that separate permits do not allow consideration of cumulative effects of maintenance activities or the creation of larger more viable mitigation areas.

Raised Bank Alternative

Under this alternative, structures (e.g. levees or walls) would be added along the top of channels to allow them to contain vegetation without compromising their ability to convey flood waters. The structures would offset the effect of vegetation and sediment by allowing water elevations to increase without spilling out into adjacent developed areas. However, accumulation of sediment and vegetation would ultimately eliminate the increased flood capacity created by the structures. Channel-specific engineering would be undertaken to determine the additional "bank" height needed.

Although this alternative would potentially impact less wetlands, allow natural removal of urban pollutants to continue and generate less solid waste, the City rejected the alternative for factors related to impacts to wildlife habitat, cost, visual quality, public safety, and the temporary nature of the solution. With respect to wildlife habitat, the structures along storm water facilities would have an adverse impact on wildlife by making it more difficult for upland wildlife to access the channels for water, food and cover. Walling off the storm water facilities would also have an adverse visual impact. With respect to public safety, allowing the channels to fill with sediment could block side drains that empty into the channels which could cause water to back up and flood adjacent public and/or private properties. This accumulation of sediment would likely eventually offset the additional capacity created by the structures.

With respect to financial feasibility, the cost of designing and constructing structures along existing drainage facilities would be substantial. In addition, the cost would be increased by the need to acquire private property to construct the structures. Given the number of miles of drainage channels within the City, the cost of increasing flood capacity by constructing walls or levees is considered infeasible. Funding would be required to design and construct these structures. Council Policy 800-04 (Drainage Facilities) states that all projects with significant or total funding by the City shall be specifically identified and scheduled in the Capital Improvement Program (CIP). Council Policy 800-14 (Prioritizing CIP Projects) outlines the prioritization and funding policy for which projects compete. The prioritization process allows for the analytical comparison of the costs and benefits of individual project as well as providing an opportunity to evaluate projects against one another on their relative merits. This alternative would, therefore, compete with other CIP projects for funding and implementation. Construction could be delayed indefinitely until funding is available while the need to maintain facilities would still exist. Also, due to the uncertainty associated with the ultimate approval of these structures as a CIP project, this alternative is considered infeasible.

Channel By-Pass Alternative

This alternative would involve construction of underground pipes that would divert some or all of the runoff around a channel segment to allow the channel to be naturally vegetated. Channel-specific engineering would be undertaken to determine the location and sizing of by-pass pipes to assure that vegetated channel segments can continue to support vegetation without resulting in flooding.

Although this alternative would be the next environmentally-preferred alternative (after the No Maintenance Alternative) because it could potentially result in reduced impacts related to wetlands, water quality and solid waste disposal, the City rejected the alternative as financially infeasible. As with the Raised Bank Alternative, the cost of constructing the by-pass pipes would be high. Beyond the cost of acquiring easements, adjacent development would make it difficult to construct by-pass pipes without impacting structures including homes and businesses. Condemning structures would further add to the cost of the by-pass alternative. As discussed with the Raised Bank Alternative, pursuant to Council Policy 800-14, this alternative would compete with other CIP projects for funding and implementation. Construction could, therefore, be delayed indefinitely until funding is available, or never occur because the by-pass structures would not be approved as a CIP project.

In addition, this alternative would not be effective in the long-term because accumulation of sediment in the main channel would likely eventually offset the additional capacity created by the by pass. Given these cost factors, accommodating flood waters with by-pass pipes is considered infeasible. Lastly, by-pass pipes could physically impact or burden adjacent property owners related to construction of pipelines and/or easement acquisition.

Widened Channel Alternative

Under this alternative, the configuration of channels would be modified to increase the volume capacity of the channel. The goal of increasing the channel volume would be to enable vegetation to exist in the channel without causing flooding. Channel-specific hydraulic analysis would be undertaken to determine the additional width needed. In most cases, the capacity would likely be increased by widening the cross-section of the channel. Increasing the depth of the channel would also increase capacity but is expected to be difficult to achieve in most cases due to constraints imposed by the slope limitations on the channel banks and maintaining downstream gradients.

Allowing vegetation to remain in the widened channels would reduce the impact of maintenance on water quality and solid waste. The vegetation remaining within the channels would allow the natural process of urban pollutant control to continue. This alternative would also reduce the long-term impact on solid waste disposal. Although the initial widening effort would generate plant material requiring offsite disposal, subsequent clearing and related disposal would be reduced in the long-term.

Although this alternative would allow vegetation to remain over some portion of the widened channels without periodic maintenance, the initial widening would impact the same amount of vegetation as the full maintenance approach. However, since a portion of the vegetation within a widened channel would be allowed to remain during future maintenance, the long-term impact of maintenance on wetland habitat would be reduced. Also, as with the proposed project, the actions within channels would not result in the permanent loss of the channels themselves.

The City considers this to be an infeasible alternative to the proposed Master Plan for social and economic reasons. With respect to economic feasibility, the cost of designing and widening existing drainage facilities would be substantial. In addition, the cost would be increased by the need to acquire private property to accommodate widening. As discussed with the Raised Bank Alternative, pursuant to Council Policy 800-14, this alternative would compete with other CIP projects for funding and implementation. Construction could, therefore, be delayed indefinitely until funding is available, or never occur because the widening would not be approved as a CIP project. With respect to social issues, as with the other alternatives, widening of the channels would impact adjacent homes as businesses through the loss of property and/or the need to complete relocation.

Off-Site Runoff Reduction Alternative

The Off-site Runoff Reduction Alternative would involve implementing low impact development (LID) Best Management Practices and Integrated Management Practices (BMPs/IMPs) within the affected watersheds to substantially reduce associated runoff generation and flows into storm water facilities included in the Master Program. The use of LID BMPs/IMPs could involve: (1) reducing impervious surfaces through the use of vegetation or permeable pavement, and reducing impervious surfaces and compaction in landscaped and open space areas; (2) directing runoff into pervious areas (e.g., landscaping); (3) directing runoff into engineered IMP sites (e.g., bioretention facilities, planter boxes, cisterns or infiltration facilities); and/or (4) creating self-contained/self-treating drainage management areas (DMAs) such as green roofs or basins.

This alternative would, by nature, be implemented in areas outside the storm water facilities. The Off-site Runoff Reduction Alternative would target retrofitting LID BMPs/IMPs in applicable existing developed areas because sites with new development are already subject to storm water standards requiring the use of LID BMPs/IMPs.

To the extent this alternative would be able to minimize or eliminate the need for removing vegetation and sediment to improve floodwater conveyance, this alternative would reduce impacts of the proposed Master Program related to aesthetics/neighborhood character, biological resources, cultural resources and water quality. Cumulative aesthetic/neighborhood character impacts would be lessened by reducing the number of trees that require removal to improve conveyance of flood water. Similarly, the ability to leave wetland vegetation within the storm water facilities, due to reductions in storm runoff, would proportionately reduce impacts to biological resources related to the proposed Master Program. Lastly, the LID BMPs/IMPs would reduce the urban pollutants reaching the storm water facilities, and minimize the impacts of storm water facility maintenance on the ability of the storm water facilities to remove water-born pollutants.

Although the Off-site Runoff Reduction Alternative could potentially result in fewer impacts to aesthetic/neighborhood character and biological resources, it was rejected by the City as financially infeasible and posing a burden on adjacent property owners. The cost of constructing and maintaining adequate LID BMPs/IMPs to generate a meaningful reduction in runoff, while

unknown, would likely be high due to the anticipated extensive nature of BMPs/IMPs that would be required. In addition to construction and long-term maintenance costs, the City would incur additional costs related to acquiring private property/easements for the placement of BMPs/IMPs. In addition to cost and acquisition issues, the timing associated with a substantial reduction of off-site surface water generation is problematic. Although future development projects are required to incorporate LID concepts, the rate at which this occurs is likely to be extremely protracted, given today's economic conditions. Thus, it may take decades for enough new development to incorporate LID concepts to result in a substantial reduction in storm water runoff and the associated maintenance activities. Based on these considerations, the Off-site Runoff Reduction Alternative is considered infeasible as a stand-alone alternative to the proposed Master Program.

MITIGATION, MONITORING AND REPORTING PROGRAM INCORPORATED INTO THE PROJECT:

A series of mitigation measures are identified in the PEIR to reduce environmental impacts. These measures are summarized below. The detailed mitigation measures are contained in Chapter 11 of the PEIR.

LAND USE (DIRECT)

Implementation of the following mitigation measures would reduce impacts related to maintenance noise impacts on sensitive birds protected under the City's Environmentally Sensitive Lands Regulation to below a level of significance.

Mitigation Measure 4.1.1 requires verification that all MHPA boundaries and limits of work have been delineated on all maintenance documents.

Mitigation Measure 4.1.2 requires a qualified biologist to survey areas suspected to serve as habitat (based on historical records or site conditions) for state- or federally-listed sensitive birds ~~covered by the MSCP~~.

Mitigation Measure 4.1.3 requires, if a listed species is located within 500 feet of a proposed maintenance activity and maintenance would occur during the associated breeding season, an analysis of the noise generated by maintenance activities to identify the location of the 60 dB(A) Leq noise contour and identify measures to be undertaken during maintenance to reduce noise levels.

Mitigation Measure 4.1.4 requires the Project Biologist to determine if maintenance has the potential to impact breeding activities of listed species. If impacts could occur, maintenance, maintenance would be restricted during the breeding season unless maintenance is required to protect life and property.

Mitigation Measure 4.1.5 requires, if maintenance cannot be avoided during the breeding season for a listed bird, monitoring the nearby breeding bird activities by a qualified acoustician and biologist to determine the effectiveness of noise attenuation measures. If the noise attenuation is

determined to be inadequate, the associated maintenance activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season of the subject species.

Mitigation Measure 4.1.6 requires a pre-maintenance meeting where the Project Biologist to discuss the sensitive nature of the adjacent habitat with the crew and subcontractor. The area of maintenance would be clearly delineated before the meeting.

Mitigation Measure 4.1.7 requires maintenance plans be designed to avoid the use of invasive plants, control lighting, delineate disturbance areas and limits of work, ~~and~~ manage trash, and comply with policies in the City's Subarea Plan related to maintenance of roads and utilities.

Mitigation Measure 4.1.8 requires the Multi-Habitat Planning Area (MHPA) boundaries and measures to protect coastal California gnatcatchers be shown on the maintenance plans.

BIOLOGICAL RESOURCES (DIRECT)

Implementation of the following mitigation measures would reduce impacts related to sensitive biological resources to below a level of significance.

Mitigation Measure 4.3.1 requires an IBA be prepared based on the IMP prior to commencing maintenance to quantify the impacts to biological resources based on the MMRP, prior to commencing maintenance.

Mitigation Measure 4.3.2 prohibits initiation of maintenance activities before the City's Assistant Deputy Director (ADD) Environmental Designee and state and federal agencies with jurisdiction over maintenance activities have approved the IMPs and IBAs including required mitigation for each of the proposed activities.

Mitigation Measure 4.3.3 prohibits any maintenance activities until the City's ADD Environmental Designee and Mitigation Monitoring Coordinator (MMC) have approved the qualifications of the biologists who will monitor maintenance activities which may impact sensitive biological resources.

Mitigation Measure 4.3.4 requires creation of a mitigation account to ensure sufficient funds to implement all biological mitigation required for the proposed maintenance activities.

Mitigation Measure 4.3.5 requires evidence of compliance with other permitting authorities, if applicable, before maintenance begins.

Mitigation Measure 4.3.6 requires a pre-maintenance meeting be held with the maintenance workers and the monitoring biologist to review mitigation measures included in the IBA.

Mitigation Measure 4.3.7 requires the monitoring biologist to submit a letter report within three months of the end of maintenance describing the monitoring activities and any remedial measures taken to mitigate biological impacts associated with each maintenance activity. Within 90 days of receiving comments on the draft monitoring report, one copy of the final monitoring report shall be submitted to the MMC.

Mitigation Measure 4.3.8 requires the monitoring biologist to submit an annual summary of the monitoring activities and any remedial measures taken to minimize biological impacts within six months of the end of the annual storm water facility maintenance program.

Mitigation Measure 4.3.9 requires mitigation for wetland impacts to occur within the same watershed as the impact, unless no suitable location exists within the watershed. Mitigation sites are chosen based on best mitigation value. In addition, mitigation plans must be prepared prior to any maintenance activity that could impact significant biological resources. These plans must identify success criteria and include a maintenance and monitoring program to assure that the success criteria are met. Mitigation will be accomplished through one or a combination of the following methods: enhancement, restoration, creation, or mitigation credit acquisition. Specific mitigation ratios must be in accordance with Table 4.3-10 of PEIR.

Mitigation Measure 4.3.10 requires a wetland mitigation plan be prepared in accordance with the Conceptual Wetland Restoration Plan contained in Appendix H of the Biological Technical Report, included as Appendix D.3 of the PEIR.

Mitigation Measure 4.3.11 requires impacts to upland vegetation be compensated through payment into the City's Habitat Acquisition Fund, habitat preservation, or purchase of suitable mitigation credits. Specific mitigation ratios must be in accordance with Table 4.3-11 of the PEIR. The upland mitigation must occur within six months of the date the related maintenance has been completed.

Mitigation 4.3.12 requires impacted, occupied coastal California gnatcatcher habitat be compensated through acquisition of suitable habitat or mitigation credits at a ratio of 1:1. The mitigation must take place within the MHPA and must be accomplished within six months of the date maintenance is completed.

Mitigation Measure 4.3.13 requires the monitoring biologist to confirm that mitigation actions (e.g., sensitive resource fencing, noise attenuation measures and equipment setbacks) have been adequately implemented before maintenance begins and monitor maintenance activities, when required.

Mitigation Measure 4.3.14 requires the City to conduct an environmental review of the proposed mitigation plan in accordance with CEQA and implement any mitigation measures needed to reduce impacts on biological resources resulting from offsite mitigation

Mitigation Measure 4.3.15 requires impacts to listed or endemic sensitive plant species to be offset through implementation of one or combination of: salvage and relocation; seed collection and replanting off site; and/or preservation of offsite populations.

Mitigation Measure 4.3.16 requires specific distance setbacks for maintenance activities from habitat and/or nests associated with sensitive animals.

Mitigation Measure 4.3.17 restricts clearing, grubbing, or grading during the breeding season of sensitive bird species.

Mitigation Measure 4.3.18 requires that a qualified biologist submit evidence to the ADD and any applicable resource agency which demonstrates whether or not sensitive breeding birds could be present, triggering the requirement for implementation of mitigation measure 4.3-20.

Mitigation Measure 4.3.19 requires the presence of sensitive birds be assumed if suitable habitat may be affected by maintenance noise but specific surveys are not conducted. In this event, the City would comply with Mitigation Measure 4.3-20.

Mitigation Measure 4.3.20 specifies that, if no surveys are completed and no sound attenuation devices are installed, maintenance activities that would generate more than 60dB(A) L_{eq} within the habitat requiring protection shall cease for the duration of the breeding season of the appropriate species and a qualified biologist shall establish a limit of work.

Mitigation Measure 4.3.21 requires a pre-maintenance survey for raptor nests if maintenance occurs during the raptor breeding season (January 15 to August 31). If active raptor nests are found, maintenance is prohibited within distances which are specific to the affected raptor until any fledglings have left the nest.

Mitigation Measure 4.3.22 requires trees and/or grasslands supporting active raptor nests not be removed until after the breeding season or until the young have fledged.

Mitigation Measure 4.3.23 requires avoidance or minimization measures when maintenance activities occur at known localities for listed fish species or within suitable habitat for other highly sensitive aquatic species (i.e., southwestern pond turtle).

Mitigation Measure 4.3.24 requires the boundaries of listed and/or narrow endemic plants, to be clearly delineated with flagging or temporary fencing that must remain in place for the duration of the activity.

Mitigation Measure 4.3.25 precludes maintenance within or adjacent to avian nesting habitat during breeding season (January 15 to August 31) unless postponing maintenance would result in a threat to human life or property.

HISTORICAL RESOURCES (DIRECT)

Implementation of the following mitigation measures would reduce impacts to significant historical resources, which may be encountered in the course of maintenance activities, to below a level of significance.

Mitigation Measure 4.4.1 requires an Individual Historical Assessment (IHA) prior to any maintenance activity for any maintenance area determined to have a moderate to high potential for the occurrence of important historical resources. If such a potential exists, an IHA would be prepared to determine if significant historic resources could be affected, whether the impacts are covered in the PEIR, and identify required preservation or salvage actions from the MMRP.

Mitigation Measure 4.4.2 requires preparation of a phased research design and data recovery program (up to 15 percent sample) for any significant historical resources which may be impacted by maintenance, and summarized in a final results report.

Mitigation Measure 4.4.3 requires monitoring and implementation of historical protection or mitigation measures set forth in the IHA for specific maintenance activities.

PALEONTOLOGICAL RESOURCES (DIRECT)

Implementation of the following mitigation measure would reduce impacts to significant paleontological resources, which may be encountered in the course of maintenance activities, to below a level of significance.

Mitigation Measure 4.7.1 requires monitoring during maintenance activities where the potential exists for subsurface paleontological resources. The monitoring paleontologist shall have the authority to redirect maintenance away from any subsurface resources which are encountered to allow recovery of important scientific information associated with those resources. Draft and final reports shall be submitted to summarize the results of any recovery programs.

WATER QUALITY (DIRECT)

Implementation of the following mitigation measure would reduce impacts to significant water quality, which may be encountered in the course of maintenance activities, to below a level of significance.

Mitigation Measure 4.8.1 requires a qualified water quality specialist to prepare an Individual Water Quality Assessment (IWQA) for the IMP. Mitigation measures would be required to be incorporated into IMPs for specific pollutants when the existing levels of those pollutants exceed, or are within 25 percent of, standards established in the San Diego Basin Plan.

Mitigation Measure 4.8.2 prohibits maintenance activities before the ADD Environmental Designee and state and federal agencies with jurisdiction over maintenance activities have approved the IMPs and IWQAs as well as confirming that mitigation measures, BMPs and protocols have been incorporated into the IMP, as appropriate.

Mitigation Measure 4.8.3 requires a pre-maintenance meeting whenever the IHHA indicates significant water quality impacts may occur. At this meeting, the water quality specialist will identify and discuss mitigation measures, protocols and BMPs that must be carried out during maintenance.

RESULTS OF PUBLIC REVIEW:

( ) No comments were received during the public input period.

( ) Comments were received but did not address the accuracy or completeness of the Recirculated draft Environmental Impact Report (EIR). No response is necessary and the letters are attached at the end of the EIR.

(X) Comments addressing the accuracy or completeness of the Recirculated draft Environmental Impact Report (EIR) were received during the public input period. The letters and responses are located immediately after the Table of Contents.

Copies of the Recirculated Draft PEIR, the Mitigation Monitoring and Reporting Program and any technical appendices may be reviewed in the office of the Entitlements Division, or purchased for the cost of reproduction.

Cecilia Gallardo, AICP
Assistant Deputy Director

June 14, 2011
Date of a Recirculated Draft Report

October 4, 2011
Date of a Recirculated Final Report

Analyst: Myra Herrmann

PUBLIC REVIEW:

The following individuals, organizations, and agencies received a copy or notice of the draft PEIR and were invited to comment on its accuracy and sufficiency:

Federal Agencies
U.S. EPA (19)
U.S. Border Patrol (22)
U. S. Fish and Wildlife Service (23)
U. S. Army Corps of Engineers (26)

Military
Naval Facilities Engineering Command, SW Division, Environmental Planning (12)
MCAS Miramar (13)

State of California

Departments
Department of Transportation, District 11 (31)
California Transportation Commission, Attention: Susan Bransen
1120 N Street, MS 52, Sacramento, CA 95814
Department of Fish and Game (32)
Toxic Substance Control (39)
Department of Parks and Recreation (40)
Water Resources (45)
State Clearinghouse (46A)

Agencies
Resources Agency (43)
Regional Water Quality Control Board, Region 9 (44)
California Environmental Protection Agency (37A)

Commissions/Boards
California Coastal Commission (47)
California Transportation Commission (51A)
Native American Heritage Commission (56)
Water Resources Control Board (55)

San Diego County
Department of Planning and Land Use (68)
Department of Parks and Recreation (69)
Department of Public Works (72)
Department of Environmental Health (75/76)
Air Pollution Control District (65)

City of San Diego
Office of the Mayor (91)
Council President Young, District 4 (MS 10A)
Councilmember Lightner, District 1 (MS 10A)

Councilmember Faulconer, District 2 (MS 10A)
Councilmember Gloria, District 3 (MS 10A)
Councilmember DeMaio, District 5 (MS 10A)
Councilmember Zapf, District 6 (MS 10A)
Councilmember Emerald, District 7 (MS 10A)
Councilmember Alvarez, District 8 (MS 10A)
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Departments
Development Services Department
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LDR Engineering - Don Weston (MS 501)
LDR Planning – Gary Geiler (MS 501)
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MSCP Reviewer – Kristen Forburger (MS 5A)
Facilities Financing – Tom Tomlinson (MS 606F)
Jeff Harkness (MS 5A)
Park and Recreation Department (89)
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Environmental Services Department (80)
Lisa Wood (MS 1102A)
Public Utilities Department
Nicole McGinnis (MS 906)
Keli Balo (MS 901)
Library Gov't Documents Department (81 & 81A)
Governmental Relations Department (MS 51M)
Real Estate Assets Department (85)
Engineering and Capital Projects Department (86)
Kerry Santoro, Project Officer II (MS 908A)
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Kris McFadden, Deputy Director
Gus Brown,
Anne Jarque, Senior Planner (MS 44)
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City Agencies
Redevelopment Agency (MS 904)
Southeastern Economic Development Corporation (SEDC) (448)
Centre City Development Corporation (MS 51-D)
Housing Commission (MS 49N)

Advisory Boards
Historical Resources Board (87)
Community Forest Advisory Board (90)
Wetland Advisory Board (91A)

Advisory Committees
Mission Bay Park Committee (320)
Balboa Park Committee (MS 35)

Libraries (NOTICE ONLY)
Balboa Branch Library (81B)
Beckwourth Branch Library (81C)
Benjamin Branch Library (81D)
Carmel Mountain Ranch Branch (81E)
Carmel Valley Branch Library (81F)
City Heights/Weingart Branch Library (81G)
Clairemont Branch Library (81H)
College-Rolando Branch Library (81I)
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La Jolla/Riford branch Library (81L)
Linda Vista Branch Library (81M)
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North Park Branch Library (81T)
Oak Park Branch Library (81U)
Ocean Beach Branch Library (81V)
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Ron Christman (215)
Louie Guassac (215A)
Clint Linton (215B)
Kumeyaay Cultural Repatriation Committee (225)
Kumeyaay Cultural Heritage Preservation
Native American Bands and Groups (225A - S) NOTICE ONLY

Other Agencies
San Diego Association of Governments (108)
Sempra (114)
Metropolitan Transit Systems (115)
Otay River Park Joint Powers Authority
5201 Ruffin Road, Suite P, San Diego, CA 92123
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Community Groups, Associations, Boards, Committees and Councils
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RVR PARC (423)
Beeler Canyon Conservancy (436)
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Mission Trails Regional Park (465)
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Friends of Rice Canyon
Friends of Switzer Canyon
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San Diego Canyons Coalition

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Mactec
Rick Engineering
Susan Wynn, Cooley LLP.
Coastal Environmental Rights Foundation

School Districts (NOTICE ONLY)
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MASTER STORM WATER SYSTEM MAINTENANCE PROGRAM

FINAL RECIRCULATED PROGRAM ENVIRONMENTAL IMPACT REPORT

SCH. NO. 2004101032
PROJECT NO. 42891

OCTOBER 2011

Prepared for:

City of San Diego
Transportation & Storm Water Department
Storm Water Division
2781 Caminito Chollas
San Diego, CA 92123

Master Storm Water System Maintenance Program
Final Recirculated Program Environmental Impact Report

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LIST OF ACRONYMS

The following list of acronyms used within this Program Environmental Impact Report is provided for the reader's reference.

ADD	Assistant Deputy Director
ADRP	Archaeological Data Recovery Program
AMSL	above mean sea level
APE	Area of Potential Effect
ARDDRP	Archaeological Research Design and Data Recovery Program
Basin Plan	Water Quality Control Plan for the San Diego Basin
BAT	best available technology economically achievable
BCH	beach
BCT	best conventional pollutant control technology
BI	Building Inspector
BMI	Benthic Macroinvertebrate
BMPs	Best Management Practices
BOD	biological oxygen demand
BS	broom baccharis scrub
CAM	cismontane alkali marsh
CBM	coastal brackish marsh
CDFG	California Department of Fish and Game
CDP	Coastal Development Permit
CEQA	California Environmental Quality Act
CH_4	methane
City	City of San Diego
CLOW	coast live oak woodland
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO_2	carbon dioxide
COD	chemical oxygen demand
Corps	U.S. Army Corps of Engineers
CSCS	coastal sage-chaparral scrub
CSM	coastal saltmarsh
CSVR	Consultant Site Visit Record
CWA	federal Clean Water Act
dB	decibel
dB(A)	A-weighting decibel
DCSS	Diegan coastal sage scrub
DEV	developed land
DH/RUD	disturbed habitat/ruderal
DSD	Development Services Department
DW	disturbed wetland
EAS	Environmental Analysis Section
ERM	Environmental Review Manager

LIST OF ACRONYMS (cont.)

ESL	Environmentally Sensitive Lands
EW	eucalyptus woodland
FWM	freshwater marsh
General Plan	City of San Diego Progress Guide and General Plan
gpd	gallons per day
HELIX	HELIX Environmental Planning, Inc.
HRG	City of San Diego's Historical Resources Guidelines
HU	Hydrologic Unit
HUD	U.S. Department of Housing and Urban Development
IBA	Individual Biological Assessment
IHA	Individual Historical Assessment
IHHA	Individual Hydrology and Hydraulic Assessment
IMP	Individual Maintenance Plan
INA	Individual Noise Assessment
IWQA	Individual Water Quality Assessment
JURMP	Jurisdictional Urban Runoff Management Plan
L_{dn}	artificial decibel increment added to quiet time noise levels in a 24-hour noise descriptor
L_{eq}	noise equivalent level
LCP	Local Coastal
LID	Low Impact Development Plan
LUP	Land Use Plan
MBTA	Migratory Bird Treaty Act
MC	Maintenance Contractor
MEP	maximum extent practicable
MFS	mule fat scrub
MHPA	Multi-Habitat Planning Area
MLD	Most Likely Descendent
MM	Maintenance Manager
MMC	Mitigation Monitoring Coordinator
MMRP	Mitigation Monitoring and Reporting Plan
MSCP	Multiple Species Conservation Program
MSWSMP	Master Storm Water System Maintenance Program
N_2O	nitrous oxide
NAHC	Native American Heritage Commission
NCCP	Natural Communities Conservation Planning
NFC	City natural flood channel
NHPA	National Historic Preservation Act

LIST OF ACRONYMS (cont.)

NNG	non-native grassland
NNV/ORN	non-native vegetation/ornamental
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
ODS	other drainage systems
PEIR	Program Environmental Impact Report
PI	Principal Investigator
Porter-Cologne Act	State Porter-Cologne Water Quality Act
PRC	Public Resources Code
RE	Resident Engineer
RS	riparian scrub
RSWFI	Routine Storm Water Facility Inspection
RURMP	Regional Urban Runoff Management Plan
RW	riparian woodland
RWQCB	Regional Water Quality Control Board
SCR	Substantial Conformance Review
SDP	Site Development Permit
SFD	southern foredunes
SMC	southern mixed chaparral
SNI	Service Notification Inspection
SOC	scrub oak chaparral
SPI	Storm Patrol Inspection
SRF	southern riparian forest
SRW	southern sycamore riparian woodland
STM/OW	streambed/open water
SUSMP	Standard Urban Storm Water Mitigation Plan
SWD	City of San Diego, Storm Water Division
SWPPP	Storm Water Pollution Prevention Plan
SWQCB	State Water Quality Control Board
SWRCB	State Water Resources Control Board
SWS	southern willow scrub
SWSAS	Storm Water Sampling and Analysis Strategy
T&SD	Transportation and Storm Water Department
TDS	total dissolved solids
TMDL	total maximum daily load
TSS	total suspended solids
URMP	Urban Runoff Management Plan
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WDR	Wastewater Discharge Regulations
WURMP	Watershed Urban Runoff Management Plan
WUS	Waters of the U.S.

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RESPONSES TO COMMENTS

LIST OF PERSONS, ORGANIZATIONS, AND PUBLIC AGENCIES THAT COMMENTED ON THE DRAFT ENVIRONMENTAL IMPACT REPORT (EIR)

A draft version of this EIR was circulated for public review from June 14, 2011 through July 29, 2011. The following is a listing of the names and addresses of persons, organizations, and public agencies that commented during this public review period.

LETTER DESIGNATION	NAME	ADDRESS
STATE AGENCY		
A	Fish and Game, Department of	3383 Ruffin Road San Diego, CA 92123
B	Governor's Office of Planning and Research, State Clearinghouse and Planning Unit	
C	Native Heritage Commission	915 Capitol Mall, Room 364 Sacramento, CA 95814
D	Parks and Recreation, Department of	
E	Parks and Recreation, Department of, Tijuana River National Estuarine Research Reserve	301 Caspian Way Imperial Beach, CA 91932
F	Toxic Substances Control, Department of	5796 Corporate Center Cypress, CA 90630
G	Water Resources Board, Regional Water Quality Control Board	
SPECIAL INTEREST/ORGANIZATIONS		
H	California Native Plant Society	PO Box 121390 San Diego, CA 92112
I	Coast Law Group	1140 South Coast Highway 101 Encinitas, CA 92024
J	Fairmont Park Neighborhood Association	1829 Parrot Street San Diego, CA 92105
K	Friends of Rose Canyon	PO Box 221051 San Diego, CA 92192
L	Friends of Rose Creek	4629 Cass Street, Suite 188 San Diego, CA 92109
M	Los Penasquitos Lagoon Foundation	PO Box 940 Cardiff by the Sea, CA 92007
N	San Diegans for Open Government	c/o Briggs Law Corporation 814 Morena Blvd., Suite 107 San Diego, CA 92117
O	San Diego Audubon Society	4010 Morena Blvd., Suite 100 San Diego, CA 92117

LETTER DESIGNATION	NAME	ADDRESS
P	San Diego Canyonlands	3552 Bancroft Street San Diego, CA 92104
Q	San Diego Coastkeeper	2825 Dewey Road, Suite 200 San Diego, CA 92106
R	San Diego County Archaeological Society, Inc.	P.O Box 81106 San Diego, CA 92138-1106
S	San Diego Wetlands Advisory Board	600 B Street, Suite 800 San Diego, CA 92101
GENERAL PUBLIC		
T	Cal Sorento, Ltd.	10951 Sorrento Valley Road, Suite 2-H San Diego, CA 99191
U	Gabaldon, John	
V	Johnston, Kevin	
W	Kay, Isabel	
X	Little, Robert	
Y	Steinbach, Joseph	
Z	Wood, Don	

State of California -The Natural Resources Agency
DEPARTMENT OF FISH AND GAME
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
(858) 467-4201
www.dfg.ca.gov

EDMUND G. BROWN, Jr. Governor
JOHN McCAMMAN, Director

July 29, 2011

Ms. Myra Herrmann
City of San Diego
Development Services Center
1222 First Avenue, MS 501
San Diego, CA 92101

Subject: Department of Fish and Game comments on the Recirculated Draft Program Environmental Impact Report for the Master Storm Water System Maintenance Program (Project No. 42891; SCH# 2004101032)

Dear Ms. Herrmann:

The California Department of Fish and Game (Department) has reviewed the Recirculated Draft Program Environmental Impact Report (PEIR) for the Master Storm Water System Maintenance Program (MSWSMP), dated June 2011. The Department previously provided written comments (dated August 26, 2009) during the public review period for the draft PEIR, along with providing Response to Comments (dated May 5, 2010) for the Final PEIR. The comments provided herein are based on information provided in the recirculated draft PEIR and associated documents (including the Biological Technical Report, prepared by Helix Environmental Planning, Inc., dated May 2011), our knowledge of sensitive and declining vegetation communities in the County of San Diego, and our participation in regional conservation planning efforts.

The Department is a Trustee Agency and a Responsible Agency pursuant to the California Environmental Quality Act (CEQA Guidelines §§15386 and 15381, respectively) and is responsible for ensuring appropriate conservation of the state's biological resources, including rare, threatened, and endangered plant and animal species, pursuant to the California Endangered Species Act (Fish and Game Code §2050 et seq.) and other sections of the Fish and Game Code (1600 et seq.). The Department also administers the Natural Community Conservation Planning (NCCP) Program. The City of San Diego (City) participates in the NCCP program by implementing its approved Multiple Species Conservation Program (MSCP) Subarea Plan (SAP).

Conserving California's Wildlife Since 1870

Ms. Myra Herrmann
July 29, 2011
Page 2 of 6

The Department appreciates the efforts that the City has made at this stage during the environmental review process to minimize the potential adverse biological impacts from the MSWSMP. We offer the following supplemental recommendations and comments to assist the City in avoiding, minimizing, and adequately mitigating project related impacts to biological resources, and to ensure that the project is consistent with ongoing regional planning efforts.

A.1

1. The Department previously emphasized the need for the PEIR to incorporate the wetland mitigation ratios provided in the City's Biology Guidelines (i.e., Table 2). Table 4.3-10 in the recirculated draft PEIR continues to reflect a number of ratios that are lower than those provided in Table 2 of the Biology Guidelines. The Department cited Section 9.12 (Mitigation Guidelines) of the MSCP Implementing Agreement (IA), which identifies that the Biology Guidelines will apply to all new private and public land development projects within the SAP which are subject to the City's jurisdiction. The City's Municipal Code definition of development includes clearing, grubbing, excavating, embanking, filling or managing brush, and based on the description of the Proposed Project, these aforementioned activities would occur under it. While such activities do not always trigger the application of the City's Environmentally Sensitive Lands Regulations (ESL), we do not concur with the City's prior conclusions that channel maintenance is fundamentally different from traditional types of development for which the MSCP and Biology Guideline ratios were developed. The recirculated draft PEIR is currently silent on this issue; therefore we request further discussion/guidance as to the City's position for deferring to lower wetland mitigation ratios for MSWSMP projects (See comment #3).

A.2

2. In a letter prepared by Weston Solutions (March 9, 2011; Appendix D.4) to the City of San Diego, Weston Solutions referenced data from a restoration project at Forester Creek and subsequently used this data to draw a conclusion in regards to potential adverse effects to benthic macroinvertebrates. Weston Solutions stated that "By June 2008, the BMI community had recovered to similar or better conditions than was seen pre-restoration. Notably, the Downstream Site has an IBI score that rated the site "unimpaired" (albeit by a single point and within the margin of error), …it is our conclusion that maintenance activities associated with storm water facility maintenance would result in short-term impacts to the BMI but the degree of impact would not be considered significant."

   We are unsure how definitive this conclusion is given the limited 2008 post-restoration data that was presented in the Weston Solutions letter. Due to site specificity (pesticides, metals and other unique system characteristics) each site may differ based on historical contaminants which may be present. Disruptions (e.g., channel clearing) could cause historical contaminant

A.1 In order to fully conform to the City's Biology Guidelines and the MSCP Implementing Agreement, the mitigation ratios contained in Table 4.3-10 of the Final PEIR have been revised to reflect the ratios identified in the Table 2 of the Biology Guidelines. Table 4.3-10 was also revised to acknowledge the higher mitigation ratios required when impacted riparian scrub and freshwater marsh occurs within the Coastal Zone.

The City continues to believe that mitigation for storm water maintenance impacts should not be held to the same standard as traditional land development. As suggested in the comment, the City intends to continue to work with CDFG and the other Resource Agencies to lower the mitigation ratios for freshwater marsh and disturbed wetland, and eliminate mitigation requirements for unvegetated drainages.

A.2 Should the CDFG and other Resource Agencies agree to reduce mitigation ratios, the City would be able to implement those reduced ratios without being inconsistent with its Biology Guidelines. The Biology Guidelines contain a provision in Section B (pages 13 and 14) which states: "Wetland mitigation required as part of any federal (404) or state (1601/1603) wetland permit will supersede and will not be in addition to any mitigation identified in the CEQA document for those wetland areas covered under any federal or state wetland permit." This provision would allow the City to employ lower ratios for storm water maintenance, if those lower ratios are acceptable to the Resource Agencies. As a result, the City would not be out of compliance with the Implementing Agreement because the Biology Guidelines specifically allow for lower mitigation ratios under the aforementioned situation.

A.2 cont.

concentrations to become available to aquatic organisms. Additionally, it is unclear how accurate predictions can be made without considering *in situ* benthic macroinvertebrate data. Benthic macroinvertebrate data would prove beneficial in this situation by allowing direct comparisons between pre-maintenance sites and post-maintenance sites. As a Resource Agency, the Department is concerned with the distribution, abundance, and richness of aquatic resources such as fish and aquatic invertebrates. The Department is also concerned that short term impacts could diminish benthic macroinvertebrate populations and taxa richness over time, which would affect the ecology of the system. Therefore, we are requesting additional guidance as to how the City arrived at this conclusion.

As emphasized in our prior comment letters, we believe that there is a need to conduct some level of aquatic bioassessment for benthic macroinvertebrate communities in conjunction with MSWSMP projects. We recommend that the report forms for either the Individual Biological Assessment or the Individual Water Quality Assessment be revised to include an evaluation of benthos composite, in associated with those drainage channels subject to maintenance under the MSWSMP.

A.2 cont. Lastly, Mitigation Measure 4.3.9 of the Final PEIR has been revised to eliminate reference to allowing a 1:1 ratio when using mitigation credits where the wetland habitat has already become established.

A.3

3. The Department does not concur with the determination provided in the recirculated draft PEIR (page 4.3-38) that wetland creation would not be required as a mitigation obligation for individual projects. We believe that depending on the level and frequency of the proposed maintenance activities under the MSWSMP, the overall suitability of habitat within these areas to support wildlife will be compromised, consequently wetland creation would be necessary. The Department opposes any development or conversion which would result in a reduction of wetland acreage or wetland habitat values, unless, at a minimum, project mitigation assures there will be "no net loss" of either wetland habitat values or acreage. Development and conversion include but are not limited to conversion to subsurface drains, placement of fill or building of structures within the wetland, and channelization or removal of materials from the streambed. Those obligations for wetland creation will be considered pursuant to any forthcoming Streambed Alteration Agreements negotiated for individual projects under the MSWSMP.

A.3 As discussed in Response to Comment A.1, the City has revised the mitigation ratios in Table 4.3-10 of the Recirculated PEIR to match Table 2 of the Biology Guidelines. Thus, mitigation for impacts to wetlands will include 1:1 creation or restoration as a minimum component of the overall mitigation, pursuant to page 13 of the Biology Guidelines.

A.4

4. The recirculated draft PEIR (page 4.8-17) discusses that riprap or other techniques would be used to reduce the discharge velocity of redirected water to prevent downstream erosion. The City's SAP (Section 1.4.2 Flood Control) cites that no riprap, concrete, or other unnatural material shall be used to stabilize river, creek, tributary, and channel banks within the Multi-Habitat Planning Area (MHPA). Given limitation placed on the use of materials in these areas, the Individual Hydrology/Hydraulic Assessment Report form should include this as an item that will be evaluated and included with the MSCP

A.4 Any rip-rap placed in storm water facilities would be related to one of two factors. First, rip-rap would be used to replace and restore rip-rap that previously existed in the channel. Second, it may be used temporarily to function as a check dam. The last sentence of the 3rd full paragraph on page 4.8-17 of the Final Recirculated EIR has been deleted to avoid confusion over the use and/or purpose of rip-rap associated with maintenance.

Ms. Myra Herrmann
July 29, 2011
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A.4 cont. Annual Report (following those obligations cited under section 5.5 Maintenance Reporting of the MSWSMP).

A.5 5. Supplemental copies of project maps, plans, and surveys discussed under *Mitigation Measure 4.1.6* should also be provided the City's MSCP program for incorporation into the annual report to the Department.

A.6 6. We recommend that accompanying the avoidance measures provided in *Mitigation Measure 4.1.7*, in those instances where access could potentially impact upland areas within the MHPA, the SAP General Planning Policies and Design Guidelines for Roads and Utilities/Construction and Policies [Nos. 1-8] (Section 1.4.2 of the SAP) should be applied and followed in order to receive coverage under the existing state and federal MSCP permits. This guidance has been discussed in the Biological Technical Report and should be carried-over into the corresponding mitigation measure.

A.7 7. The Department recommends that a Project-wide Maintenance Access Plan be developed and included as part of the MSWSMP. The Maintenance Access Plan should clearly demonstrate how access to required work areas would occur, impacts will be avoided/minimized, and mitigation for unavoidable impacts to uplands and wetland consistent with the existing ESL Regulations/Biology Guidelines. Accompanying the aerial image maps that have been provided in the recirculated draft PEIR, the Maintenance Access Plan should include requirements for all access areas within or adjacent to the MHPA (e.g., use of existing access routes, avoidance of breeding seasons, shortest path is not always least impactive, work in wildlife corridor areas, native revegetation guidelines for erosion control, etc.). These routes would then be further refined (with review/input from the City's MSCP staff) for each work access area, based on habitat, species present, etc. For instance, the requirements for access in "Western Otay Valley Regional Park" (page 4.1-4) should be applied to all areas where work would occur under this program (see comment #6).

A.8 8. We recommend that *Mitigation Measure 4.3.8* include a requirement that the City implement a GIS database that includes all City wetland mitigation sites, along with features for tracking impacts/mitigation type/restoration status. Also, this information should be provided to the City's MSCP Program for inclusion in their annual reports to the Department.

A.9 9. *Mitigation Measure 4.3.11* identifies that upland impacts shall be compensated through payment into the City's Habitat Acquisition Fund (HAF). However, those conditions or criteria that would allow (or be appropriate) for payment into the fund were not defined in this mitigation measure. The cases (as provided in the City's Biology Guidelines) for when payment into the City's HAF would

A.5 The City intends to include a discussion of the biological impacts and mitigation associated with annual storm water maintenance in its annual report to the Resource Agencies, pursuant to the reporting requirements of the MSCP, but does not believe modification of the language of Mitigation Measure 4.1-6 is appropriate.

A.6 The City has added the following bullet to Mitigation Measure 4.1-7 to reflect CDFG's request: "Access roads through MHPA-designated areas shall comply with the applicable policies contained in the "Roads and Utilities Construction and Maintenance Policies" identified in Section 1.4.2 of the City's MSCP Subarea Plan."

A.7 As requested by many of the commenters during the public review period for the original PEIR, the City has specifically identified access paths as well as staging and storage areas to be used to maintain each of the storm water facilities included in the Master Program. These locations were assessed as part of the Recirculated PEIR. The majority of the access routes lie in urban areas, outside the MHPA, and/or have been historically used for access. Furthermore, implementation of the Master Plan protocols along with the PEIR mitigation measures related to biological resources will protect sensitive biological resources with MHPA areas adjacent to access routes. Mitigation Measure 4.1.1 requires MHPA boundaries to be delineated on all maintenance documents to assure that maintenance crews are aware of the sensitivity of these areas. Lastly, the Substantial Conformance Review (SCR) Checklist, included as Appendix A of the Master Program, will ensure that the biology protocols and mitigation measures have been appropriately incorporated into each IMP. More specifically, Question 57 of the Checklist requires DSD to confirm that the proposed access matches that identified in the Master Program. Thus, the additional documentation, referred to as the Project-wide Maintenance Access Plan is considered unnecessary.

A.9 cont. apply needs to be detailed in this mitigation measure. All project's deferring to payment into the HAF should receive concurrence from the City's MSCP program.

A.10

10. The Department recommends the Individual Biological Assessment Report Form be revised to include the following information within or as supplemental attachments:

(1) GPS coordinates of sensitive plant and animal resources detected, including copies of California Native Species Field Survey Form that have been filed with the California Natural Diversity Database

(2) Location of project within or adjacent to the MSCP's MHPA

(3) MSCP consistency checklist

(4) Determination if the project will disrupt the integrity or continuity of an important habitat, (i.e., disruption of a wildlife corridor and/or an extensive riparian woodland)

(5) Identify whether maintenance access roads extend into environmentally sensitive lands and specific exclusion measures implemented to prohibit unauthorized access

(6) Jurisdictional Delineation Reports prepared for project

(7) Focused surveys reports prepared in accordance with federal or state protocol guidelines

(8) Results of California Natural Diversity Database records searches

(9) Identify current level of anthropogenic influences on habitat within project footprint (e.g., homeless encampment, illegal dumping)

(10) Identify whether sensitive plant surveys are being conducted at the appropriate time of the year to ensure optimal detection

(11) Verification that plant and animal surveys are conducted in conformance with the Methods and Survey Limitations standards defined under the City's Biology Guidelines

(12) Document other sensitive species (e.g., those other species that are not listed by federal and/or state agencies and /or not covered by the MSCP and to which any impacts may be considered significant under CEQA (CEQA Guideline §15380 (b) and (d) and §15125 (c))

(13) Record of any conservation easements over MSWSMP maintenance activity sites

A.8 The City is committed to keeping track of wetland mitigation occurring in association with storm water maintenance. This tracking is critical to being able to accomplish the goal of "one-time" mitigation for storm water maintenance in specific channel segments in order to document that future maintenance can occur without additional mitigation. The process by which the City will keep track of this wetland mitigation has yet to be determined, and may utilize GIS techniques. As discussed in Response to Comment A.5, the City intends to include a discussion of the biological impacts and mitigation associated with annual storm water maintenance in its annual report to the Resource Agencies, pursuant to the reporting requirements of the MSCP, but does not believe modification of the language of Mitigation Measure 4.3-8 is appropriate.

A.9 The City will follow the criteria identified in its Biology Guidelines which provides further information about the its Habitat Acquisition Fund when determining when it will be used to mitigate for upland impacts associated with storm water maintenance. The City's Habitat Acquisition Fund (HAF) was established by City Council Resolution R-275129, adopted on February 12, 1990 and codified in Section 143.0141d(a)(1)(C) of the Municipal Code. The HAF is intended to be used for the as mitigation of impacts to small, isolated sites with lower, long-term conservation value. For the purpose of the HAF, small is generally considered to be less than five acres, but could in some cases be considered up to 10 acres. The goal of the HAF is to avoid postage stamp mitigation areas and allow funds to be consolidated to acquire larger upland areas to promote overall resource value. The HAF is used to purchase land under private ownership which is mapped within the MHPA, resulting in the addition of core biological habitat in accordance with the requirements of the MSCP Subarea Plan.

A.10 The commenter identifies a number of additions to the Individual Biological Assessment (IBA) forms included in the Master PEIR. Those additions and the City's response to the suggestion are provided below:

(1) GPS coordinates of sensitive plant and animal resources detected, including copies of the California Native Species Field Survey Form that have been filed with the California Natural Diversity Database.

A.10 cont.

Response: The IBA now includes a requirement that California Native Species Field Survey Forms be filed when sensitive species are encountered.

(2) Location of project within or adjacent to MSCP's MHPA.

Response: The IBA now includes a requirement that any portion of the maintenance activity located within an MHPA be identified.

(3) MSCP consistency checklist.

Response: The Substantial Conformance Review (SCR) checklist contains specific questions regarding the relationship of the maintenance activity to the MSCP Land Use Adjacency Guidelines. Inclusion of an MSCP consistency checklist in the IBA is not considered necessary.

(4) Determination if the project will disrupt the integrity or continuity of an important habitat (i.e., disruption of a wildlife corridor and/or an extensive riparian woodland).

Response: This question has been added to the IBA.

(5) Identify whether maintenance access roads extend into environmentally sensitive lands and specific exclusion measures implemented to prohibit unauthorized access.

Response: Access roads are already identified and evaluated in the Recirculated PEIR. However, as indicated earlier, additional questions regarding the location of maintenance within MHPAs and identification of appropriate mitigation measures have been incorporated in to the IBA.

(6) Jurisdictional Delineation Reports prepared for project.

Response: The IBA has been revised to require jurisdictional maps and documentation to accompany the IBA.

A.10 cont.

(7) Focused survey reports prepared in accordance with federal and state protocol guidelines.

Response: The IBA has been revised to require any protocol surveys conducted to accompany the IBA.

(8) Results of California Natural Diversity Database records searches.

Response: The IBA has been revised to require the results of California Natural Diversity Database records searches accompany the IBA.

(9) Identify current level of anthropogenic influences on habitat with the project footprint (e.g., homeless encampment, illegal dumping).

Response: The IBA has been revised to require this information.

(10) Identify whether sensitive plant surveys are being conducted at the appropriate time of year to ensure optimal detection.

Response: Every effort will be made to conduct the sensitive species surveys during the appropriate time of year. When this cannot occur, the potential shortcomings of the conclusions derived from a survey not conducted during the optimal time will be described in the IBA .

(11) Verification that plant and animal surveys are conducted in conformance with the Methods and Survey Limitations standards defined in the City's Biological Guidelines.

Response: The City will assure that surveys are conducted in accordance with its Biological Guidelines. Survey results will be included in each IBA, which will then be reviewed for compliance with the Biology Guidelines and MSCP Subarea Plan by DSD Environmental and MSCP staff, as well as all applicable Resource Agencies. Review for conformance with the survey standards noted above would be part of the SCR process and is part of a typical biology report review. An additional requirement in the checklist is not necessary to assure that the staff review would be conducted in accordance with the Biology Guidelines.

Ms. Myra Herrmann
July 29, 2011
Page 6 of 6

A.11 11. The Biological Resource Protection Maintenance Protocols (Subchapter 3.0) should include measures that ensure that selected erosion control measures do not inadvertently result in entrapping wildlife. For example, avoiding the use of erosion control blankets that contain monofilament layers that are not 100 percent photodegradable or biodegradable and therefore by not readily decomposing could result in entangling wildlife.

A.12 12. Page 4.3-18 discusses the likelihood for little blue heron (*Egretta caerulea*) to occur within the project area and mentions that beyond sightings at Rose Creek near Mission Bay, it would not likely be found in other locations mapped for the Master Program study area. However, according to the San Diego County Bird Atlas, little blue heron has been repeatedly been seen at Los Penasquitos Lagoon (due west of facilities located at Soledad and Los Penasquitos Creeks).

We appreciate the opportunity to comment on the recirculated draft PEIR and to assist the City in further minimizing and mitigating project impacts to biological resources. If you should have questions or comments regarding this letter, please contact Paul Schlitt at (858) 637-5510.

Sincerely,

Edmund Pert
Regional Manager
South Coast Region

cc: State Clearinghouse, Sacramento
David Zoutendyk, U.S. Fish and Wildlife Service
Patrick Gower, U.S. Fish and Wildlife Service
Randy Rodriguez, California Department of Fish and Game, San Diego
Paul Schlitt, California Department of Fish and Game, San Diego

A.10 cont. (12) Document other sensitive species (e.g., those other species that are not listed by federal and/or state agencies and/or not covered by the MSCP and to which any impacts may be considered significant under Sections 15380(b) and (d) and 15125(c) of the CEQA Guidelines.

Response: The IBA has been revised to require consideration of sensitive species to include species not listed by federal and/or state agencies, and/or not covered by the MSCP

(13) Record of any conservation easements over MSWSMP maintenance activity sites.

Response: The IBA has been revised to provide this information, as applicable.

A.11 Protocol BIO-3 in the Master Plan has been modified to require that the monitoring biologist review the proposed erosion control measures to assure that they would not endanger wildlife through factors such as entanglement in non-biodegradable erosion control blankets. In addition, question 65 has been added to the SCR Checklist to confirm that the appropriate measures are included in the IMPs.

A.12 Comment noted.

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

August 2, 2011

Myra Herrmann
City of San Diego
1222 First Avenue, MS-501
San Diego, CA 92101

Subject: Master Storm Water System Maintenance Program
SCH#: 2004101032

Dear Myra Herrmann:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on August 1, 2011, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

B.1

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

B.1 This letter documents the public review process conducted by the State Clearinghouse. No response is required.

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

July 1, 2011

Ms. Myra Herrmann, Senior Environmental Planner, Archaeologist
City of San Diego Development Services Department
1222 First Avenue, MS 501
San Diego, CA 92101

Re: SCH#2004101032; CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for the **"Master Storm Water System Maintenance Program (MSWSMP) Project"** located Citywide; San Diego County, California

Dear Ms. Herrmann:

The Native American Heritage Commission (NAHC), the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources. The NAHC wishes to comment on the above-referenced proposed Project.

This letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9.

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. The NAHC Sacred Lands File (SLF) search resulted in; **Native American cultural resources were identified** within several areas of the City - 'area of potential effect (APE), based on the USGS coordinates for the City of San Diego. The absence of archaeological items at the surface level does not preclude their existence at the subsurface level once ground-breaking activity is underway.

The NAHC "Sacred Sites,' as defined by the Native American Heritage Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254.10.

C.1 Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural

C.1 The Individual Historical Assessment (IHA) form contained in the Master Program has been amended to require consideration of potential concerns of Native American Tribes relative to the proposed maintenance.

C.1 cont. significance of the historic properties in the project area (e.g. APE). We strongly urge that you make contact with the list of Native American Contacts on the attached list of Native American contacts, to see if your proposed project might impact Native American cultural resources and to obtain their recommendations concerning the proposed project. Pursuant to C"A Public Resources Code § 5097.95, the NAHC requests that the Native American consulting parties be provided pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and Section 2183.2 that requires documentation, data recovery of cultural resources.

C.2 Furthermore we recommend, also, that you contact the California Historic Resources Information System (CHRIS) California Office of Historic Preservation for pertinent archaeological data within or near the APE, at (916) 445-7000 for the nearest Information Center in order to learn what archaeological fixtures may have been recorded in the APE.

C.3 Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C 4321-43351) and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation.

C.4 Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery'.

C.5 To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects.

C.6 The response to this search for Native American cultural resources is conducted in the NAHC Sacred Lands Inventory, established by the California Legislature (CA Public Resources Code 5097.94(a) and is exempt from the CA Public Records Act (c.f. California Government Code 6254.10) although Native Americans on the attached contact list may wish to reveal the nature of identified cultural resources/historic properties. Confidentiality of "historic properties of religious and cultural significance" may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places and there may be sites within the APE eligible for listing on the California Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious

2

C.2 A records review was conducted at the South Coastal Information Center (SCIC) of the California Historic Resources Information System, San Diego State University, as detailed in Section 4.4 of the Recirculated PEIR (see also Appendix E of the PEIR, Affinis 2011). Records review included survey coverage maps of previous surveys and archaeological studies, and site records of previously recorded archaeological sites within 300 feet of each channel/basin segment in the Master Program. Updated records searches will be conducted in the course of preparing IHAs for individual maintenance activities.

C.3 As indicated in Response to Comment C.1, the City will consult Native American Tribes that may be interested in proposed maintenance activities. This consultation will be performed in accordance with the federal requirements identified by the commenter and in accordance with the City's Historical Resources Guidelines for each IHA.

C.4 Sections III and IV of the Historical Resources (Archaeology) Mitigation Monitoring and Reporting Program (MMRP) includes provisions for the discovery and subsequent treatment of human remains during any phase of the archaeological mitigation program. These measures include compliance with Section 5097.98 of the California Public Resources Code, Section 27491 of the California Government Code and Section 7050.5 of the California Health and Safety Code.

C.5 Comment noted. All culturally affiliated tribal groups in the San Diego County area and other tribal members were sent either a copy of the Public Notice of Availability, or the full environmental document in accordance with the provisions of CEQA and the City's Land Development Code, CEQA Implementation Procedures.

C.6 Comment noted. The City acknowledges the confidentiality of "Historic properties of religious & cultural significance", in accordance with the Public Resources Code. Public disclosure of recorded archaeological sites or Native American sacred lands is strictly prohibited by the City of San Diego.

and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

3

State of California • Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Edmund G. Brown Jr., *Governor*
Ruth Coleman, *Director*

July 28, 2011

Ms. Myra Herrmann
City of San Diego Development Services Center
1222 First Avenue, MS501
San Diego, CA 92101
DSDEAS@sandiego.gov

RE: Master Storm Water Maintenance Program Recirculated Draft Program Environmental Impact Report (Project No. 42891/SCH No. 2004101032)

Dear Ms. Herrmann,

Thank you for the opportunity to comment on the Recirculated Draft Program Environmental Impact Report (DPEIR; SCH 2004101032) regarding the City of San Diego's (City's) Master Storm Water Maintenance Program (Program). California State Parks (CSP) is the land manager for large portions of the Los Peñasquitos Marsh as part of Torrey Pines State Natural Reserve (Reserve) and portions of the Tijuana Estuary as Part of the Tijuana River National Estuarine Research Reserve (TRNERR) and Border Field State Park. Storm Water Facility Segments 6 through12 occur immediately upstream of the Los Peñasquitos Marsh. Segments 128 through139 occur within or upstream of the TRNERR.

D.1 As stated in our previous comment letter (August 20, 2009), CSP is primarily concerned with the downstream effects for the Proposed Project. At the Los Peñasquitos Marsh there is currently a problem with sediment, trash, and hazardous materials collecting at the end of the channel (northwest of segment 7). If segments 6 through 12 are maintained without vegetation, the greater flow and velocity will substantially increase the debris settling within CSP managed wetlands. When this debris is passed to vegetated and aquatic habitats, downstream remediation is extremely difficult and costly. These impacts will threaten the beneficial uses of the wetland habitats and degrade land that is protected by a number of designations (including the City of San Diego's MHPA, Coastal Act ESHA, and a State Natural Preserve). The mechanism to avoid or mitigate these likely significant effects is not clear in the DPEIR.

CSP appreciates that many of the issues regarding the Project Segments within the Tijuana Estuary are being addressed by the City's active collaboration with State Parks and other agencies as part of the Tijuana River Valley Recovery Team. CSP would like to continue this spirit of collaboration regarding Segments leading to the Los Peñasquitos Marsh.

D.2 Additionally, since these projects occur within sensitive lands and will affect our management responsibilities, CSP needs an opportunity to review and provide concurrence with project level plans to provide assurance that the degradation of downstream lands will be avoided or adequately mitigated, and mitigation measures

D.1 Erosion control measures to protect downstream waters will be utilized during the maintenance process, in accordance with NPDES requirements. Historically segments 6-12 have been subject to sediment accumulation (deposition) which has precipitated in the need for regular maintenance. As a result, these facilities have tended to capture rather than transport sediment and trash into the Los Penasquitos Lagoon. Even after maintenance, Segments 6-12 are expected to continue to be subject to deposition, and, therefore, will not contribute to additional sediment supply into Los Penasquitos Lagoon. As discussed in the Maintenance Protocol (WQ-9, p 3-15) of the EIR, maintenance segments anticipated to generate localized velocity increases following maintenance will include the placement of temporary check dams to reduce storm water velocities and aid in the re-establishment of vegetation in the channel to reduce the potential for sediment generation within the site. In addition, many of the channels within segments 6-12 are already concrete-lined, and therefore, will not generate sediment within the limits of the maintenance.

D.2 The SWD appreciates CSP's offer to coordinate with the City on a project by project basis specifically in the Los Penasquitos and Tijuana watersheds to achieve both water quality and flood control objectives that can be mutually beneficial. As further described in the Master Program, the SWD will maintain an internal Master Program Maintenance Contact List comprised of public and private interested parties and stakeholders

D.2 cont.

(such as sediment basins and trash collectors) are maintained in perpetuity. CSP understands the difficulty and costs associated with maintaining this type of infrastructure as we have similar projects and issues. As an adjacent land manager, CSP would appreciate the opportunity to coordinate with the City on a project by project basis to improve the quality of our land and assist the City with access, design, and advocacy so that projects can be mutually beneficial.

D.3

CSP would also like to advocate for a more integrated approach to the proposed Project. This is particularly important for the Los Peñasquitos Marsh which is nearing the implementation phase of load reductions (TMDLs) for sediment. Coordinating the proposed Project with this and other watershed based efforts (such as Low Impact Development (LID) incentives for existing development) would provide planning support and cost sharing opportunities.

Thank you for the opportunity to comment on the DPEIR. Please feel free to contact Environmental Scientist Darren Smith (619-952-3895) for further discussion of our concerns.

Sincerely,

Clay Phillips, Acting San Diego Coast District Superintendent

Cc

William Mennell, District Specialist Manager
Brian Ketterer, North Sector Superintendent
Jay Chamberlin, Natural Resources Division Chief
Darren Scott Smith, Natural Resources Program Manager, SD Coast District
Reading File

D.2 cont. who will be notified annually of the SWD's proposed Priority List. If a facility adjacent to lands managed by CSP is identified on the annual Priority List, the City will coordinate efforts to provide the appropriate information to CSP for their review and input.

D.3 The SWD agrees with the suggestion that an integrated approach to storm water management is beneficial. The SWD implements several other programs that work to address storm water quality includ ing LID and hydromodification (including reducing peak flow rates and increasing peak flow capacities). Collectively, these efforts minimize the amount of channel maintenance and cleaning that must be completed by reducing runoff flows and addressing sediment and trash before they enter storm drain channels. The SWD welcomes the opportunity to coordinate with other agencies which are involved in storm water management efforts.

Tijuana River National Estuarine Research Reserve
California Department of Parks and Recreation
301 Caspian Way • Imperial Beach • CA • 91932
(619) 575-3613 • Fax (619) 575-6913 • www.tijuanaestuary.org

July 29, 2011

Ms. Myra Herrman
City of San Diego Development Services Center
1222 First Avenue, MS501
San Diego, CA 92101
DSDEAS@sandiego.gov

RE: Master Storm Water Maintenance Program Recirculated Draft Program Environmental Impact Report (Project No. 42891/SCH No. 2004101032)

Dear Ms. Hermann,

Thank you for the opportunity to comment on this re-circulated PEIR. I have two primary comments.

E.1 First, I appreciate that the City's Storm Water Maintenance is a complicated program that involves many miles of stream corridors in the City. It is understandable that only a certain level of detail can be provided in a programmatic document like this. It is thus a great concern that there is no additional public comment built into this program. Our experience in the Tijuana River Valley indicates that it is imperative to have this opportunity for public feedback, both to avoid unintended consequences of projects as well as take advantage of local knowledge to increase the efficacy of the proposed work. I recommend an annual public review be a formal part of this program.

E.2 Also, from the perspective of work done in the Tijuana River Valley, I would like to emphasize the importance of controlling invasive plants (such as Arundo) prior to maintaining vegetated channels. This will not only avoid unintended negative environmental consequences, such as downstream spread of viable propagules, but also increase the effectiveness of projects by decreasing the probability of invasive species rapidly re-colonizing cleared sites.

Thank you

Christopher M. Peregrin
Stewardship Coordinator/Environmental Scientist
Tijuana River National Estuarine Research Reserve
Silver Strand State Beach, Border Field State Park

301 Caspian Way, Imperial Beach, CA 91932
(o) 619-575-3613 x332; (c) 619-204-0097; (f) 619-575-6913
cpere@parks.ca.gov

E.1 As discussed in Response to Comment O.1, the annual maintenance plan approval process provides multiple opportunities for the public to get involved and comment on the proposed maintenance activities.

E.2 Individual maintenance plans and biological assessments prepared during the SCR process would identify the potential risk from the spread of invasives during maintenance and include pro-active measures to minimize the potential spread into downstream areas. In order to provide more protection from the downstream spread of invasive species during maintenance, invasive species would be removed in a manner that does not promote establishment of invasive species in areas downstream of maintenance activities. Maintenance protocol BIO-6 identifies the specific techniques to be used to remove arundo during maintenance. Areas where invasive plants are removed as mitigation will be inspected on a quarterly basis for up to two years to assure that the direct actions taken by the City to remove existing invasives is effective.

Department of Toxic Substances Control

Linda S. Adams
Acting Secretary for
Environmental Protection

Deborah O. Raphael, Director
5796 Corporate Avenue
Cypress, California 90630

Edmund G. Brown Jr.
Governor

July 26, 2011

Ms. Myra Herrmann
City of San Diego Development Services Center
1222 First Avenue, MS 501
San Diego, California 92101

DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR MASTER STORM WATER SYSTEM MAINTENANCE PROGRAM (SCH # 2004101032)

Dear Ms. Herrmann:

The Department of Toxic Substances Control (DTSC) has received your submitted Notice of Availability of the Environmental Impact Report for the above-mentioned project. The following project description is stated in your document: "Master Site Development Permit (SDP) and Costal Development Permit (CDP) for the long-term maintenance of storm water facilities maintained by the Storm Water Division (SWD) of the City of San Diego's Transportation and Storm Water Department (T &SWD). The storm water facilities include a series of natural and/or constructed drainage channels. The Master Program identifies the maintenance activities anticipated to be carried out for each storm water facility. The Master Program also establishes a series of protocols to be carried out during maintenance activities that are intended to minimize impacts related to soil and erosion, water quality, and wildlife disruption".

Based on the review of the submitted document DTSC has the following comments:

F.1

1) The EIR should evaluate whether conditions within the project area may pose a threat to human health or the environment. Following are the databases of some of the regulatory agencies:

- National Priorities List (NPL): A list maintained by the United States Environmental Protection Agency (U.S.EPA).
- Envirostor (formerly CalSites): A Database primarily used by the California Department of Toxic Substances Control, accessible through DTSC's website (see below).

F.1 As a Programmatic EIR, site-specific determinations of the potential for hazardous materials to occur within maintenance areas are not feasible. However. the Master Program identifies a means of determining if hazardous materials may be encountered in the course of maintenance. The Individual Water Quality Assessment (IWQA), contained in Appendix G of the Master Program, requires that a sample be taken of the sediment to be removed and sent to a laboratory to identify chemicals which may be contained within the sediment. This approach to evaluating the potential for hazardous materials is more definitive than the

Ms. Myra Herrmann
July 26, 2011
Page 2

F.1 cont.

- Resource Conservation and Recovery Information System (RCRIS): A database of RCRA facilities that is maintained by U.S. EPA.
- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS): A database of CERCLA sites that is maintained by U.S.EPA.
- Solid Waste Information System (SWIS): A database provided by the California Integrated Waste Management Board which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations.
- GeoTracker: A List that is maintained by Regional Water Quality Control Boards.
- Local Counties and Cities maintain lists for hazardous substances cleanup sites and leaking underground storage tanks.
- The United States Army Corps of Engineers, 911 Wilshire Boulevard, Los Angeles, California, 90017, (213) 452-3908, maintains a list of Formerly Used Defense Sites (FUDS).

F.2

2) The EIR should identify the mechanism to initiate any required investigation and/or remediation for any site that may be contaminated, and the government agency to provide appropriate regulatory oversight. If necessary, DTSC would require an oversight agreement in order to review such documents.

F.3

3) Any environmental investigations, sampling and/or remediation for a site should be conducted under a Workplan approved and overseen by a regulatory agency that has jurisdiction to oversee hazardous substance cleanup. The findings of any investigations, including any Phase I or II Environmental Site Assessment Investigations should be summarized in the document. All sampling results in which hazardous substances were found above regulatory standards should be clearly summarized in a table. All closure, certification or remediation approval reports by regulatory agencies should be included in the EIR.

F.4

4) If buildings, other structures, asphalt or concrete-paved surface areas are being planned to be demolished, an investigation should also be conducted for the presence of other hazardous chemicals, mercury, and asbestos containing materials (ACMs). If other hazardous chemicals, lead-based paints (LPB) or products, mercury or ACMs are identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations and policies.

F.1 cont. Phase I Environmental Assessments commonly performed to estimate the potential of for hazardous materials because Phase I Environmental Assessments do not normally involve actual testing.

In the event that contaminated soils or hazardous conditions are encountered during maintenance activities, the maintenance contractor, along with City staff will be required to implement compliance measures for contaminants in accordance with applicable local (Whitebook specifications), state and federal regulatory requirements. The City would coordinate with the County of San Diego, Department of Environmental Health, the City's Local Enforcement Agency and the City's Environmental Services Department. These reports would be reviewed by staff from the City's Local Enforcement Agency (LEA) and Environmental Services Department (ESD). Should additional regulatory oversight be necessary, staff from the City's LEA or ESD would coordinate with the applicable local, state or federal agency based on the type or nature of contamination requiring remediation.

F.2 As indicated in Response to Comment F.1, the City will test sediment to be removed prior to conducting maintenance and institute appropriate measures to avoid health and safety risk to hazardous materials which may be contained within the sediment.

F.3 When applicable, the City would conduct environmental investigations, sampling and/or remediation under a work plan which would be approved and overseen by the regulatory agency with jurisdiction over the hazardous substances that may occur within a maintenance area as noted in Response to Comment F.1. The findings and results of this work would be summarized in a document which would be made available to the regulatory agency with jurisdiction. As indicated in Response to Comment F.1, this information cannot be included in the PEIR at this time.

F.4 The proposed maintenance program would not involve the demolition of buildings, structures, or asphalt/concrete paved surfaces; therefore, testing and remediation for hazardous chemicals, mercury, lead-based

Ms. Myra Herrmann
July 26, 2011
Page 3

F.5 5) Future project construction may require soil excavation or filling in certain areas. Sampling may be required. If soil is contaminated, it must be properly disposed and not simply placed in another location onsite. Land Disposal Restrictions (LDRs) may be applicable to such soils. Also, if the project proposes to import soil to backfill the areas excavated, sampling should be conducted to ensure that the imported soil is free of contamination.

F.6 6) Human health and the environment of sensitive receptors should be protected during any construction or demolition activities. If necessary, a health risk assessment overseen and approved by the appropriate government agency should be conducted by a qualified health risk assessor to determine if there are, have been, or will be, any releases of hazardous materials that may pose a risk to human health or the environment.

F.7 7) If it is determined that hazardous wastes are, or will be, generated by the proposed operations, the wastes must be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5). If it is determined that hazardous wastes will be generated, the facility should also obtain a United States Environmental Protection Agency Identification Number by contacting (800) 618-6942. Certain hazardous waste treatment processes or hazardous materials, handling, storage or uses may require authorization from the local Certified Unified Program Agency (CUPA). Information about the requirement for authorization can be obtained by contacting your local CUPA.

F.8 8) DTSC can provide cleanup oversight through an Environmental Oversight Agreement (EOA) for government agencies that are not responsible parties, or a Voluntary Cleanup Agreement (VCA) for private parties. For additional information on the EOA or VCA, please see www.dtsc.ca.gov/SiteCleanup/Brownfields, or contact Ms. Maryam Tasnif-Abbasi, DTSC's Voluntary Cleanup Coordinator, at (714) 484-5489.

If you have any questions regarding this letter, please contact me at ashami@dtsc.ca.gov, or by phone at (714) 484-5472.

Sincerely,

Al Shami
Project Manager
Brownfields and Environmental Restoration Program

F.4 cont. paint, or asbestos containing materials would not be required. However, heavy metals could be encountered in accumulated sediments in channels identified on a 303(d) list or adjacent to areas where burn ash has been documented. Under such circumstances, all appropriate remediation measures will be followed after consultation with staff from the City's LEA and ESD.

F.5 As indicated in Response to Comments F.1 and F.4, the City would follow appropriate remediation measures for contaminated soil including proper off-site disposal. As warranted, sampling would be conducted as part of the Phase I Environmental Site Assessment or in the event that contaminants are discovered during maintenance. The results of this testing would be used to determine the proper off site disposal location for contaminated material. No fill material from outside the maintenance areas will be used within the maintenance areas.

F.6 As indicated in Response to Comments F.2 and F.4, the contaminants likely to be encountered do not represent a major public health hazard. Furthermore, these contaminants are generated from adjacent development and would be present whether or not maintenance occurs. In fact, maintenance, when properly performed, would safely remove the contaminated sediment from urban areas resulting in an improvement to health and safety in adjacent areas. However, in the event that contaminated soils or hazardous conditions are encountered during maintenance activities, the contractor, along with City staff will be required to implement compliance measures for possible contaminants and/or contaminated groundwater in accordance with all applicable local (Whitebook specifications), state and federal regulatory requirements.

F.7 The only potential source for hazardous materials would be associated with oil and fuel emissions from maintenance equipment. This potential short-term risk would be minimized through implementation of maintenance protocols identified in the Maintenance Program, as well as standard best management practices (BMPs) for use and storage of equipment.

F.8 Comment noted.

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044
state.clearinghouse@opr.ca.gov

CEQA Tracking Center
Department of Toxic Substances Control
Office of Environmental Planning and Analysis
P.O. Box 806
Sacramento, California 95812
nritter@dtsc.ca.gov

CEQA # 3252

State Water Resources Control Board

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

Linda S. Adams
Acting Secretary for Environmental Protection

Edmund G. Brown Jr.
Governor

JUL 2 2 2011

Ms. Myra Herrmann
City of San Diego Development Services Center
1222 First Avenue, MS 501
San Diego, CA 92101

Dear Ms. Herrmann:

PROGRAMMATIC ENVIRONMENTAL IMPACT REPORT (PEIR) FOR THE CITY OF SAN DIEGO (CITY); MASTER STORM WATER SYSTEM MAINTENANCE PROGRAM (PROJECT); SAN DIEGO COUNTY; STATE CLEARINGHOUSE NO. 2004101032

We understand the City is not pursuing Clean Water State Revolving Fund (CWSRF) financing for this Project. As a funding agency and a State agency with jurisdiction by law to preserve, enhance, and restore the quality of California's water resources, the State Water Resources Control Board (State Water Board) is providing the following information for the environmental document prepared for the Project.

The City may want to consider the CWSRF Program to provide funding for future construction. The State Water Board, Division of Financial Assistance, is responsible for administering CWSRF financing. The primary purpose for the CWSRF Program is to implement the Clean Water Act and various state laws by providing financial assistance for wastewater treatment facilities necessary to prevent water pollution, recycle water, correct nonpoint source and storm drainage pollution problems, and provide for estuary enhancement, thereby protecting and promoting health, safety and welfare of state inhabitants. The CWSRF Program provides low-interest funding equal to one-half the most recent State General Obligation Bond Rates with a 20-year term. Applications are accepted and processed continuously. Please refer to the State Water Board's CWSRF website at:
www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/index.shtml.

Following are specific comments on the City's PEIR:

G.1

1. If the City decides to pursue Proposition 84 funding for the Project, then compliance with Public Resources Code (PRC) Section 75102 is required. PRC Section 75102 requires that before the adoption of a negative declaration or EIR required for any project to be financed with Proposition 84 funds, the lead agency shall notify the proposed action to a California Native American tribe, which is on the contact list maintained by the Native American Heritage Commission (NAHC), if that tribe has traditional lands located within the area of the proposed Project.

   The NAHC can be contacted at:

   915 Capitol Mall, Room 364
   Sacramento, CA 95814
   (916) 653-4082

G.1 The SWD will not be pursuing Proposition 84 funding for the project. However, the PEIR was mailed to the Native American Heritage Commission (Public Information List No. 56) for their review and a comment letter was received during public review. The City's responses to their letter can be found under letter "C" above.

Ms. Myra Herrmann -2-

G.1 cont. Note: The NAHC will provide a list of Native American tribes and individuals that are culturally affiliated with your project area and recommend that they all be contacted.

G.2 2. Page 4.1-11 states that "mature trees spaced at least 50 feet apart would be allowed to remain in place during maintenance." Clarify how many trees will be removed as a result of the Project.

G.3 3. Page 4.1-11 states that, "Impacts to wetlands habitat would be mitigated by enhancing, restoring or creating new wetland habitat." Discuss how this would be achieved and at what ratio would wetland habitat be mitigated. Include mitigation measures in the Monitoring and Reporting Program to ensure impacted wetlands are mitigated in accordance with state and federal laws.

G.4 4. Page 4.1-21 states that "If lighting is required for night time maintenance, it shall be directed away from the preserve and the tops of adjacent trees with potentially nesting raptors, using appropriate placement and shielding." Please discuss whether the City will use shielding and light filters for ground nesting raptor species and nocturnal mammals.

Thank you again for the opportunity to review the City's PEIR. We have no further comments at this time. if you have any questions or concerns, please feel free to contact me at (916)327-9401 or by email at LDLEE@waterboards.ca.gov, or contact Ms. Jessica Henderson-McBean at (916)327-9117 or by email at JHenderson-McBean@waterboards.ca.gov.

Sincerely,

Michelle Lobo for Lisa Lee

Lisa Lee
Environmental Scientist

Enclosures (4)

cc: State Clearinghouse
(Re: SCH# 2004101032)
P.O. Box 3044
Sacramento, CA 95812-3044

California Environmental Protection Agency

Recycled Paper

G.2 To the greatest degree possible and contingent upon the findings of the Individual Hydrologic and Hydraulic Assessment (IHHA) for each maintenance activity, the City will retain mature trees which are at least 50 feet apart. However, due to the programmatic nature of the analysis contained in the Recirculated PEIR, the exact number of trees that could be impacted by maintenance cannot be predicted at this time. This information would be defined for each individual maintenance activity through preparation of IBAs.

G.3 A full discussion of wetland mitigation measures is provided in Section 4.3 of the Recirculated PEIR. The mitigation measures identified in this section will be are included in the Mitigation Monitoring and Reporting Program to be adopted by the City for the Master Program.

G.4 The language included on page 4.1-21 regarding lighting is taken from the City's MSCP Subarea Plan Land Use Adjacency Guidelines. Should the biologist determine in the course of preparing an IBA that ground-dwelling species could be significantly impacted, light shielding would be designed and placed to reduce and/or minimize potential direct and/or indirect impacts from night lighting on ground-dwelling, nocturnal species.

California Native Plant Society

The California Native Plant Society is a statewide non-profit organization of amateurs and professionals with a common interest in California's native plants. The Society seeks to increase understanding of California's native flora and to preserve this rich resource for future generations.

Development Services Department, City of San Diego July 28, 2011
Attention: M. Herrmann
RE: Project# 42891, Master Storm Water System Maintenance Program

Dear Ms. Herrmann,
The California Native Plant Society, San Diego Chapter (CNPS) appreciates the opportunity to comment on the PEIR for Master Storm Water System Maintenance Program.

The City has proposed a program to remove vegetation from areas within San Diego's creeks, which form portions of the City's storm water conveyance system, for the purpose of flood control to reduce losses to life and property. The PEIR defines "Storm water facilities" as natural and constructed drainage channels.

H.1 The current plan proposes to bulldoze/dredge areas of the City including 80 acres of sensitive ecological habitats on a routine basis. The goal of this proposed program is to protect life and property from the hazard of flooding, however the proposal has not even identified areas that are at risk of flooding, nor does it demonstrate a connection between the removal of vegetation from the areas identified and flood protection. We feel this project is a waste of money and will unnecessarily and permanently degrade our City's natural ecosystems.

H.2 The scope of this project should be greatly reduced to areas only affected by flooding. Many of the proposed areas identified for removing "vegetation and accumulated sediment" DO NOT have accumulated sediment, but are ecological "Wetlands" that are actually being eroded and losing soil/sediment due to existing adjacent/upstream urban drainage outfall structures. The majority of the areas proposed for grading/dredging should be removed from the program. It is unnecessary for the City to spend money every year (for forever) on these proposed "maintenance activities" that will not solve any problems.

H.3 In regards to proposed habitat mitigation, this program should require all project impacts to habitats to be considered permanent and require a minimum 1:1 ratio of "Habitat Creation" (No Net-Loss), or "Restoration" as currently defined by the City and State, (City Biology Guidelines July 2002 Pg.13, Restoration: "*An activity that reestablishes the habitat functions of a former wetland. An example is the excavation of agricultural fill from historic wetlands and the reestablishment of native wetland vegetation*"). This is not the same as "Enhancement" or "weeding" as this proposed PEIR mentions in the mitigation chapter. Traditionally and currently "Restoration" is defined as restoring an area that used to be a wetland, but is not currently, back to a wetland hydrologically. This requires grading and excavation of an area that is currently considered an "Upland" area until it can support wetland vegetation. We also do not agree with

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H.1 As discussed on page 3-4 of the Recirculated PEIR, many of the urbanized storm water facilities included in the Master Program were not designed to accommodate vegetation. Vegetation growing within storm water facilities diminishes the ability of these facilities to convey storm water in two primary ways. First, the mass of the vegetation diminishes the overall volume of water that can be accommodated. Second, vegetation slows down the velocity of storm water causing it to remain in the facility for longer periods of time.

The loss of life and property resulting from flooding along many of the storm water facilities included in the Master Program is well documented. Consequently, the protection from flooding that results from the removal of vegetation (and sediment) that interferes with the conveyance of flood water is not considered a "waste of money."

H.2 As discussed on page 3-30 of the Recirculated PEIR, the City has removed approximately 18 miles of storm water facilities which were not expected to require maintenance from the current Master Program. The 32 miles of facilities that remain within the Master Program have either historically experienced flooding problems or are considered prone to flooding. Nevertheless, maintenance would not occur within these facilities unless the IHHA required to be completed by the Master Program indicates that removal of vegetation would result in an improvement in each facility's ability to convey flood water.

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H.4 the proposal of a "One time" mitigation process for habitat impacts, we believe that each time the biological resource is impacted, it should be mitigated accordingly. We also strongly believe

H.5 that all habitat mitigation should be required to be implemented in the same Watershed as the impacted habitat, without exception. In addition, we are opposed to the footnote on table 4.3-10

H.6 that states: "*Mitigation done in advance or through the purchase of mitigation credits will be at a 1:1 ratio"* and request that it be removed. We also strongly disagree with the mitigation ratio for

H.7 "streambed/natural flood channel" that is "N/A" or zero. This is because natural streambeds have a high ecological value as opposed to a graded hole, and should require mitigation (at least 1:1).

H.8 This program also needs to make a more strict distinction between existing concrete/urbanized drainage structures and natural (earthen bottom) "Wetland" habitats. We feel this proposed master plan, is much more adequate for mitigating impacts to biological resources within concrete lined channels, but should not be applied to earthen bottom creeks/wetlands.

H.9 The City should put its focus on upgrading/retrofitting its current constructed storm water facilities in areas that are already developed, and implement "Low Impact Development" techniques. There are structural designs that can provide permanent solutions to the hazards of flooding. Strom water flow needs to be addressed prior to it reaching the City's natural areas (canyons, streams, rivers, the Pacific Ocean, etc.). The City's existing drainage structures need to be re-engineered and upgraded to handle storm water flow in ways that are more efficient and compatible with the natural land that it sits upon and is surrounded by.

H.10 This proposal discloses the fact that the activities will cause an increase in pollution from urban runoff to our water ways and beaches. This seems to be a direct violation of the Federal Clean Water Act, which prohibits the use of waterways to convey pollutants. There are engineering techniques available that can reduce the risk of storm flooding and not increase pollution at our beaches. Currently the number one reason for beach closures in San Diego is pollution caused by urban run off. Retaining native vegetation within our City's Wetlands and drainage courses is a proven method of removing pollutants from urban run-off, but removing the vegetation has not been proven to reduce flooding in San Diego.

H.11 If vegetation removal from earthen drainages is deemed necessary, the proposed project should focus on invasive vegetation removal, many of the project maintenance locations have species including giant reed (*arundo donax*), Mexican fan palms (*Washingtonia robusta*), Tamarix (*Tamatix ramosissima*), Eucalyptus (*Eucalyptus globulus*), etc. In addition, the removal of this type of vegetation does not require mitigation.

H.12 In regards to the proposed "Annual Maintenance Processes" and the project's proposed Substantial Conformance Reviews (SCRs). Individual Maintenance Plans (IMPs) and Biological Restoration, Creation, and Enhancement activities should be required to be on standard "City D-sheet Grading Plans/Permits" issued by the Development Services Dept. and

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H.3 As discussed in response to comment A.1, the wetland mitigation ratios identified in Table 4.3-10 of the Recirculated PEIR have been revised to match Table 2 of the City's Biology Guidelines. In addition, as indicated in Response to Comment A.3, the wetland mitigation will include 1:1 creation or restoration as a minimum component of the overall mitigation.

The City continues to believe that mitigation is only required for maintenance within a specific segment on a "one time" basis. The appropriateness of "one time" mitigation is further reinforced by the City's decision to mitigate wetland loss with creation or restoration at a 1:1 ratio. Additionally, the City notes that the underlying drainage and the majority of its biological functions and services would be unaffected by maintenance. Lastly, as discussed in the first paragraph on page 4.3-35 of the Recirculated PEIR, wetland habitat is expected to re-establish within 6 to 12 months following maintenance.

H.4 The one-time mitigation approach described in the Master Program and Recirculated PEIR is considered appropriate. One-time mitigation is the standard form of mitigation for developments which result in the complete loss of wetlands and the underlying drainages. As discussed in Response to Comment A.1, the underlying drainage is not lost and the wetland vegetation typically re-establishes itself within 6 to 12 months. Thus, the one-time mitigation approach for storm water maintenance is considered appropriate.

H.5 Mitigation Measure 4.3.9, which defines the wetland mitigation required to be implemented, includes criteria intended to encourage the mitigation to occur within the same watershed. The mitigation measure also requires the City to demonstrate that there are no suitable locations within the impacted watershed before it can implement mitigation in other watersheds.

H.6 Mitigation locations for wetland impacts shall be selected using the following order of preference, based on the best mitigation value to be achieved.

1. Within impacted watershed, within City limits.
2. Within impacted watershed, outside City limits on City-owned or other publicly-owned land.
3. Outside impacted watershed, within City limits.

H.6 cont. However, given the urbanized nature of the watersheds within the City limits and the conflicting nature of wetland habitat and flood control, it may be difficult to find sufficient mitigation areas in many of the watersheds within which the maintenance impacts occur.

H.7 With respect to allowing increased mitigation value for established wetland mitigation areas, this approach is commonly accepted by the Resource Agencies as long as the wetland habitat has been shown to be sufficiently established and adequate long-term preservation and maintenance are assured.

H.8 Table 3-1 in the Recirculated PEIR identifies those facilities that are earthen (natural), concrete, or a combination of both, with the lengths of each type provided. As discussed in Response to Comment A.1, the wetland mitigation ratios have been revised in the Recirculated PEIR to match Table 2 of the City's Biology Guidelines. As indicated in Mitigation Measure 4.3.10, whenever maintenance would impact wetland vegetation, a wetland mitigation plan would be prepared specific to each channel to be maintained, based on the standards provided in the Conceptual Wetland Restoration Plan (Appendix D.3). It should also be noted that the wetland mitigation would occur within earthen drainages and not concrete-lined storm water facilities.

H.9 The City agrees with the commenter regarding the importance of implementing LID outside of the storm water facilities to reduce the amount of runoff needed to be transported through the City's storm water facilities. As discussed on page 7-18 of the Recirculated PEIR, the City's Storm Water Management and Discharge Control Ordinance requires that all new development and redevelopment activities comply with the storm water pollution prevention requirements in the Land Development Code. However, no mechanism currently exists to force existing developments to retroactively implement LID measures. Unfortunately, runoff from existing development in the urbanized areas is primarily responsible for the runoff carried by the storm water facilities included in the Master Program.

Despite the City's shared support for LID, as discussed on page 7-21 of the Recirculated PEIR, implementation of LID measures would have no substantial impact on the probability of flooding and would, therefore, fail to help alleviate flooding. LID measures target the low intensity storms and have very little to no effect on the storms beyond a 10-year storm event which are responsible for flooding. Furthermore,

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signed by a City Engineer. This type of activity/work currently requires grading permits by the City's Municipal Code:

"San Diego Municipal Code Chapter 12:
Ch. 12 Art.9 Div.6
§129.0601 Purpose of Grading Permit Procedures

The purpose of these procedures is to establish the process for review of Grading Permit applications for compliance with the regulations set forth in Chapter 14, Article 2, Division 1 and to protect persons, property and the environment. *(Added 12-9-1997 by O-18451 N.S.; effective 1-1-2000.)*

§129.0602 When a Grading Permit is Required

A Grading Permit is required for the following work:

(a) Any *grading* within open space easements or City-owned open space;

(b) Any *grading* required for the restoration of unauthorized *grading*;

(c) Any *grading* within the *Special Flood Hazard Area*;

H.12 cont.

(d) Any *grading* in accordance with a Grading Permit required as a condition of a *development permit* to assure compliance with the *development* permit conditions.

(e) Any grading that includes the following conditions:

(1) *Excavation* or *fill* that results in a slope with a gradient of 25 percent or greater (4 horizontal feet to 1 vertical foot) and for which the depth or height at any point is more than 5 feet measured vertically at the face of the slope from the top of the slope to the bottom of the slope;

(2) *Excavation* or *fill* for which the depth or height at any point from the lowest *grade* to the highest *grade* at any time during the proposed *grading* is more than 5 feet measured vertically;

(3) *Grading* that creates manufactured slopes at a gradient exceeding that specified in Section 142.0133;

(4) *Grading* for which the graded area is more than 1 acre;

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H.9 cont. when rainfall events such as the 100-year event occur, they are typically preceded by smaller storms, and therefore the available storage volumes in LID devices are saturated and would result in only a minor reduction in the runoff from the property. Thus, LID is not considered a viable alternative to removal of vegetation and sediment to improve the ability of storm water facilities to convey flood water.

H.10 The maintenance activities themselves would not cause an increase in pollution from urban runoff. As discussed in Section 4.8 of the Recirculated PEIR, water quality effects from maintenance would be related to the potential for maintenance to diminish the capacity of plants and sediments to extract pollutants transported to the drainage facilities in runoff from adjacent development. In addition, the loss of plant material may allow polluted sediment to be transported downstream during high flows. As also discussed, in Section 4.8, the removal of polluted sediment in the course of maintenance would have a positive effect on local and downstream water quality conditions.

The Recirculated PEIR now includes a specific mitigation measure (Mitigation Measure 4.8.1) which requires potential water quality impacts resulting from maintenance to be quantitatively evaluated. When the negative impacts of maintenance outweigh the positive benefits, Mitigation Measure 4.8.1 requires that one or more measures identified in Table 4.8-8 of the Recirculated PEIR be implemented to eliminate the net negative water quality impacts of maintenance.

H.11 The City agrees with the concept of placing a priority on removing invasive species to restore conveyance capacity to storm water facilities. Infestation by invasive species, such as those noted in the comment, is frequently a major factor dictating the need for maintenance. The City would focus on invasives removal as the primary means to achieve the desired flood capacity in storm water channels. However, when removal of invasives would be unable to achieve the desired capacity, removal of native vegetation would be required.

H.12 The City does not issue grading permits to itself. However, grading plans for City work are prepared to the satisfaction of the City Engineer, in accordance with Section 129.0104 (b) (6) of the Municipal Code. The inspection of City grading work is also done under the authority of the City Engineer, in accordance with Section129.0104 (b) (10) of

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H.12 cont.

(5) *Grading* that adversely affects the existing drainage pattern by altering the drainage pattern, concentrating runoff, increasing the quantity of runoff, or increasing the velocity of runoff to adjacent properties;

(6) Placing *fill* material that contains more than 5 percent, by volume, of broken concrete, asphalt, masonry, or construction debris;

(7) Placing *fill* material that has any piece larger than 12 inches in any direction; or

(8) *Grading* that includes blasting or other use of explosives.

(f) Any *grading* work on a property that contains a *historical resource* as described in Section 143.0210."

H.13

We feel the proposed maintenance activities require standard grading permits (criteria listed above). This requirement will also help ensure an appropriate level of design, implementation, documentation, and coordination of the multiple City Departments involved. We do not feel this proposed project should deviate from the City's requirement of a grading permit for IMPs or restoration activities.

We thank you for the opportunity to comment on this action, and hope that we may work with you to improve the environment in San Diego.
Sincerely,

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for:
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H.12 cont. the Municipal Code. The City Engineer is responsible for ensuring that grading work is designed and completed in accordance with sound engineering judgment and practices, and in compliance with all applicable regulations and permit conditions.

Prescribing a D-Sheet for maintenance or restoration activities on an existing public improvement is inappropriate. This format is not expected to be necessary for the scope of work involved. However, if the City Engineer determines the scope of proposed maintenance or restoration activities would warrant this format, a D-sheet would be required. Moreover, in light of technological developments in document imaging, it would be unduly restrictive to prescribe a particular document format. The determination of the appropriate format for grading plans and other engineering work is already under the discretion of the City Engineer, as provided for in the San Diego Municipal Code.

H.13 As discussed in Response to Comment H.12, a grading permit is not required for maintenance activities. Furthermore, a grading permit is not required in order to coordinate the work of various City departments on City grading work. The coordination of City departments on City grading work is currently accomplished outside of a grading permit process. The City Engineer ensures that all relevant departments provide their concurrence that applicable regulations and permit conditions have been satisfied before the City Engineer or designee would approve the maintenance plan. The inspection of the grading to ensure its compliance with applicable regulations and permit conditions is also under the purview of the City Engineer.

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July 29, 2011

Myra Hermann
Development Services Department
City of San Diego
1222 First Avenue, MS 501
San Diego, CA 92101

Via Electronic Mail
dsdeas@sandiego.gov

Re: Master Storm Water System Maintenance Program Project No. 42891
Recirculated Draft Program Environmental Impact Report

Dear Ms. Hermann:

Coast Law Group LLP ("CLG") represents Coastal Environmental Rights Foundation (CERF), a nonprofit environmental organization founded by surfers in North San Diego County and active throughout California's coastal communities. CERF was established to aggressively advocate, including through litigation, for the protection and enhancement of coastal natural resources and the quality of life for coastal residents. CERF has been an active participant in discussions with the City of San Diego (City) regarding the inadequacy of its approach to flood control under the auspices of storm water maintenance, as petitioner in one lawsuit[1] and two State Water Resources Control Board appeals[2], and as part of a Planning Commission appeal to the City Council[3]. Throughout this time, CERF has expended considerable time not only urging evolution of the City's process, but also reaching compromise solutions in order to realize the environmental benefits of a long-term, holistic approach to storm water maintenance through the Master Storm Water System Maintenance Program (MSWSMP).

In that regard, CERF commends the City for making marked improvements in reducing the scope of its planned maintenance, reevaluating the project impacts, including a new Low Impact Development alternative, and recirculating the draft Program Environmental Impact Report (PEIR) for further public review. Notwithstanding this positive movement, the City's MSWSMP remains problematic for a variety of reasons enumerated below. The MSWSMP's supporting PEIR continues to fall short of CEQA mandates, failing to adequately analyze the MSWSMP impacts, review alternatives, and incorporate adequate mitigation measures into the project.

We simply cannot support the City's current approach in the MSWSMP and are deeply troubled by the severely lacking CEQA analysis. In light of CERF's concerns, and additional deficiencies noted by other environmental groups and resource agencies, we urge the City to reconsider its approach to storm water maintenance, flood control, and CEQA review.

I. The MSWSMP and PEIR Are Contrary to CEQA Programmatic Review Policies

I.1 CERF hoped to see a MSWSMP that would meet the City's objective of protecting life and property, with more than a simple nod to the important function of the City's storm water system as natural habitat and functioning ecosystems. We hoped the City would put the environmental value of the storm water system on equal if not greater footing than its flood control function. Though the protection of life and property is a valid concern, the reality is the City's storm water system is not

[1] *CERF vs. City of San Diego*, Case No. 37-2010-00105262-CU-TT-CTL

[2] Appeal No. A-2139 and A-2126.

[3] Environmental Groups' Appeal of Planning Commission May 7, 2010 Decision.

I.1 The City is well aware of the fact that the storm water facilities included in the Master Program support important biological resources in addition to transporting storm water. As a result of this awareness, the City has included numerous provisions in the Master Program and Recirculated PEIR to limit and compensate for the adverse impacts of maintenance activities on biological resources associated with storm water facilities. These measures include: (1) performing detailed hydrology studies to determine the minimum amount of vegetation that must be removed to restore conveyance capacity, (2) retaining mature trees, and (3) attempting to avoid removing the vegetation on channel banks

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just a flood control device. Moreover, as the City readily admits, in many areas the City's storm water system is not equipped to convey storm water. (PEIR, Appendix A.2. Response to Comment S.17). It makes complete sense then, that in order to effectively plan for wet weather, the City should look outside the City's storm water system and simple, traditional conveyance methods. Although the City has acknowledged the benefits of reduced maintenance, channel widening, and low impact development (LID) in the PEIR alternatives analysis, it has found such alternatives infeasible largely based on capital improvement program inefficiencies and other unsubstantiated claims.

I.1 cont.

This type of narrow, short-sighted thinking is exactly what programmatic review is meant to avoid. The CEQA Guidelines note the available advantages of the program EIR:

> Use of a program EIR can provide the following advantages. The program EIR can:
>
> (1) Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action,
>
> (2) Ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis,
>
> (3) Avoid duplicative reconsideration of basic policy considerations,
>
> (4) Allow the Lead Agency to consider broad policy alternatives and programwide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts, and
>
> (5) Allow reduction in paperwork.

(CEQA Guideline §15168(b)). Unfortunately, the City has not designed a program or prepared an EIR that take advantage of the opportunities provided by this type of review. CERF specifically suggests an integrated MSWSMP, akin to that suggested by Shute, Mihaly and Weinberger in its May 12, 2010 comment letter.

A. <u>The LID Alternative Requires Further Consideration</u>

While the City has evaluated the new LID alternative in the PEIR, this was accomplished largely through only cursory and conclusory analysis. (PEIR, p. 7-18-21).

> Under CEQA, the **public agency bears the burden of affirmatively demonstrating** that, notwithstanding a project's impact on the environment, **the agency's approval of the proposed project followed <u>meaningful consideration of alternatives and mitigation measures</u>**." [citation] The agency may not approve a project with significant environmental impacts "if there are feasible alternatives or feasible mitigation measures available which would substantially lessen" the project's significant environmental impacts, but "in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures," the project may be approved despite its significant environmental impacts. [citation]

(*Cherry Valley Pass Acres & Neighbors v. City of Beaumont*, (2010) 190 Cal. App. 4th 316 (internal citations omitted)(emphasis added)).

I.1 cont.

where the channel width exceeds 20 feet. When the hydrology analysis concludes that vegetation removal is necessary, the Master Program and PEIR contain a rigorous set of measures to mitigate for direct impacts to biological resources as well as a series of protocols and mitigation measures to minimize indirect impacts on adjacent biological resources during maintenance.

Unfortunately, the ability to convey storm water and support biological resources often conflict with one another due to the adverse impact vegetation has on the capacity of storm water facilities to convey storm water. However, as stated on page 3 of the Master Program, Section 26.1 of the San Diego City Charter mandates that the City provide essential public works and public health services by maintaining the storm water conveyance system for the purpose of reducing flood risk. Thus, the need for effectively convey storm water must be a primary goal of the City. As indicated in the discussion of alternatives in Section 7.0 of the Recirculated PEIR, no feasible alternatives to removing vegetation and sediment to allow effective storm water conveyance exist. As a result, the City has prepared the proposed Master Program to maintain the storm water system to fulfill the mandate of minimizing flood risk while at the same time implementing a series of measures intended to minimize the biological impacts to the greatest degree possible.

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I.2 Finding it infeasible as a stand-alone alternative because of "unknown" but presumably high costs, the PEIR rejects this LID alternative. (*Id*. at 7-21). While the City finds LID to be too expensive, it provides absolutely no cost estimates, nor does it compare the relative cost of LID with implementation of the MSWSMP. A variety of LID techniques exist, many of which can be executed on an individual citizen level through expanded education efforts, such as reduction in use of water for irrigation, use of rain barrels, pervious pavement, ocean friendly gardens or drought-tolerant landscape, and redirecting runoff to pervious areas. These techniques are even highlighted in the EIR. (PEIR, p. 7-18). Yet, the PEIR makes no effort to quantify the "high cost" of implementation.

I.3 The PEIR also rejects the LID alternative because it targets the frequent but low intensity storms and purportedly has "very little to no effect" on storms beyond the 10-year storm event. (*Id*. at 7-21). This presumes, however, that the City flood control objective reaches beyond the 10-year storm event–which is not articulated anywhere–and that channel clearing *does* meet this objective. Indeed, the PEIR objective is actually articulated as "reducing flood risk" without an explicit level of acceptable risk of flooding. (PEIR, ES-2). As already pointed out, and further detailed below, the City's storm water system cannot handle even two or five year storms in some areas. (PEIR, Appendix A.2. Response to Comment S.17). Presumably accommodation of a 10-year storm would qualify as a marked improvement and meet the objective of protecting life and property and reducing flood risk.

I.4 Lastly, the PEIR notes perceived timing issues with reducing runoff through new development because of the economy. In light of the 20-year life-span of the MSWSMP, it is entirely reasonable to choose an approach that provides longterm benefits. Moreover, the PEIR does not even attempt to estimate how long before LID benefits would be realized, and at what point the City would consider LID an effective runoff reduction technique. (PEIR, p. 7-21).

Further, though the water quality benefit of this alternative is barely touched upon in the PEIR, it is apparent nonetheless. Reduction of flows into the storm water system and down stream into receiving water bodies is the single most effective way to prevent introduction of pollutants into these water bodies. The City admits as much in describing the mechanism by which water enters the storm water system:

> During World War II, the City witnessed exponential growth, including the construction of new streets and housing, and vast changes to its landscape to accommodate war-related facilities. These activities increased the amount of impervious surface, changed drainage flow patterns, and altered the natural balance between runoff and natural absorption. This, in turn, substantially increased the volume, frequency, and velocity of storm water flows. Although the City constructed storm water facilities, the pace of growth still dictated the need for improved capacity and preventative maintenance. (PEIR, p. 3-1).

Urban runoff remains the greatest impact to water quality.[4] The current MS4 NPDES Permit states:

> Urban runoff discharges from MS4s often contain pollutants that cause toxicity to aquatic organisms (i.e., adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). Toxic pollutants impact the overall quality of

[4] http://www.sdcoastkeeper.org/learn/urban-runoff.html; see Exh 1, CA Summary, Natural Resources Defense Council, *Testing the Waters* 2011

I.2 The discussion of the LID alternative in the Recirculated PEIR does conform with the requirements of CEQA. The potential benefits are discussed in relation to each of the significant impacts associated with the proposed Master Program and the section includes an explicit discussion of the reasons the alternative was not considered feasible. Furthermore, the commenter does not provide any substantial evidence to support the claim that LID would offer a feasible alternative to removal of vegetation and sediment impeding the flow of storm water.

In addition to cost considerations, the Recirculated PEIR concluded that LID was not a feasible alternative because the runoff reduction measures cannot be retroactively enforced on the existing development which is responsible for the impermeable surface conditions that generate runoff in urban areas. Although new development and redevelopment projects would be required to implement LID measures, this activity will be minimal within the highly urbanized areas served by the facilities included in the Master Program. In addition, the Recirculated PEIR points out that LID measures are aimed at reducing low flow runoff and would, therefore, not help relieve the high flow conditions that result in flooding.

I.3 The City is mandated to reduce flood risk regardless of the storm event. The commenter is correct in stating that many of the storm water facilities have been constrained by adjacent development to the point where they are unable to provide flood protection for more than two to five year storms. Because of these constraints, the City is able to reduce but not avoid the flood risk to adjacent development. However, these constraints facing these facilities make routine maintenance even more important and further diminish the ability of the LID measures that can be implemented in a timely fashion to eliminate the need for vegetation and sediment removal to achieve the City's mandate.

I.4 The effect of LID measures will be taken into account in the course of completing the detailed hydrology studies required to be completed prior to each maintenance activity. As indicated earlier, these studies are designed to determine the minimal amount of vegetation removal necessary to reduce flood risk. In locations where LID measures are

> aquatic systems and beneficial uses of receiving waters.[5]

From the United State EPA:

> The most recent National Water Quality Inventory reports that runoff from urban areas is the leading source of impairments to surveyed estuaries and the third largest source of water quality impairments to surveyed lakes. In addition, population and development trends indicate that by 2010 more than half of the Nation will live in coastal towns and cities. Runoff from these rapidly growing urban areas will continue to degrade coastal waters.
>
> To protect surface water and ground water quality, urban development and household activities must be guided by plans that limit runoff and reduce pollutant loadings. To this end, communities can address urban water quality problems on both a local and watershed level and garner the institutional support to help address urban runoff problems.[6]

I.5 Despite the tremendous (and obvious) water quality benefit the LID alternative would provide, the PEIR fails to recognize this reduction in pollutant load, merely acknowledging the long-term benefits. Astonishingly, the City assumes the implementation of LID measures would *cause* water quality impacts similar to the project because of mechanized equipment usage and hazardous material storage. (PEIR, p. 7-20). Laughable at best, this bald assertion is simply disingenuous. How the City equates LID techniques (which include diversion techniques and onsite retention) to *in-stream mechanized* removal of sediment and vegetation in wetlands, rivers, and channels is unfathomable. Not only is it difficult to imagine a scenario wherein LID implementation would cause water quality impacts similar to the proposed project, the City apparently expects the public to conjure up such a scenario because it fails to provide *any* substation for such a bold assertion.

I.6 Notwithstanding the City's failure, such analysis is required by CEQA. *(Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 403-404 [Even though the agency ultimately finds mitigation measures adequate or proposed alternatives infeasible, the EIR must still contain a meaningful discussion of both alternatives and mitigation measures]; PRC § 21081). "The core of an EIR is the mitigation and alternatives sections. "(*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564).

In light of these deficiencies in the PEIR analysis, CERF urges the City to reconsider its consideration of the LID alternative.

> [An EIR] must contain sufficient detail to help ensure the integrity of the process of decisionmaking by precluding stubborn problems or serious criticism from being swept under the rug. [citation] It must reflect the analytic route the agency traveled from evidence to action. An EIR which does not produce adequate information regarding alternatives cannot achieve the dual purpose served by the EIR, which is to enable the reviewing agency to make an informed decision and to make the decisionmaker's reasoning accessible to the public, thereby protecting informed self-government.

(*Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 733, citing *Concerned*

[5] NPDES Permit No. CAS0108758, Regional Board Order No. R9-2007-0001

[6] http://water.epa.gov/polwaste/nps/outreach/point7.cfm attached as Exh 2

I.4 cont. reducing the amount of runoff entering the storm water facilities, this reduction in runoff volume will result in a proportionate reduction in vegetation removal. Thus, as stated in the Recirculated PEIR, LID may represent a viable tool to reduce the need for maintenance on a case-by-case basis.

I.5 The discussion of the potential water quality impacts of the LID alternative has been misconstrued by the commenter. The discussion of water quality effects dealt with short-term impacts related to the construction of LID measures, and simply noted that the land disturbance associated with the initial installation of LID measures could generate erosion and sediment. In addition it was noted that the equipment used in installing the LID measures could result in the incidental discharge of oil and gas byproducts. As required by CEQA, the discussion in the Recirculated PEIR compares the effects of LID measures with the effects of maintenance. In this case, the focus of the comparison was on the short-term sources of water pollutants related to the installation of LID measures with maintenance activities. The discussion does not imply that the operational aspects of LID measures would have water quality impacts.

I.6 As discussed in Response to Comment I.2, the discussion of the LID alternative in the EIR is considered responsive to the requirements of CEQA.

Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn. (1986) 42 Cal.3d 929, 935; *People v. County of Kern* (1974) 39 Cal.App.3d 830, 841; *Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 515; *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 392.)

I.7 The City should revisit this LID analysis in the PEIR and truly consider its ability to implement this alternative fully, or incorporate LID as the preferred or priority technique in the MSWSMP site-specific assessment. Not only will an integrated alternative alleviate the need for some clearing activities, it may work to reduce the water quality impacts of clearing activities by reducing flows (and therefore pollutant loads) to maintained channels.

II. Programmatic Review Without Site-Specific Project-Level Review is Inappropriate and Contrary to CEQA

It is no surprise to the City–indeed the PEIR flippantly acknowledges–the public is vehemently opposed to the City's review and approval process. (PEIR, p. ES-9-10). The City's proposed method of substantial conformance review is not only contrary to CEQA, but is terrible public policy. After conducting cursory review of a 20-year program, the City intends to foreclose the public's opportunity for project-specific review and comment.

I.8 CERF maintains the City's process is fundamentally flawed, and joins in comments submitted by San Diego Coastkeeper (July 27, 2011) and Shute, Mihaly and Weinberger on behalf of various environmental groups (May 12, 2010).[7] Should the City hold steadfast to its position that the PEIR presents adequate program and individual project level CEQA review, and its intention not to conduct project-specific CEQA review, environmental groups will most certainly be forced to challenge the validity of such an approach in court.

A. The PEIR's Site Specific Analysis Is Inadequate

I.9 Because of the PEIR's failure to adequately analyze and mitigate impacts on an individual project level, its usefulness to avoid further project-specific CEQA review is limited. The City has labeled the EIR as programmatic in hopes of avoiding more detailed review of individual projects, but has also indicated its intention not to conduct further CEQA review which would tier off of this PEIR. (PEIR, ES-2-3, pp. 3-24-25). However, this type of CEQA gamesmanship has been invalidated by the courts.

> Designating an EIR as a program EIR also does not by itself decrease the level of analysis otherwise required in the EIR. "All EIR's must cover the same general content. (Guidelines, §§ 15120-15132.) The level of specificity of an EIR is determined by the nature of the project and the 'rule of reason' [citation], rather than any semantic label accorded to the EIR."

(Friends of Mammoth v. Town of Mammoth Lakes Redevelopment Agency 82 Cal.App.4th 511, 533 -534 (2000) (citing *Al Larson Boat Shop, Inc. v. Board of Harbor Commissioners*, 18 Cal.App.4th 729, 741-742, fn. omitted)). As previous commentors have noted, the City tries to have it both ways with its PEIR and substantial conformance review: it provides programmatic level analysis in lieu of future project level review. This approach is not only unlawful, but it also serves to deprive the public and decisionmakers of meaningful review and involvement.

[7] CERF hereby incorporates the entirety of those comment letters.

I.7 As discussed in Section 7.6 of the Recirculated PEIR, the City believes that LID is not a feasible alternative to the Master Program and the commenter has not provided any evidence to suggest that it would be a feasible alternative. Thus, no revisions to the discussion in Section 7.6 are considered warranted.

I.8 Comment noted.

I.9 The Recirculated PEIR is useful in analyzing the impacts and mitigation measures associated with future maintenance activities carried out in accordance with the Master Program. The PEIR identifies specific impact thresholds to assist in the determination as to whether a subsequent maintenance activity could result in a significant impact. The PEIR also contains detailed mitigation measures which are to be applied to subsequent maintenance activities to mitigate environmental impacts including specific ratios to be applied to biological mitigation.

The Recirculated PEIR does not eliminate the need for subsequent review of individual maintenance activities. In fact, as discussed in the Recirculated PEIR and the Master Program, each individual maintenance activity will be subjected to an extensive technical review to quantify the actual impacts of each activity and define the appropriate mitigation. This review will occur through a process known as Substantial Conformance

I.9 cont. Review (SCR). The SCR process is a voluntary process included in the Municipal Code by which a permittee may get verification that activities proposed pursuant to an existing permit are in fact covered by that permit (e.g., in substantial conformance). The SWD has elected to submit annual maintenance plans for the SCR review as an added measure to ensure independent review by DSD of compliance with permit and PEIR requirements. The SWD also elected to provide for this process within the Master Program to allow further public input (See Response to Comment O.1) regarding review of annual maintenance plans and accompanying individual technical assessments covering a broad range of environmental topics including biological and historical resources, hydrology, noise, and water quality.

CEQA specifically allows for the Recirculated PEIR to be used for subsequent maintenance activities which are consistent with the Master Program and PEIR. Section 15168(c) of the CEQA Guidelines states: "Subsequent activities in the program must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared." Section 15168(c)(1) allows the City to rely on the Recirculated PEIR for subsequent maintenance as long as the maintenance activities would not have effects that were not examined in the PEIR. Section 15168(c)(3) further requires that subsequent activities include feasible mitigation measures and alternatives developed in the program EIR. The SCR checklist included as Appendix J of the Master Program includes a comprehensive review of the potential environmental impacts associated with a proposed maintenance activity and will serve as the method to comply with Section 15168(c)(1) and (3). For example, the checklist identifies each mitigation measure and protocol included in the PEIR and requires a determination be made as to whether the measure is included in the proposed maintenance plan.

If the SCR process results in a determination that a maintenance activity is not in substantial conformance with Master Program and/or the results and conclusions of the PEIR, a new or amended permit accompanied by a detailed environmental review will be required.

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I.10 Specifically, the lack of adequate water quality impacts analysis and resultant deferral of mitigation measures until individual technical analysis complete is contrary to fundamental CEQA principles. *Sundstrom v. County of Mendocino* 202 Cal.App.3d 296, 307 (1988) ("By deferring environmental assessment to a future date, the conditions run counter to that policy of CEQA which requires environmental review at the earliest feasible stage in the planning process."). As detailed below, the City's approach to quantification and assessment of water quality impacts and suite of various BMPs, without project specific analysis, or performance standards is severely flawed.

B. Future Individual Technical Assessments Fail to Indicate Severity of Water Quality Impacts

After environmental groups and resource agencies provided extensive comments and criticisms of the previous PEIR, the City now attempts to "quantify" the impacts and benefits of implementing its MSWSMP. The City's Response to Comments belies the City's attempted about-face in the PEIR and Water Quality White Paper:

> It is true that that [sic] vegetation and sediment within concrete channels would function to remove pollutants from runoff. However, this clarification does not materially affect the conclusions of the PEIR because the PEIR did not, nor could it, assess the overall ability of the City's storm water system to control urban pollutants. Determining the amount of urban pollutants that can be removed by the City's storm water facility would be a difficult and an expensive undertaking which *would not change the fact that water quality controls afforded by vegetation would be lost due to maintenance*. (PEIR, Appendix A.2. Response to Comment S.22 (emphasis added)).

Notwithstanding this response, the City now claims it can and has found a way to accurately account for not only the impact to water quality, but also the perceived benefit, of channel clearing. This will be done through the Individual Technical Assessments, including the Individual Hydrology/Hydraulic Analysis (IHHA). The MSWSMP indicates that the IHHA will give the City the information it needs to conclude just how much vegetation and sediment should be removed: "the hydrology/hydraulic study will be the most critical of all of the studies. The focus of this analysis will be on identifying the **minimum amount of sediment and vegetation removal necessary to allow the facility to effectively convey flood water** and prevent flooding." (MSWSMP, p. 16 (emphasis added)). The document later provides:

> Based on this analysis, the hydrologist will identify the minimum amount of sediment and/or vegetation that must be removed to allow effective flood conveyance and **restore the channel to its as-built or natural condition**. Wherever possible, the hydrologist will identify areas of native vegetation that may remain within the affected storm water facility, based on input from the biologist. ((MSWSMP, p. 18 (emphasis added)).

I.11 However, these two statements regarding the purpose of the hydrology/hydraulic study are at the very least inconsistent, if not contradictory. In addition, "[m]any of these facilities are unable to convey runoff from more than a two to five year storm event" (*Id*. at S.17). Thus, much of the storm water system is insufficient to convey a two or five year storm, *even if completely cleared*. It is unclear which storm level the Storm Water Department (SWD) will use as a metric for determination of effective conveyance, but it seems inevitable the City will always clear channels to historical, as-built conditions. In addition to the Response to Comments previously cited, the best evidence of this reality is the City's own findings from previous studies.

I.10 The analysis of potential water quality impacts associated with storm water maintenance contained in the Recirculated PEIR is adequate for a programmatic analysis. The analysis provides a comprehensive discussion of the potential ways that maintenance can affect water quality. In addition, Table 4.8-8 of the Recirculated PEIR identifies a specific list of measures available to reduce water quality impacts. Delaying the selection of mitigation based upon more detailed impact information does not constitute "deferral" of mitigation.

I.11 The commenter is correct in stating that adjacent development has encroached upon storm water channels in a manner which has limited their capacities to less than a 10-year storm in many locations. As a result, large-scale removal of vegetation will likely be necessary to restore storm water conveyance capacity. However, this fact should not trivialize the City's commitment to undertake IHHAs to minimize

While the City attempted to rework its MSWSMP and PEIR, it moved forward with channel clearing in certain segments of the storm water system on an emergency basis through the Army Corps of Engineers Regional General Permit 63. IHHAs for these segments routinely revealed:

> It is important to note that the RCP culvert crossing and the portion upstream of this crossing do not have capacity to convey 100-year storm event. This culvert and lower portion of the channel is severely undersized and is subject to silt debris deposition. Maintenance is required for this culvert and channel to alleviate the effects of flooding to the adjacent properties. Maintaining the channel would not provide the channel with 100-year capacity but rather reduce the frequency of flooding. If maintenance is not performed, the historic frequent flooding that is typical of this area will continue to occur. (IHHA Map 6, 7-2-2010, p. 5. (Exh 3)(emphasis added)).[8]

The City will find justification to continuously clear areas with historical flooding issues, although not necessarily because it prevents risks to safety or property, but merely because it helps alleviate an underlying issue–poor development planning and an increase in impervious cover.

The Response to Comments also notes:

> The PEIR does not distinguish between flood events (e.g. 2-, 10-, 50-year events) due to the **widely varying capacities** of storm water facilities to handle different flood events. Depending on the condition of a particular facility, any one of these events could cause problems. The proposal to conduct hydrology studies prior to maintenance is intended to provide facility-specific evaluation of the runoff capacity and define appropriate actions to be taken to maximize flood control. (PEIR, Appendix A.2. Response to Comment S.14(emphasis added)).

Further, with respect to retention of native vegetation, the City candidly explained:

> The emergency maintenance will bring the channel back to the historic design, increase capacity and reduce the frequency of flooding. Any retention of native vegetation will not achieve this goal, nor was [sic] the intent of the historic design. Therefore, the recommendation of the IHHA report is to maintain the channel consistent with historic plans.

(Helix Environmental RGP 63 Map 58 Letter to Army Corps, December 22, 2010, p. 3 (Exh 6)(emphasis added)). "There is no native vegetation identified in the IBA that should be retained during the maintenance." (IHHA Map 6, 7-2-2010, p. 5. (Exh 3)).[9]

I.12 Because many of the City's facilities are not equipped to handle even two or five year storms, and in light of the City's past practices, it is unlikely the City will retain native vegetation in many (if not most) of the channels. Clearing of channels to as-built or historical conditions will most certainly result in removal of the majority of the sediment and vegetation in many (if not most) channels.

I.13 Without an accurate project description, CEQA's objective of furthering public disclosure and informed environmental decision making would be stymied. (CEB, Kostke & Zischke, 2011, §12.2).

[8] Similar language is found in IHHA for Map 6a (Exh 4) and 134 (Exh 5).

[9] The same language is found in IHHA for Map 6a (Exh 3) and 134 (Exh 4). For Map 58, mature Sycamores or Cottonwoods were to be trimmed but maintained.

I.11 cont. vegetation removal wherever possible.

Copies of Exhibits 3-5 which are referenced following Comment I.11 are available for review at the SWD.

I.12 See Response to Comment I.11.

I.13 This comment expresses concern that the Recirculated PEIR evaluates the impact of storm water maintenance on the assumption that the minimum amount of maintenance will be conducted and, therefore, may underestimate the extent of impacts. It is appropriate to assume that the minimum amount of vegetation will be removed due to the requirement

I.13 cont. A project description that omits integral components of the project may result in an EIR that fails to disclose all of the impacts of the project. (*San Joaquin Raptor/Wildlife Rescue Ctr. v. County of Stanislaus* (1994) 27 Cal. App. 4th 713, 730). By claiming the *minimum* amount necessary will be removed, the City fails to adequately convey to the public the true scope of its maintenance activities–and the resultant impacts. (MSWSMP, p. 16).

C. Water Quality Impact Assessment is Fatally Flawed

The City has attempted to assess whether channel clearing will impact water quality by employing an overly complex scoring system and impact/benefit analysis. This analysis, embodied in the Water Quality White Paper (Appendix F to PEIR) obfuscates the water quality impact analysis, and makes CEQA significance determination nearly impossible. For a variety of reasons detailed below, the City should simply its analysis, correct its baseline, and simply quantify impacts without engaging in is meandering calculations and assessment. Anything less will certainly result in CEQA violations.

1. The Water Quality Impact Assessment Uses an Improper Baseline

The City's benefit/impact assessment improperly turns CEQA on its head. Impacts are to be measured against baseline, not balanced against project benefits. While the City's purported benefit may be appropriate for City overriding considerations, it is improper in the CEQA context. (PRC §§ 21100(b)(1), 21068, 21100; CEQA Guideline §§15125(a), 15126(a), 15126.2(a), 15143), 15382).

I.14 In addition, in conducting this benefit/impact analysis, the City inappropriately underestimates the benefit of retaining sediment/vegetation by only including dry weather days during the wet season in its analysis.[10]

> The number of days per year that the channel may experience dry weather flows was estimated by subtracting the wet days (i.e., rainfall greater than or equal to 0.2 inches, including the subsequent 72 hours) from the total number of days during the wet season (October 1 to June 30). (White Paper, p.19)

This is of critical importance, because the City's calculations are based on the assumption that the water quality benefits are only attained during these dry weather days. By excluding July 31st to September 30th, 92 days, from its analysis, the City underestimates water quality benefits afforded through sediment/vegetation pollutant uptake and transformation by 33 percent.[11] Not only does this inappropriately underestimate the existing water quality benefits in the City's impacts analysis, it provides a misleading and incorrect baseline for CEQA impacts analysis. An EIR must describe the environmental setting for a proposed project, which determines the baseline for impacts analysis. (CEQA Guideline § 15125). The establishment of the baseline is critical to meaningful assessment of environmental impacts. (*Save our Peninsula Committee v. Monterey County Bd. Of Supervisors* (2001) 87 Cal.App. 4th 99, 119). This is typically the existing physical conditions that exist at the time the EIR process beings. (CEQA Guideline § 15125(a)).

[10] The number of wet weather days is used several times in the City's calculations, introducing this error into various aspects of the assessment. (See White Paper, Appendix E, flow calculations based on number of dry days in wet weather).

[11] The City counts 273 days in the wet season and then subtracts rainy days plus the following 72 hours. In the example provided in Appendix E of the White Paper, this leaves 236 dry weather days. The 92 unaccounted-for dry weather days are over 1/3 of the 273 total wet season days.

I.13 cont. in the Master Program that a hydrology study be done before each maintenance activity. One of the specific goals of this hydrology study is to define the minimum amount of vegetation needed to be removed to maximize storm water conveyance.

It is interesting to note that a number of comments were received on the original PEIR expressing the concern that the PEIR over-estimated the potential impacts of maintenance. In order to provide a worst-case basis of impact analysis, the original PEIR assumed that many of the channels would be cleared from bank to bank. In response to those concerns, the City based the analysis in the Recirculated PEIR on the actual results of recent hydrology studies. These studies essentially followed the procedures identified for IHHAs, as defined in the proposed Master Program. In reviewing the results of these studies, it appeared that limiting clearing to the channel bottom plus 2 feet on either side (for channels greater than 20 feet wide) normally provided a sufficient improvement in the ability of those channels to convey storm water and the benefits of removing vegetation on the channel banks was minimal. Channels with a width less than 20 feet were generally found to require removal of vegetation from bank to bank to maximize their ability to convey storm water. Thus, as indicated on pages 4.3-25 and 27, the evaluation of biology impacts was based on these criteria.

It is also important to note that the impact analysis contained in the PEIR is appropriately programmatic in nature. The impact estimates contained in the PEIR are considered adequate for the purposes of evaluating the overall impact of maintenance and the ability of mitigation measures to reduce impacts. The impact analysis will be revised in the course of preparing the IBAs required by the Master Program. These assessments will accurately determine the impact of each maintenance activity on biological resources and define the appropriate amount of mitigation required to offset those impacts.

I.14 The benefit/impacts assessment formula included in the Recirculated PEIR to determine the significance of water quality impacts associated with maintenance will evaluate conditions which exist at the time a specific maintenance activity is proposed. The benefits will be evaluated based

I.14 cont. on the reduction in pollutants that results from the removal of existing sediments within the area proposed to be maintained. The impacts will be derived from the effect of the maintenance on the pollutant treatment capacity that exists at the time of maintenance. This approach assures that the evaluation will be done at the most appropriate time with the most up-to-date information. To base the evaluation on conditions which may have existed at the time the Recirculated PEIR is prepared would not offer the optimum approach to defining the impact of maintenance on water quality due to the dynamic nature of water quality through time.

The comments indicate a misunderstanding of the process methodology regarding the conditions from which the water quality assessment methodology is based. The assessment process does include dry weather flows during the dry weather season, where they are present. However, in the two examples presented in the White Paper, summer dry weather flows were not observed in these flood control channel based on over 5 years of dry weather flow monitoring through the ICID program, special studies in these watershed and at least two field verification events at the time of the assessment. If through this level of analysis, no dry weather flows are observed, the baseline conditions that is assessed requires consistency with site specific data. Where dry weather flows are documented from previous and ongoing monitoring, and verified through site investigations as part of the assessment process, the process specifically requires the inclusion of the summer dry weather flows as part of the assessment methodology (See Appendix A, SOP, Evaluating System Flow and Volume Section).

Furthermore, the methodology takes a conservative approach and includes potential dry weather flows during the wet weather season, even if there are no flows observed in the dry periods of the wet weather season. In addition, the methodology takes in account low flow wet weather flows for storms that are less than 0.2 inches. Therefore, for the two examples provided, the total days during the wet season that are excluded from the determination of the loss of assimilation capacity are 37 days out of 273 days. If dry weather flows had been documented and measured for the dry season, the days excluded would have been only 37 out of 365 days. This would be only 10 percent of the full year. This limited time

I.14 cont. period represents conditions where the retention time is significantly reduced due to high storm flows and the potential for plant and sediment uptake of constituents is negligible. This is based on the scientific data presented in the over 50 references provided in the White Paper that have established a direct relationship between reduction in retention times to reductions in pollutant uptake.

To provide further clarification on this issue, the following text has been added to the White Paper (Appendix A, SOP, Evaluating System Flow and Volume Section):

To estimate annual pollutant load through the system, the annual flow shall be estimated based on the empirical data obtained in this assessment. Monitoring equipment may be installed to log stream level, and head verse flow tables can be created based on stream geometry to calculate annual dry flow through the system. This may be particularly applicable when there is evidence of intermittent flows in a system. In lieu of installing equipment (when flow is fairly consistent), the daily flow shall be estimated by multiplying the instantaneous measured flow (QNTS) by 24 hours and the conversion factor of 3,600 seconds per hour. The assessor shall estimate the number of days per year the system meets the dry weather flow condition. A thorough understanding of how a system responds to storm events shall obtained through reviewing available annual dry weather monitoring, MS4 monitoring, receiving water monitoring, regional NPDES monitoring, SMC, and third party data a combined with field verification (how long after storm event is there flow, is there summer flows, etc.). The assessor may estimate the annual dry weather days by subtracting the wet days per year. A wet day is when flow in the system is significant enough to cause retention time of water through the system to be minimal, such as a few minutes. Constructed wetlands recommend a retention time of approximately 24 hours to be effective. Thus, when retention time of the system is reduced to minutes, the vegetation in the system undergoing root uptake of pollutants will not result in measurable differences in water quality improvement and is considered negligible. In some cases, the assessor may assume wet days include storm events of 0.2 inches of

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I.14 cont. The City has instead constructed its own artificial baseline for impacts analysis (although under the guise of balancing impacts/benefits) by omitting 92 days of the year. To substantiate this decision, the City may argue that dry weather flows are unpermitted during the dry season pursuant to its MS4 Permit. Some of these flows may not be permitted pursuant to the MS4 Permit, but they must nevertheless be taken into account in determining the baseline. (*Riverwatch v. County of San Diego* (1999) 76 Cal. App. 4th 1428). Moreover, the PEIR admits dry weather flows persist: "...a few storm water facilities, such as Sorrento Creek, carry sufficient amounts of urban runoff during the dry months to preclude or limit maintenance activities." (PEIR, 3-18).

2. The City's Significance Threshold is Unsubstantiated and Improper

I.15 The City's method also uses a significance standard of within 25 percent of water quality standards for a 303(d)-listed constituent.[12] However, the City provides no support for this arbitrary standard. Indeed, in light of the finding that cumulative water quality impacts are significant and unmitigable, the City should analyze what the true impact of *any* increase in pollutant levels (above baseline) would be, and appropriately consider *increases above baseline* (rather than below or within the Basin Plan objective) significant. (CEQA Guideline §15126.2). Coupled with the imprecise nature of the City's monitoring, flow assessment, and scoring system and improper baseline, underestimation of channel clearing impacts is certain.

3. The City's (Improper) Calculations Are Skewed Toward Increasing Semblance of Benefits and Underestimating Impacts

I.16 With respect to cumulative impacts in particular, the City underestimates the channel pollutant capture and removal capacity by assuming storm events greater than .2 inches and the 72 hours thereafter will exceed the capacity of the existing natural treatment system. (White Paper, p. 5). Though the City has constructed a nice self-serving graph to support this argument, it has provided no substantiation for this assertion in general, and for the arbitrary .2 inch rain cutoff (and the following 72 hours thereafter). (*Id.*, pp. 5-6).

I.17 As explained in Coastkeeper's comments on the White Paper, the City's evaluation of impacts/benefits is fatally flawed (in addition to being contrary to CEQA).[13] The City's arbitrary scoring system only serves to underestimate and artificially reduce the pollutant removal efficiency of the existing natural system in the channels.[14] The City relies on the false premise that channels to be maintained do not act as efficiently as a "natural system" without explanation. The City merely relies on the assertion that the channels "were not designed to be treatment systems, so they do not retain pollutants under the varied flow conditions as effective (sic) as constructed treatment systems." (White Paper, p. 7). While it is true the channels were designed merely to convey water, it does not follow that natural unplanned growth is not as effective (if not more effective) than constructed treatment systems.

[12] Although the PEIR mentions exceedance of within 25 percent of Basin Plan standards, the Water Quality White Paper speaks in terms of 303(d) listed constituents. (White Paper, p. 11 ("Targeted pollutants for this assessment are based on the §303d listed pollutants.").

[13] These comments are attached hereto as Exhibit 7 and are incorporated herein by reference.

[14] There are incalculable flaws in the City's methodology, and numerous unsupported assertions regarding pollutant-removal efficiency and constructed or engineered treatment systems peppered throughout the PEIR and White Paper. As acknowledged by the City, most literature cited and used to support many of the City's assumptions is based on engineered treatment systems for wastewater–not urban runoff or storm water. (PEIR, p. 4.8-19).

I.14 cont. *rainfall within a 24-hour period and the following three calendar days (or less if systems drops back to minimal flow prior to the three day period), which is consistent with the threshold use by the San Diego County Department of Environmental Health's (DEH) to issue General Advisory to avoid contact with ocean and bay water within 300 feet on either side of any storm drain, river, or lagoon outlet. (SDRWQCB Amendment to the Water quality Control Plan for the San Diego Basin (9) dated 2008). These calculations are conservative for two reasons: (1) storm events less than 0.2 inches still produce runoff, which would reduce retention time (in other words by not including storm events less than 0.2 inches, the calculations would assume benefits of the existing system when it would not be a benefit during these storms causing higher flows) and (2) watersheds typically have relatively high flows, when compared to flows associated with 24-hour retention times, for longer than three days after storm events, especially larger events and/or larger watershed. Additionally, flow in these systems typically tapper off to minimal (or zero) as more time elapses from the last storm event of the wet season. Assuming the calculated daily flow exists in the system until the end of the wet season (June 30) is also conservative, because this higher than actual flow will estimate a higher than actual pollutant load and the associated pollutant removal ability of the existing system which is scheduled for maintenance (impact). Some systems may have measurable amounts of dry weather flow through the summer months from sources such as over irrigation, foundation drains, natural groundwater seepage, and other non-storm water sources (sometimes referred to as urban runoff). In this case (flow in dry season), the daily flow for the system during the summer months (June 30 to October 1) should be estimated and added to the annual flow for the system.*

I.15 The City adopted the "25 percent" standard in an effort to respond to earlier public comment that the contribution toward pollutant levels which had not yet exceeded established standards should be considered. While not based on any adopted procedure, this approach does offer a conservative basis for evaluating impacts.

For concrete channels, there may be some merit to the City's assertion. However, maintenance activities are planned in both earthen and concrete-lined channels. Moreover, these channels are to be cleared because *natural* ecosystems have flourished within them, taking up residence where the City would rather *artificially* provide a clear path for moving water. The City's belief that natural treatment systems require periodic maintenance to sustain pollutant retention properties is also completely unsubstantiated and serves as a faulty premise. Natural wetlands are *self-sustaining* without human interference.[15]

I.17 cont. "The process begins with filed verification of dry weather flows." (White Paper, p. 11). "If no flow is observed, then there is no quantifiable impact due to re-mobilization of deposited pollutants." (*Id.*). Such a premise is absurd. A random field visit to a channel cannot confirm that absence of dry weather flows. Even if there are no dry weather flows, there may very well still be an impact to water quality due to re-mobilization of deposited pollutants during wet weather. After removal of sediment and vegetation, such pollutants may be carried downstream during the first rain event post-channel clearing.

The City then calculates the benefit of removing sediment by multiplying the pollutant concentration "in the channel sediments" by the "volume of sediment scheduled to be removed". (White Paper, p. 11). Although the City attempts to create a sophisticated calculation for benefit/impact assessment, its bias and the absolutely arbitrary nature of its methods are evident in this statement. For benefit quantification, the City multiplies concentration by mass. Put simply, the City assumes full pollutant absorption in every single grain of sediment it removes. Maximum efficiency of the treatment system is assumed for benefit assessment. However, when it comes to impact assessment, the City goes through a winding road of several scoring systems all designed to chip away at the pollutant removal efficiency, resulting in a reduced pollutant absorption efficiency. Thus, the sediment/vegetation removed by the City is 100 percent efficient–but the impact to water quality is quantified as something much less. This type of reasoning is not only unsubstantiated, but is designed to underestimate impacts to water quality.

I.18 The City's impacts analysis also fails to capture downstream impact due to sediment and vegetation removal as vegetation lost will no longer stabilize existing sediment, or capture future sediment loads. (White Paper, p. 16). Thus, any underestimated water quality impacts within the channel will be compounded downstream, especially where multiple channels are cleared upstream of a common receiving water body.

I.19 Impacts to water quality are further underestimated through the City's assumptions that (1) filed flow and concentration are constant throughout the year and in different years; (2) literature values for removal efficiency of engineered natural treatment systems accurately capture the efficiency of natural systems; (3) the estimated time between maintenance or re-establishment of capacity is accurate in light of (i) changing SWD priorities and budget priorities and (ii) the rate of re-establishment; (4) no impacts to water quality result for non-303(d) listed pollutants; and (5) impacts to water quality can be effectively mitigated through BMPs that are *already required* to offset other existing or future impacts (ie. NPDES Permit, TMDL, etc).[16] (White Paper, p. 14, Figure 3. Water quality management quantification process).

I.20 The White Paper recites a plethora of pollutants commonly found in urban runoff and storm water: metals, pesticides, nutrients, PCBs, PAHs, etc. (White Paper, p. 15). Nonetheless, the City has decided only to monitor 303(d) listed pollutants. As a result, not only will the City be unable to

[15] Exh 8:US ACOE Regulatory Guidance Letter, No. 02-2 Date: December 24, 2002

[16] This is entirely improper where BMPs are already in place as part of the baseline condition.

I.15 cont. The "25 percent" concept is similar to the EPA guidelines for Total Maximum Daily Loads. These guidelines include a margin of safety as part of the determination of waste load allocations (WLA). The guidance does not define a specific number but a potential range of 5 to 40% of the WLA to be added to the background and allowable concentrations. The EPA assessment process uses a 75% margin of safety by taking 1/5 of the value of the established concentration that does not result in an impact to beneficial use. For example, if the WQO is 10 mg/l, then the concentration used in the water quality assessment to determine if mitigation is needed is set at 2.5 mg/l (=10mg/l (1-10mg/l*.75)) to address potential cumulative water quality impacts from other constituents.

To add an additional margin of safety with regard to the analysis of cumulative water quality impacts, the storm water analysis for proposed maintenance activities requires consideration of list of constituents that exceeds the 303d listed constituents by requiring consideration of those constituents that are monitored under the NPDES Co-permittee regional monitoring program. This expanded list was used in the two examples provided in the White Paper.

The assessment methodology required of future maintenance activities, therefore, uses a conservative approach of considering a wider list of constituents that is not limited to the 303d list, and a margin of safety of one quarter of the WQO in determining impacts. This approach allows consideration of conditions that represent levels of constituents such as nutrients or natural minerals that occur at concentrations above non-detect but are within one fourth of the water quality standard.

I.16 The definition for wet weather per the San Diego NPDES Regional Stormwater Permit (San Diego Regional Water Quality Control Board's Order No. *R9-2007-0001, NPDES No. CAS0108758 Waste Discharge Requirements for Discharges of Urban Runoff From the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, the Incorporated Cities of San Diego County, the San Diego Unified Port District, and the San Diego County Regional Airport Authority*, dated January 24, 2007) is any storm greater than 0.1 inches. It further defines the storm event as occurring over the next 72

I.16 cont. hours. The San Diego County Department of Environmental Health's (DEH) issues a General Advisory to avoid contact with ocean and bay water within 300 feet on either side of any storm drain, river, or lagoon outlet for storm events of 0.2 inches or greater. The definition used in the White Paper (0.2 inches and the following 3 days) is, therefore, based on the more conservative of current definitions for wet weather in the region. This definition of wet weather flows is used in the assessment process to define the days that due to high flows and velocities have a negligible assimilation capacity. For the two examples provided, this period is limited to only 37 days of the year. This limited time period represents conditions where the retention time are significantly reduced due to high storm flows, and the potential for plant and sediment uptake of constituents is negligible. This is based on the scientific data presented in the over 50 references provided in the White Paper that have established a direct relationship between reduction in retention times to reductions in pollutant uptake.

I.17 The citation in the comment was not quoted correctly. The statement in the White Paper was that the channels do not act as efficiently as "constructed treatment systems." The statement from the White Paper is based on over 50 peer-reviewed technical references that provide quantifiable removal capacities for specific constituents for engineered systems that are designed to control flow velocity and retention time to maximize plant uptake.

The City's storm water facilities are not designed to contain storm flows, but to convey them as quickly as possible to avoid localized flooding. The assessment process defined in the White Paper provides for the quantification of water quality impacts by comparing the ability of systems specifically designed to maximize pollutant adsorption with conditions in the City's storm water facilities with regard to their assimilation capacity. If the sediment and vegetation community has all the components that would maximize adsorption of pollutants, then the maximum level is used (i.e., conveyance systems would be considered as effective as constructed treatment systems). If the storm water facility possesses less than favorable conditions for pollutant adsorption, then this is accounted for based on site-specific surveys and standardized scoring methodologies that will be performed by qualified scientists.

I.17 cont. The statements in the White Paper made in regard to maintenance of natural treatment systems is based on over 50 pier reviewed technical references provided. As the comment does not include any evidence to support the claim that the assessment procedure is flawed, no specific response can be made to the claim.

Storm water facility maintenance is required due to accumulation of pollutants in the sediment and vegetation that exceed the capacity of these systems over time. If the plants and sediment that have reached their assimilation capacity are not removed to re-establish their original capacity to accumulate pollutants, these pollutants will not be removed as effectively from the water column. Furthermore, the sediment and plant materials which have accumulated pollutants can be transported downstream during high storm flows.

Because all the channels to be maintained receive urban runoff and are 303d-listed for impairment, there is likely no case where uptake capacity is not a concern and would not require some level of maintenance overtime to restore this capacity. The reviewer quotes a USACE Regulatory Guidance Letter that states, "Natural wetlands are self-sustaining without human interference." Again, the issue at hand does not pertain to natural wetland systems, but rather constructed treatment (wetland) systems or, more accurately, flood control channels that have some or all characteristics of constructed treatment systems.

As discussed in Response to Comment I.14, determination of dry weather summer flows is to be based primarily on existing data that includes over 20 years of water quality monitoring by the City including annual dry weather monitoring, MS4 monitoring, receiving water monitoring. In addition, regional NPDES monitoring, SMC, and third party (Coastkeeper) data will be used to determine if dry weather flows are present. This review of the existing data will be followed by field verification that may include installation of flow monitors, if evidence exists of periodic dry weather flows. This is further clarified in the modifications to the White Paper (Appendix A, SOP, Evaluating System Flow and Volume Section). Furthermore, the assessment process includes winter dry weather flows

I.17 cont. even if no summer dry weather flows are observed and low flow wet weather storm events below 0.2 inches.

The assessment process has included an equal level of sophistication and conservatism in the calculation of the benefits and impacts. Specifically, the basis for the level of pollutant removal achieved from the removal of impacted sediment is based on actual site-specific sediment sampling and analysis. This is a sound approach that is a standard approach to quantifying the volume of pollutant removed. Furthermore, the pollutant removal benefit assessment includes a sophisticated evaluation of the sediment transport capacity by evaluated site-specific grain size and anticipated storm flow velocities. The Evaluation of Sediment Transport Potential Section of SOP (Appendix A) states:

> *Benefits are considered only for those conditions were measured contaminants are anticipated to be mobilized between maintenance periods. If the potential peak velocity for the design storm is below the maximum permissible velocity listed for the applicable material/ cover, then the load removal benefits from sediment removal should not be applied to the benefit-impact assessment calculations (i.e., maintenance may involve the removal of sediment, but load removal shall not be credited as a benefit of sediment removal).*

The SOP calls for laboratory analysis of the sediment grain size using ASTM D6913 to determine type of cover. Based on the Drainage Design Manual, tables are provided to determine maximum permissible velocity allowed within the channel without causing scour. The results of the IHHA are used to provide the velocities of the channel segments scheduled for maintenance. This again uses conservative approach in that if velocities are greater than maximum permissible velocity, zero benefit is realized without a more detailed sediment transport analysis.

I.18 The City's impact analysis recognizes the potential for the removal of vegetation to increase erosion. In response to this potential impact, the Master Program includes a specific protocol to compensate for this potential impact until the wetland vegetation begins to re-establish (generally 6-12 months after maintenance). If an IHHA prepared for a maintenance plan concludes that the removal of vegetation and/or

I.18 cont. sediment could generate localized velocity increases, Protocol WQ-9 requires the maintenance plan to include a temporary check dam. The check dam would be designed to reduce storm water velocities and aid in the re-establishment of vegetation in the channel. In addition, the City will implement erosion control measures, in accordance with NPDES requirements. Lastly, it's important to note that many of the channels proposed for maintenance have historically been subject to deposition of sediments which has resulted in the need for ongoing maintenance. Thus, sediments normally accumulate in these storm water facilities rather than being transported through them.

I.19 As discussed below, the potential impacts are not underestimated:

(1) As discussed in Response to Comment I.14, the intention of the assessment is to estimate the dry weather flows as accurately and reasonably as possible. Historical data will be used and augmented with field verification. Conservative assumptions will be used, such as considering constant flow, which overestimates flow, and thus loading and potential impacts that would be mitigated.

(2) The assessment is based on site-specific measured field conditions and published data on the efficiencies of storm water systems.

(3) The estimated time between maintenance activities is based on the best available data relating to channel prioritization, resources, the rate of vegetation re-establishment, the rate sediment re-accumulation, and other factors in which the City does not have control over (such as weather).

(4) The water quality assessment includes constituents that are monitored under the NPDES Co-permittee regional monitoring program, which includes §303d listed pollutants and numerous non-§303d listed pollutants. As discussed in Response to Comment I.15, a full list of constituents is used in the assessment process along with a margin of safety to address cumulative effects of multiple constituents.

I.19 cont.

(5) The assessment has used an integrated approach to addressing water quality as advocated by the Regional Board. The overall goal is improved water quality that is achieved through implementing effective best management practices (BMPs) regardless of which program or individual project regulatory regime. Without an integrated approach to water quality, inefficiencies occur and delays in implementation.

The City is committed to an integrated water quality program that best uses public funds to meet the overall water quality goals of our region. This is consistent with the EIR process which is based on comparing baseline conditions with the potential impacts from the channel maintenance. As BMPs are implemented in this integrated approach, which includes BMPs implemented for TMDLs and NPDES Permit requirements, the concentrations in the receiving waters will decrease and a new baseline condition will be established. Under an integrated approach, BMPs will be implemented in the watershed considering channel maintenance priorities as well. Where BMPs are implemented to measurably reduce concentrations of pollutants prior to channel maintenance, the baseline condition will indicate these reductions from site-specific data and assessment. These established reductions will reduce the level of mitigation required as the baseline conditions have been reduced. So, if BMP's are already implemented, they could not be double counted as they would not provide additional water quality improvement above what they are currently providing. If a BMP is currently being planned but not implemented, that BMP may provide water improvements that may help to mitigate some of the potential impacts of performing channel maintenance. If for example, a BMP was in planning for TMDL compliance that also could help mitigate channel maintenance impacts, it would not be considered double counting, because BMPs may be implemented to reduce daily loading below established values in TMDLs (to meet regulations) and improve the water quality to baseline level of water exiting maintained channel segments (to meet water quality assessment mitigation goal). This integrated approach is more sustainable and reduces inefficiencies in the use of public resources.

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I.20 cont. mitigate for these pollutant sources, it has not and will not even monitor the project's impact with respect to the majority of these pollutants.

I.21 The City clearly does not appreciate the purpose of CEQA review. The impact of the MSWSMP (the project) is measured against the baseline. The impact cannot be effectively analyzed by arbitrarily choosing only to assess water quality impact for already impaired water bodies (ie. 303(d) listed pollutants). Any increase in pollutant loading (or decrease in pollutant removal) may result in a significant environmental impact.

Not until the IWQA and IHHA for each segment would it be determined whether impacts are significant and if so, which and how many BMPs would be used, and at for how long such mitigation measures would be required. (PEIR, p. 4.8-26). Even the Water Quality White Paper contains such admissions:

> This White Paper provides a framework for future decision-making, to select site-specific BMPs, and evaluate their feasibility. This is a simplistic approach, and the actual BMPs used by the City will be coordinated with the City's Integrated Water Quality Program. (White Paper, p. 21).

I.22 For example, the PEIR states installation of check dams is required when recommended by the IHHA. (PEIRm, p.4.8-16-17). However, there is no guarantee an IHHA would recommend a check dam, nor is there any indication of the criteria or performance standards that would indicate a check dam would be necessary. WQ-9 merely states installation is required when hydrologic or hydraulic studies indicate that maintenance could adversely impact downstream areas. (MSWSMP, p. 11). The threshold for "adverse impact" is entirely unknown.

Mitigation Measure 4.8.1 only serves to confuse matters. It states:

> If the IWQA indicates that maintenance would impact a water pollutant where the existing level for that pollutant exceeds, or is within 25 percent of, the standard established by the San Diego Basin Plan, mitigation measures identified in Table 4.8-8 shall be incorporated into the IMP to reduce the impact to within the established standard for that pollutant. (PEIR, p. 4.8-28).

The Water Quality White Paper attempts to clarify this process unsuccessfully:

> In cases where mitigation may be necessary, BMPs may be implemented in the watershed in coordination with the Storm Water Department's Integrated Water Quality Program to off-set the loss in pollutant load removal capacity. BMP implementation planning can be prioritized based on this quantification process as well as scheduling of storm water facility maintenance. In this example, approximately 31 pounds of cadmium during the maintenance period (3 years), or about 10 pounds per year, would need to be mitigated (i.e., 10 pounds of cadmium per year shall be removed from the watershed through mitigation efforts/BMP implementation). In order to estimate the appropriate mitigation effort the following general process shall be followed: (1) select the type(s) of BMPs that may be used as mitigation effort; (2) estimate the approximate tributary watershed area that each BMP can effectively treat; (3) estimate the average annual pollutant load removal of selected BMP; (4) and estimate the total number of BMPs required to remove pollutant loads greater than the required mitigation effort.

I.20 As discussed in Response to Comment I.15, the water quality assessment includes constituents that are monitored under the NPDES Co-permittee regional monitoring program, which includes §303d listed pollutants and numerous non-§303d listed pollutants.

I.21 The statement by the commenter that "any increase in pollutant loading (or decrease in pollutant removal) may result in a significant environmental impact" is an over-generalization. The levels of the many constituents in local watersheds are well below the threshold established in the San Diego Basin Plan. As a result, minor increases in those pollutants resulting from maintenance would not have a significant impact with respect to those pollutants.

The Recirculated PEIR appropriately uses the existing runoff pollutant levels and impaired water body status within the different watersheds as the baseline for its programmatic analysis. Furthermore, recognizing the dynamic nature of pollutants within storm water channels, the Recirculated PEIR and Master Program require Individual Water Quality Assessments (IWQAs) to be completed at the time individual maintenance activities are proposed and use the latest pollutant and impaired water body information available. This will ensure that the latest information on pollutant levels is used in the evaluation.

In an effort to take a conservative approach to evaluation of potential water quality impacts from maintenance, the PEIR establishes a threshold intended to evaluate the contribution of maintenance to those pollutant levels which have not yet exceeded Basin standards but could in the future. This threshold identifies a contribution of a pollutant where existing levels are within 25 percent of the level established by the San Diego Basin Plan as potentially significant.

I.22 As stated in maintenance protocol WQ-9, each stream will be assessed for its individual hydrologic and hydraulic characteristics. To provide more specificity, Protocol WQ-9 has been revised to require a check dam or comparable mechanism be installed during maintenance whenever the velocity of storm water during a "bank-full" storm event would be expected to exceed the velocities identified for unlined channels per Table 1-104.108 of the City's Storm Water Design Manual.

> There may be mitigation effort (BMPs) planned for the watershed where maintenance is occurring as part of the Storm Water Department's Integrated Water Quality Program. **The pollutant load removal of the BMPs may be used as mitigation effort**. In the case where there is currently no pollutant removal mitigation effort planned within the watershed, the water quality impact could be addressed through the implementation of further BMPs in coordination with the Storm Water Department's Integrated Water Quality Program. (White Paper, p. 20 (emphasis added)).

I.23 First it appears that the SWD will use the flawed water quality assessment to estimate impacts, and then will either (1) use BMPS *already required* through the NPDES Permit to double-count mitigation efforts (and provide no net benefit); or (2) choose BMPs in coordination with the IWQP. The IWQP planning process may take years, so while channel maintenance impacts are ongoing, BMPs have yet to be implemented.

I.24 Moreover, with this structure, and without clear performance standards, the public is left wondering how and when the City will "reduce the impact to within the established standard for that pollutant." (PEIR, p. 4.8-28). More importantly, the City fails to show how implementation of BMPs in the future will adequately reduce impacts to a less than significant level.

III. Emergency Maintenance Must Truly Be an Emergency

I.25 The City's intent to process post-emergency work with "after-the-fact" permits and mitigation measures identified in the PEIR (for emergency maintenance that does not qualify for a CEQA exemption) is problematic for several reasons. If the PEIR contained adequate analysis and appropriate mitigation measures, such an approach might have merit. However, the PEIR's channel-specific analysis of water quality impacts is deferred until a subjective, arbitrary assessment of channel health is conducted; premised on a chance sampling of dry weather flow; and woefully underestimates impacts by relying on only 303(d) pollutants, an unsubstantiated determination of "benefits" of removing sediment and vegetation, narrowly defining impacts, and limiting the number of dry days in its accounting. Further, the PEIR lists a suite of BMPS, none of which are linked to criteria, performance standards, or a process for assessment during individual channel maintenance. This leaves the public and decisionmakers guessing when, how, if, and under what circumstances any of the listed BMPs will be implemented. In other words, the PEIR is completely inadequate to begin with, and will be even less useful *post-maintenance* as a result of its cursory survey of impacts and mitigation measures.

Moreover, the cited municipal code sections authorize emergency Coastal Development Permit issuance when there exists "a sudden, unexpected occurrence within the Coastal Overlay Zone". (SDMC §126.0718(a)). Although truly sudden and unexpected emergency situations may arise, the City is well aware that deferred maintenance does not qualify as a CEQA or Coastal Emergency.[17] The City should make certain it plans appropriately and only invokes emergency provisions in true emergencies.

[17] *San Diegans for Open Government vs. City of San Diego* Case No. 37-2010-00103095-CU-TT-CTL

I.23 As discussed in Response to Comment I.19, utilizing BMPs associated with the NPDES permit would not constitute double-counting.

I.24 The standards used for the water quality assessment are well defined in the White Paper, and are based on peer- reviewed literature values along with the water quality objectives listed in the Basin Plan with a margin of safety to account for cumulative effects. BMPs that are implemented to address water quality goals whether from this process or under TMDLs or NPDES permit will be assessed against current and future Basin Plan amendments and NPDES Permit requirements that have program assessment requirements.

As stated, the proposed assessment uses an integrated approach to addressing water quality as advocated by the Regional Board. The overall goal is improved water quality that is achieved through implementing effective BMPs, regardless of which program or individual project regulatory regime. Without an integrated approach to water quality, inefficiencies occur and delays in implementation. The City is committed to an integrated water quality program that best uses public funds to meet the overall water quality goals of our region. The City is currently undertaking a comprehensive BMP assessment program as part of the Integrated Storm Water Quality Program.

I.25 In most instances, the City would rely on the original Statutory Exemption (CEQA Section 15269) issued for the initial emergency activities when processing after-the-fact permits, in accordance with San Diego Municipal Code Sections 126.0718, 143.0126 and/or 51.0102. However, maintenance activities undertaken during the initial emergency may, in some cases, result in additional environmental impacts or repairs that

IV. Conclusion

Therefore, CERF urges the City to work with environmental groups in reworking the MSWSMP and drafting a PEIR that truly meets the twin goals of reducing flooding and maintaining the City's storm water system.

Should you have any questions, please contact our office directly.

Sincerely,

COAST LAW GROUP LLP

MARCO A. GONZALEZ

LIVIA BORAK

cc. Regional Water Board
Army Corps of Engineers

I.25 cont. were not originally anticipated. In those cases, an after-the-fact permit may not be able to rely on the statutory exemption originally issued for the emergency, including any mitigation/restoration requirements covered in the exemption or emergency permit(s). Under these circumstances, reliance on the adopted PEIR and Master Program,, for those storm water facilities included in the Master Program, would be appropriate because impacts would be accounted for through the SCR process.

The after-the-fact permit submittal would include all the required elements such as, but not limited to the IBA (plus a restoration plan for wetland and/or upland impacts), IHA, IHHA, IWQA and supporting documentation (e.g. monitoring reports) indicating what Master Program protocols and PEIR mitigation measures were implemented for the emergency maintenance activities.

Fairmount Park Neighborhood Association

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July 6, 2011

Myra Herrmann, Senior Planner – City Of San Diego

VIA EMAIL: dsdeas@sandiego.gov

Subject: Project 42891 Master Storm Water System Maintenance Program

The Fairmount Park Neighborhood Association has reviewed the re-circulated draft EIR and has the following comments in regard to Chapter 3.0 of the Project Description, pages 3-16 and 3-17 under the heading of BIO-6: We feel this description of Arundo eradication measures is a bit too brief and over simplified.

J.1 1. Foremost should be the point that any herbicides applied be done during the active growing season of Arundo regardless if it is folar or cut and paint method. We assume that elsewhere the City has a condition that a person qualified is handling the herbicide. As no specific chemical is identified it is important that if near water the herbicide has an EPA approved surfactant.

J.2 2. The condition that the paint and cover method is used if Arundo occurs within some native plants is an oversimplification. To what extent are there native plants? Is Arundo a certain percentage cover of the area? A lot of money and time may be wasted on some very simple and easily grown native plants that can be replanted following total removal.

J.3 3. While it is assumed that this is not the place for details of the cut and paint technique, we would like to remind you that it is **critical** when using this technique that the herbicide is applied ***within 5 minutes*** of the cut. This means one just cannot go in and cut all morning and come back after lunch and apply the herbicide. We have seen this method misused so many times, mainly based on our experience with past efforts with the Auburn branch of Chollas Creek.

We hope that you can incorporate our comments into this re-circulated EIR document draft.

Thank you for your time and attention.

Russ Connelly

President, Fairmount Park Neighborhood Association

RC/jr

J.1 The commenter is referred to page 21 of the Conceptual Wetland Restoration Plan (Appendix D.3) of the Recirculated PEIR for more information on the two procedures to be used to eradicate arundo. Table 6 of this Plan, identifies the fact that herbicide should be applied between October and November. Any herbicides applied in the course of arundo control would be applied by a properly licensed person and EPA requirements will be followed.

J.2 The method of arundo control will be tailored to site-specific conditions. As a programmatic document, it is not feasible, nor does CEQA require, a detailed determination of the extent of invasive species occurring within future maintenance areas. The protocols included in the Master Program are specifically designed to provide sufficient guidance on proper invasive plant control as individual maintenance is conducted. Furthermore, the City is motivated to reduce the cost of invasive species control and will consider the cut and spray method of arundo control if the cost of replacing native plants is not too high.

J.3 Effective control of arundo involves a number of aspects, and it is difficult to capture all of them within a concise protocol statement. As discussed earlier, the City intends to follow the expanded procedure contained in the Conceptual Wetland Restoration Plan, included in Appendix D.3 of the Recirculated PEIR.

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July 29, 2011

Myra Herrmann, Environmental Planner
City of San Diego Development Services Center
1222 First Avenue, MS 501
San Diego, CA 92101

Via email to: DSDEAS@sandiego.gov
Re: Project Number 42891

Re: Master Storm Water System Maintenance Program (MSWSMP) Draft Recirculated PEIR

Dear Ms. Herrmann:

As Executive Director of Friends of Rose Canyon, I appreciate the opportunity to comment on the Draft Recirculated PEIR. The mission of Friends of Rose Canyon is to protect, preserve and restore Rose Canyon and the Rose Creek watershed. Hence we have a profound interest in the activities proposed in this document.

K.1 **I.** I attach and incorporate by reference the following letter by Shute, Mihaly & Weinberger and the attachments to that letter. I request that you provide specific responses to each point made in these documents.

1. The May 12, 2010 letter by Shute, Mihaly & Weinberger to Chairman Naslund and Members of the Planning Commission re the Master Storm Water System Maintenance Program (MSWSMP) and Environmental Impact Report. The letter was submitted on behalf of Friends of Rose Canyon, the San Diego Audubon Society, San Diego Coastkeeper, and the California Native Plant Society, San Diego Chapter.

2. The Attachments to the Shute, Mihaly & Weinberger letter, including:
   - Attachment A: West Consultants, Inc. Letter
   - Attachment B: Conservation Biology Institute Letter
   - Attachment C: San Diego Grand Jury Report
   - Attachment D: Photos of Existing Access Roads
   - Attachment E: Environmentally Sensitive Lands Regulations
   - Attachment F: California Governor's Office of Planning and Research, Technical Advisory on Low Impact Development
   - Attachment G: Environmental Monitor article "Storm water Runoff: An Approach for Evaluating Long-Term Impacts and Identifying Mitigation Measures

K.1 The City received the Shute, Mihaly & Weinberger letter, dated May 21, 2010, at the Planning Commission hearing on the project. The receipt of the letter was after the public comment period on the original PEIR and before the recirculation of the revised PEIR. In response to that letter, as well as other comments, the PEIR was substantially revised and modifications to the Master Storm Water System Maintenance Program were made. These revisions and modifications are summarized in the history of project revisions in Section 3.5 of the Recirculated PEIR. Therefore, although the information is part of the administrative record, the City does not plan to provide a formal written response to the Shute, Mihaly & Weinberger letter or other comments received on the original PEIR. As stated on page 1 of the Notice of Availability, the Final Recirculated PEIR only includes responses to comments submitted during the public review for the Recirculated PEIR, pursuant to Section 15088.5(f)(1) of the CEQA Guidelines.

Friends of Rose Canyon

II. The PEIR provides no specific information about the proposed mitigation activities, no analysis of impacts from those activities, and no mechanism for CEQA review and public input in relation to those activities. This is unacceptable.

The following comments address issues related to the proposed mitigation activities proposed as mitigation for impacts from the storm water program's maintenance activities. These comments apply to all the PEIR's proposed mitigation activities. However, these comments focus on the proposed mitigation projects in Rose Canyon and San Clemente Canyon and the Conceptual Wetlands Mitigation Plan.

For a description of some of the CEQA problems with the proposed mitigation projects, please see pp. 22-24 in the attached Shute, Mihaly & Weinberger letter, under the heading: "The EIR Fails to Analyze Impacts Resulting from the Mitigation Activities." Although their comments were written based on the previous Program EIR, the problem remains in the Draft Recirculated PEIR. Shute, Mihaly & Weinberger's conclusion (p. 24):

K.2

> "Certification of this EIR would allow the mitigation projects to go forward without any further CEQA review. However, the mitigation projects have the potential to result in significant environmental impacts that have not been analyzed in this document. As regards potential impacts to Rose Canyon, and other potential mitigation sites, the EIR must be revised to include a well-defined, comprehensive mitigation strategy that consolidates mitigation effort to provide the greatest regional benefit and an evaluation of the potential impacts that may result from implementation of that mitigation."

1. The Recirculated Program EIR contains multiple descriptions of the process for subsequent environmental review of the proposed maintenance activities. This process does not apply to the mitigation projects, and no process is proposed for any subsequent environmental review of the proposed mitigation areas.

Section 1.6 (page 1-6) of the PEIR entitled "Subsequent Environmental Review" describes the process for subsequent environmental review of the maintenance activities. The proposed Substantial Conformance Review Checklist (Appendix J, p. 1) is: "intended to be used by Development Services Staff as an aid in reviewing storm water system maintenance projects."

The PEIR (p. 1-8) states: "Based on consideration of the Initial Study, the SCR Checklist and information contained in individual studies required by the Master Program, the City will determine which of the following CEQA process options would be appropriate for subsequent maintenance activities." Furthermore, the CEQA process options listed (p. 1-8) are for the maintenance activities, not for the mitigation areas, which are never mentioned.

Mitigation activities are proposed, and the PEIR does quantify the biological impacts that will require mitigation. P. ES-11 states:

> "Loss of significant vegetation communities consisting of up to 41.62 acres of wetland vegetation ranging from mature southern willow scrub to freshwater marsh; 37.08 acres of unvegetated channel bottom; and 4.9 acres of sensitive upland vegetation communities including Diegan coastal sage scrub, southern mixed chaparral and non-native grassland."

K.2 Certification of the Recirculated PEIR would not allow mitigation projects to go forward without additional environmental review if implementation of the mitigation would create significant impacts. Mitigation Measure 4.3.14 requires the City conduct an environmental review of the proposed mitigation plan in accordance with CEQA. If the off-site mitigation would have a significant impact, mitigation measures will be identified and implemented to reduce these impacts.

The potential for biological mitigation to impact biological resources and the likely nature of those impacts are discussed on page 4.3-26 of the Recirculated PEIR. However, until specific mitigation is defined for each subsequent maintenance activity, the degree of impacts to biological resources cannot be determined.

The Conceptual Wetland Restoration Plan contained in Appendix H of the Biological Technical Report, included as Appendix D.3 of the Recirculated PEIR, provides the wetland mitigation guidance suggested by the commenter. In the discussion of site selection criteria on page 4 of the Plan, it is stated that: Because the Master Program will be implemented in several watersheds throughout the City of San Diego, creeks and river systems that are moderately to highly disturbed were selected so that mitigation could take place over relatively large areas, rather than in a piece-meal fashion. On page 13, the Plan acknowledges that restoration should occur in large, continuous areas (e.g., San Diego River and Rose Creek) to maximize their value. In addition, wherever possible, the enhancement/restoration should occur at the uppermost

Friends of Rose Canyon

K.3 However, nowhere is there any subsequent environmental review process for the mitigation activities.

2. Not only is there no environmental review process for proposed mitigation areas, there is no specific location or other information about the mitigation activities.

The proposed maintenance areas are mapped in some detail. The PEIR Appendix D.2. (Vegetation and Wetland Delineation Maps) contains aerial maps of all maintenance areas that include: color-coded mapping of each area's vegetation types, sensitive species, and access and staging areas. On P. 3-18, the PEIR states: "The Master Program designates specific access for each of the storm water facilities included in the proposed Master Program." The PEIR commits to the limits of those mapped disturbance areas, even the areas of impact from access. The PEIR (Chapter 3.0, p. 3-16) lists the "Biological Protection" measure BIO-1 as: "Restrict vehicle to access designated in the Master Plan."

K.4 In contrast, Appendix D.3 in the Conceptual Wetland Mitigation Plan contains only vague large-area aerial maps of possible general areas for the mitigation projects.

- Conceptual Wetland Mitigation Plan Figure 3 shows proposed areas labeled B-1c and B-3 in Rose Canyon and B-1c and B-4 in San Clemente Canyon. These areas are simply vague circles on a watershed map. Furthermore, sites B-1c are labeled as in the Penasquitos South watershed. They are in the Penasquitos Hydrologic Unit, but they are in the Rose Creek watershed (the Penasquitos Hydrologic Unit has multiple watersheds). These areas should be correctly labeled so that impacts from maintenance activities in the Rose Creek Watershed can be mitigated in the Rose Creek Watershed.

- Conceptual Wetland Mitigation Plan Attachments B-3 and B-4 show a series of numbered areas on aerial maps of Rose Canyon and San Clemente Canyon. These were taken from the 2005 Rose Creek Watershed Opportunities Assessment (RCWOA), and are described on p. 2-13 of that document: "The twenty-one proposed sites consist of low laying land adjacent to the main drainages of Rose and San Clemente creeks or at the bottom of tributary drainages where limited landform grading could create conditions suitable for the establishment of wetland plant communities." None of the sites in the RCWOA were evaluated at a site level to determine construction feasibility or environmental acceptance by the local stakeholders, City of San Diego, or the resource agencies as mitigation sites. There are numerous issues, including but not limited to: access, utility conflicts, tradeoffs in the conversion of one habitat type to another, impacts of the mitigation, and cumulative impacts.

This is particularly egregious in that the proposed wetland mitigation projects could well include grading, removal of significant vegetation, installation of fences and irrigation systems, and impacts from vehicle access, including five years of maintenance activities, if not access impacts in perpetuity. Some of the sites listed as proposed mitigation areas have no existing road access, and some are located adjacent to steep hillsides. As shown by the attached photos of access roads in Rose Canyon, access roads alone can have significant and permanent impacts.

K.5 Moreover, most of the proposed mitigation sites are in public parkland and in the MSCP, and no analysis has been done of the impacts to park uses and MSCP lands.

K.2 cont. region of a drainage course or watershed to minimize the likelihood of invasive plants being transported into the mitigation area from areas further upstream.

K.3 As discussed in the previous response, Mitigation Measure 4.3.14 of the Recirculated PEIR requires review of mitigation measures to determine their potential to have impacts of their own.

K.4 The Conceptual Wetland Restoration Plan included in the PEIR is intended to demonstrate that it is reasonable to expect that areas exist within which mitigation for the wetland impacts related to the Master Program could occur. The Plan was not intended, nor required under CEQA, to provide detailed information regarding any future mitigation that may occur in the identified areas. Selection and refinement of mitigation projects will be made at the time specific maintenance activities are proposed. In accordance with the procedures identified in Master Program, an IBA will be prepared to define the wetland impacts associated with each maintenance activity. The IBA contains a specific requirement to provide a description and location of the mitigation proposed to offset wetland impacts associated with maintenance.

The constraints and issues associated with the conceptual mitigation areas raised in the comment would be addressed at the time any specific mitigation actions for storm water maintenance impacts are proposed. Addressing potential impacts of future mitigation in these areas is speculative and not required under CEQA. As discussed in Response to Comment K.2, potential impacts from mitigation are required to be considered by Mitigation Measure 4.3.14 from the Recirculated PEIR.

K.5 Restoration, enhancement and/or creation of wetlands within public parkland or MHPA areas would most likely result in a positive effect on recreation and preservation activities associated with these areas. However, the City would consider any potential adverse impacts which could occur and seek to find ways to minimize those impacts.

Yet p. 7 of the Conceptual Wetland Mitigation Plan implies that any of the sites mentioned on the maps could be used as mitigation sites:

> "The Rose Creek Watershed Opportunities Assessment (KTU&A 2005) identified 21 potential wetland creation sites and numerous areas dominated by exotic vegetation within upper Rose Canyon and upper San Clemente Canyon (Attachments B-3 and B-4), many of which are on land owned and managed by the City's Park and Recreation Department. Several of the 21 sites have been used as mitigation by the City's Metropolitan Wastewater Department (MWWD), though Sites 7-11, 13-15, and 17-21 remain available at this time."

A Coastal Conservancy funded hydrology study is currently underway that will provide more detailed information about potential wetland mitigation areas, but it is not expected to be finalized until February 2012 due to an in-stream sediment sampling effort being conducted during the 2011/2012 wet season. While the MWWD has wetland creation projects underway in Rose Canyon and San Clemente Canyon, these were undertaken with little hydrology information and some have had significant problems.

3. The Draft PEIR contains no site-specific plans for the wetland mitigation projects. It defers this to some future time, something CEQA does not allow.

A fundamental goal of CEQA is: "to inform the public and its responsible officials of the environmental consequences of their decision before they are made." (*Laurel Heights Improvement Ass'n v. Regents of University of California*).

K.6 Yet the PEIR's Project Description addresses only the program's maintenance activities and fails to even mention the mitigation projects that would provide compensation to offset the impacts related to the maintenance activities.

K.7 The Conceptual Wetland Mitigation Plan (Appendix D.3) provides only vague information about the city's intentions. Besides the vagueness about sites, it merely states that the mitigation would consist of "enhancement" or "restoration."

K.8 Continuing this theme of "trust us" when it comes to mitigation, Mitigation Measure 4.3.9 provides nothing but vague assurances":

> ***Mitigation Measure 4.3.9*** requires mitigation for wetland impacts to occur within the same watershed as the impact, unless no suitable location exists within the watershed. Mitigation sites are chosen based on best mitigation value. In addition, mitigation plans must be prepared prior to any maintenance activity that could impact significant biological resources. These plans must identify success criteria and include a maintenance and monitoring program to assure that the success criteria are met. Mitigation will be accomplished through one or a combination of the following methods: enhancement, restoration, creation, or mitigation credit acquisition. Specific mitigation ratios must be in accordance with Table 4.3-10 of PEIR.

K.6 As discussed in Response to Comment K.4, the Conceptual Wetland Restoration Plan was not intended, nor required under CEQA, to provide detailed information regarding any future mitigation that may occur in the identified areas. The same logic would apply to explain why a detailed description of mitigation is not included in the project description included in the Recirculated PEIR

K.7 As discussed in Response to Comment K.4, the Conceptual Wetland Restoration Plan was not intended, nor required under CEQA, to provide detailed information regarding any future mitigation that may occur in the identified areas.

As described on page 13 of the Conceptual Wetland Restoration Plan, restoration and enhancement would involve the rehabilitation of highly degraded wetlands with the goal of repairing natural or historic functions. Activities would include removal of invasive plants in addition to installing native wetland plants as seed and/or container stock. The goal of restoration and enhancement is more fully described on page 15 of the Conceptual Wetland Restoration Plan. The stated goal is to establish habitat that can perform the same functions and services (storm water conveyance and flood abatement, pollutant uptake, ground water

Friends of Rose Canyon

Conclusion

Friends of Rose Canyon shares many of the concerns of other environmental organizations in relation to the Master Program and PEIR. We urge the city to address those concerns so that the environmental community can support the final result.

K.9 In addition, the Conceptual Wetland Mitigation Plan is a woefully inadequate document. We strongly object to the undefined and vague nature of the proposed mitigation activities and the complete lack of analysis of potential impacts from those activities. The lack of specific information about the mitigation sites, the lack of environmental analysis of those sites, and the lack of additional CEQA review and public input into those mitigation projects make the current PEIR unacceptable. The proposed mitigation activities must be clearly defined, their impacts fully analyzed, and they must undergo full, separate CEQA review with a transparent public input process.

We are not necessarily opposed to mitigation occurring in the Rose Creek watershed. In fact, we could potentially be very supportive. However, we will not support a process that short-circuits adequate CEQA review and that avoids a robust and transparent public input process.

Sincerely,

Deborah Knight
Executive Director

Cc: Councilmember Sherri Lightner

K.7 cont. recharge, wildlife habitat, and corridors for wildlife movement) that are performed by the areas proposed for impact. Lastly, information on the various steps and material to be used in restoration and enhancement is provided in Section D of the Conceptual Wetland Restoration Plan including detailed plant palettes for each wetland community that may be restored or enhanced.

K.8 As discussed in Response to Comment K.4, details regarding the mitigation actions will be included in the IBAs prepared for each maintenance activity Mitigation Measure 4.3.9, in combination with the criteria contained in the Conceptual Wetland Restoration Plan, provides the performance criteria and parameters necessary to make sure that the ultimate mitigation achieves the reduction in impacts assumed in the PEIR.

The commenter provides no evidence to suggest that the City will not follow through on the commitment reflected in Mitigation Measure 4.3.9. The City realizes its obligation to fulfill this mitigation measure. Furthermore, the annual reporting required to be provided to the state and federal agencies with jurisdiction over wetlands will further assure that the conditions of Mitigation Measure 4.3.9 are met.

K.9 As indicated in Responses to Comment K.7, the Conceptual Wetland Restoration Plan does contain an adequate level of information to assure that future mitigation projects adequately compensate for the maintenance impacts. Furthermore, as discussed in the Response to Comment K.2, Mitigation Measure 4.3.14 of the Recirculated PEIR requires review of mitigation measures to determine their potential to have impacts of their own.

Friends of Rose Creek *
"Connecting Our Communities"
4629 Cass Street #188
San Diego CA 92109

July 28, 2011

Myra Herrmann, Environmental Planner
City of San Diego Development Services
Via E-Mail to: DSDEAS@sandiego.gov

Re: MASTER STORM WATER SYSTEM MAINTENANCE PROGRAM (MSWSMP)
Draft Program Environmental Impact Report (PEIR)
Project No. 42891/SCH No. 2004101032

Dear Ms. Herrmann:

The Friends of Rose Creek is a community group actively working to protect and enhance the lower portion of the Rose Creek Watershed from the South End of Marian Bear Park to Grand Avenue in Pacific Beach. Lower Rose Creek forms an urban green belt in San Diego and connects the habitats in Rose Canyon Open Space Park and Marian Bear Natural Park with Mission Bay Park to the south. It serves as a key habitat corridor for a variety of birds and animals.

L.1 We have reviewed the City of San Diego's Master Storm Water System Maintenance Program (MSWSMP) re-circulated Draft PEIR and we strongly encourage the City to reject the current version. We respectfully request that the Draft PEIR be revised to include several less environmentally damaging maintenance and flood control alternatives, a meaningful opportunity for the public to comment on Individual Maintenance Projects once the details are known, and additional multi-beneficial mitigation alternatives including proximity of mitigation to impacted areas.

L.2 While we appreciate the time the City of San Diego has spent to engage stakeholders, we feel their efforts have fallen short of minimal expectations. The lack of communication of meetings with people who are listed as interested parties in the PEIR is a bit shocking and has hindered our ability to effectively attend various community meetings. At the very least, if the PEIR lists an individual or an organization as an interested party, it seems reasonable that those people would be contacted in regards to public meetings on the project. Given that the issue of notification is one area of contention, that this project has not successfully utilized low cost communication techniques such as email raises a red flag.

L.3 There is no currently defined or adequate Public Process for review of Individual Maintenance Projects (IMPs) once the details and the impacts of the projects are known. In a public meeting, City Staff were unable to delineate any process by which the public could influence the decision making process or have any legal recourse to prevent damage from being inflected on the City of San Diego's precious natural resources. Furthermore, the PEIR does not address nor identify a public input process that allows individuals and communities to adequately provide comments to proposed maintenance work nor have any ability to prevent damaging maintenance methods should such methods be selected for use by city staff.

**A member of the Rose Creek Watershed Alliance*
** A Friends Group of San Diego Canyonlands, Inc.*
Visit us on-line at http://www.saverosecreek.org

L.1 The City is unaware of any potential alternatives other than those addressed in the Recirculated PEIR. As the comment provides no detail as to the additional alternative to be included, no specific response can be made to this request. Similarly, as no specifics are offered with respect to "additional multi-beneficial mitigation alternatives," no specific response can be offered. Lastly, as discussed in Response to Comment O.1, the public will have a meaningful opportunity to comment on individual maintenance plans included in annual maintenance plans.

L.2 As discussed in Response to Comment D2, the SWD will maintain an internal Master Program Maintenance Contact List comprised of public and private interested parties and stakeholders who will be notified annually of the SWD's proposed Priority List.

L.3 Refer to Response to Comment O.1, regarding the public input process for annual maintenance activities.

L.4 Stakeholders of the Rose Creek Watershed have been working on a management plan which incorporates a wide range of protections including but not limited to the preservation and enhancement of recreational, archeological, wildlife habitat and water quality in the Rose Creek Watershed. This plan has been put together in a multi-disciplinary manner to serve as a model for watershed planning in the City of San Diego. The San Diego City Council accepted the plan, titled the *Rose Creek Watershed Opportunities Assessment*, on October 21, 2008. The Alliance has been working together since to help implement its recommendations. The PEIR does not identify how proposed maintenance would support or hinder the goals outlined in the document.

L.5 We feel that local input from group such as the Friends of Rose Creek and other individuals and organization working within the watershed early on during the development of Individual Maintenance Projects is key to achieve the project goals of preventing flooding while also avoiding negative impacts. We regularly observe the creek system during storm events and note water levels at key spots of concern. The Opportunities Assessment referenced above lists many opportunities for mitigation within the lower portion of the Creek where the PEIR lists potential impacts. None of the proposed mitigation sites include ones identified by the Opportunities Assessment.

L.6 Proposed mitigation would export vegetation and wildlife habitat from urban areas into more remote location. These spaces are need to insure an equitable distribution of natural parks and recreation spaces in urban areas, many of which are disadvantaged or severely disadvantaged communities.

Please revise the PEIR to insure that mitigation will occur in areas within the same watershed but as a priority, where possible, within the same contiguous channel (not necessarily the same channel segment) in which the impact occurs. No mitigation requirements shall be exported out of the watershed where the impact occurs.

L.7 Many staging areas and channel segments proposed for clearing are in areas where the community has worked hard to restore natural creek habitat and removed or controlled invasive plants. These are places where only non-native vegetation should be removed and removal should be done surgically using hand tools.

L.8 Specifically, the earthen bottom portion of Rose Creek in Maps 34 and 35 should be removed from the project. These areas are clearly within the coastal zone and are part of a critical coastal salt marsh habitat as indicated in the PEIR. Most of the salt marshes in and adjacent to Mission Bay Park no longer exist and the portion of Rose Creek considered in Map 35 is one of the only remaining segments.

The area requested for removal includes the area downstream from the concrete channel under Mission Bay Drive. Both channel segments 34 and 35 are rich feeding grounds for birds such as Great Blue Heron, Snowy Egret and Osprey. Furthermore, the area covered by Map 35 is a fish spawning area. Both areas have had extensive restoration work performed by community groups with support of resource agencies. None of the restoration work performed by the City of San Diego Environmental Services, Robert LaRosa, The Nature School, Project C.R.E.E.K., and/or Simple Technology Against Runoff (S.T.A.R.) is indicated in the PEIR. This is a significant oversight and must be included in the PEIR to insure that additional mitigation is performed for mitigate for previous mitigation sites. These projects should be documented in the PEIR. Furthermore, the area just upstream from Garnet Avenue was part of a restoration project done by the City of San Diego approximately three years ago. Finally, the concrete channel portion of Map 34 has also been the site of permitted projects specifically designed to encourage habitat growth in the channel under one of the above referenced organizations.

L.9 The lack of public review under a CEQA process for each individual project as defined by CEQA is a serious problem with the PEIR. Each individual creek or channel-clearing project within the Master Program qualifies as

L.4 The City recognizes the work that has been done by the commenter and others to promote restoration of the Rose Creek watershed. In fact, the City has been in communication with San Diego Earthworks, who has been leading the Rose Creek restoration planning efforts. The goal of this communication was to identify ways where the City could help implement restoration efforts by providing funding which might not otherwise be available for restoration. In this way, the storm water program could have a positive effect on restoration efforts in the Rose Creek Watershed.

The Master Program could have a negative impact on restoration efforts if restoration sites occur in areas which are already prone to flooding. Additional planting in these areas could compound existing flooding problems. Continued communication between the City and San Diego Earthworks and local citizen groups would assure that restoration does not occur in portions of Rose Creek that are identified in the Master Program as needing regular maintenance to minimize flooding risk.

L.5 As indicated in the previous response, the City agrees that continued cooperation with the Rose Creek Watershed restoration efforts would be beneficial. However, the City does not believe that the organizations involved in the restoration efforts need to be directly involved in the formulation of individual maintenance plans. While the City will apprize these organizations of its plans for maintenance to avoid conflicts with restoration efforts, the responsibility for the preparation of these plans appropriately rests with the SWD and its technical consultants.

L.6 Mitigation Measure 4.3.9, in the Recirculated PEIR, already provides language that encourages mitigation to occur within the same watershed as the impact. The mitigation measure gives first priority to mitigating within the impacted watershed. It further requires the City to demonstrate that there are no suitable locations within the impacted watershed before it can implement mitigation in other watersheds.

In order to mitigate for impacts in an area outside the limits of the watershed within which the impacts occur, the SWD must demonstrate to the satisfaction of the ADD Environmental Designee in consultation with the Resource Agencies that no suitable location exists within the impacted watershed.

L.7 In response to comments from the original PEIR, the City has identified specific locations for access, storage and staging areas for each storm water facility included in the Master Program. In general, these features were located in areas which have already been involved in past maintenance activities, or are not associated with significant biological resources. As mandated by the Master Program, specific impacts related to access, storage or staging would be identified during the preparation of IBAs, and mitigation would be implemented by the City, as appropriate. Furthermore, in finalizing individual maintenance plans, the City will strive to avoid impacting biological resources with access, storage or staging areas in order to minimize mitigation costs as well as avoid unnecessary impacts.

L.8 The channel segments covered by Maps 34 and 35 are located on City-owned property managed by the SWD. In the past, SWD (formerly Streets Division) had restored flood conveyance capacities frequently (every year or two) within these segments of Rose Creek. With mechanical equipment, crews were able to maintain the full-width of the concrete portion identified on Map 34 and create a narrow pilot channel within the earthen portion identified on Map 35. Since active maintenance stopped in 2000, the SWD has received several inquiries from City Council representatives and affected residents/businesses requesting SWD remove accumulated sediment and vegetation within the channel so floodwater conveyance can be restored. Therefore, these segments of Rose Creek have been included in the Master Program.

The City also acknowledges ESD and each community/environmental group's efforts to assist the SWD maintain Rose Creek by eradicating transients and removing trash, debris, and non-native invasive vegetation in these segments. However, these restoration projects do not ensure or require the enhanced habitat to be preserved as mitigation sites. The PEIR Biological Resources Study (Helix, revised May 2011) has documented previous efforts to restore the biological value of the creek by delineating the specific habitat types within referenced PEIR Maps 34 and 35. When maintenance is proposed in this area, SWD would be required to prepare a site-specific Individual Biology Assessment to identify and mitigate impacts to significant biological resources.

For specific legal and insurance purposes, any non-City organization

L.9 cont.

a separate ―project. CEQA defines a ―project as ―an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and which is… an activity directly undertaken by any public agency. *See* Cal. Pub. Res. Code § 21065(a). Because each creek or channel-clearing activity is undertaken by the City of San Diego, a public agency, and may cause a direct physical change to the environment, each creek or channel-clearing activity is a project under CEQA.

Please reject certification of this PEIR and ask staff to resolve the many important and outstanding issues contained herein.

Thank you for the opportunity to comment on this MSWSMP, for answering questions and for carefully considering our comments and recommendations.

Sincerely,

Karin Zirk
Volunteer
Friends of Rose Creek
kzirk@earthlink.net

cc Senator Chris Kehoe
Assemblymember Toni Atkins
Mayor Jerry Sanders
City Council Members
U.S. Fish & Wildlife Service
California Department of Fish & Game
U.S. Army Corps of Engineers
California Regional Water Quality Control Board

L.8 cont. or entity must obtain a Right-of-Entry (ROE) permit from the SWD Operations & Maintenance Section before access or project implementation is permitted. ‚Each organization/entity must follow the SWD's ROE procedures and provide SWD the necessary regulatory permits and CEQA documentation required to implement their project on City-owned land managed by the T&SWD. The SWD will review each proposal and determine if the project would meet the objectives set forth in this Master Program prior to the issuance of any ROE permit.

L.9 Refer to Response to Comment O.1, regarding the public input process for individual maintenance activities.

July 28, 2011

Attn: Ms. Myra Herrmann, Environmental Planner
City of San Diego, Development Services Center
1222 First Avenue, MS 501
San Diego, CA 92101

Subject: Comments on PEIR for City of San Diego Master Storm Water System Maintenance Program (MSWMP): Project No. **42891**, SCH No. **2004101032**

Dear Ms. Herrmann:

Thank you for this opportunity to comment on the second round of the Draft Programmatic Environmental Impact Report (DPEIR) for the Master Storm Water System Maintenance Program (MSWSMP). The Los Peñasquitos Lagoon Foundation (LPLF) feels that the second iteration of this document still fails to adequately address the concerns of LPLF regarding the potential downstream impacts to Los Peñasquitos Lagoon (LPL) that will be created by the MSWSMP's proposed methods for flood control and the additional cost that will be incurred to both California State Parks the LPLF to mitigate these impacts. LPLF is also concerned about the lack of adequate analysis of potential impacts listed in this document as well as the lack of adequate and meaningful public review opportunities. Please review and respond to the following questions and comments:

M.1

1. Responses N.1, N.2, N.13, and N.14 do not adequately address LPLF's concerns about downstream impacts caused by proposed maintenance activities in areas upstream of LPL, an impaired waterbody listed on Environmental Protection Agency (EPA) 303(d) list. Hydromodification is the key driving force behind downstream impacts to LPL. Removing sediment and vegetation within the channels upstream of the lagoon will increase both peak flows and volumes of storm water through this area and potentially create "hungry water" by removing natural sediment sinks and

M.1 While removing sediment and vegetation from the identified portions of channels may increase velocity, it will not substantially increase the volume of runoff entering the Los Penasquitos Lagoon. In addition, maintenance will not result in substantial hydromodification impacts. Hydromodification is a result of increased runoff due to the construction of impervious surfaces. Maintenance of storm water facilities, under the Master Program, would not increase the impervious surfaces in the watershed and, therefore, would not result in hydromodification.

energy dissipaters. Impacts will occur to downstream properties and LPL as increased peak flows and hungry water will re-suspend sediment and scour channel banks downstream, leading to increased deposition and overall inundation within LPL. "Hungry water," increased peak flows and volumes of storm runoff have been acknowledged as key drivers for storm related impacts to LPL in recent studies and reports, including those prepared by the stakeholder group developing the current sediment TMDL for LPL. The LPLF Sediment TMDL Work Group includes representatives of the City of San Diego's Storm Water Division, Caltrans, City of Poway, County of San Diego, State Parks, San Diego Regional Water Quality Control Board, Coastkeeper and EPA. Therefore, LPLF cannot accept the response City's response that "the fact that maintenance would not impact the lagoon" as this statement is, in fact, not true nor accurate.

M.1 cont.

a. How with the City of San Diego involve the LPL Sediment TMDL Group in the planning of individual maintenance projects in the Los Peñasquitos Watershed since these projects will most likely impact the group's ability to comply with sediment load reductions as mandated by the LPL Sediment TMDL, San Diego Basin Plan and Clean Water Act?
b. How will the City compensate the LPL Sediment TMDL Group when the stream maintenance activities proposed in the MSWSMP require mitigation to comply with meeting waste load allocations and impacts to LPL's Beneficial Uses referenced in the updated San Diego Basin Plan?
c. How will the City compensate California State Parks and LPLF for increased costs related to mitigating impacts related to the proposed in the MSWSMP?
d. How will LPLF and State Parks be assured that the City of San Diego will pursue, fund and implement mitigation opportunities within the lagoon as referenced in Response N.1 when funding at the City is severely limited?
e. How will the City justify potential violation of the Coastal Act that protects Environmentally Sensitive Habitat Areas (ESHA) located within LPL from

M.1 cont. In addition, the storm events related to hydromodification are typically associated with flows as low as 10% of the 2-year storm. The storm events of concern for the Master Program are much higher. Thus, the hydrologic processes of these two discharges (hydromodification discharges vs. flood control discharges) are not comparable.

The concern that maintenance will increase erosion and the transport of sediment into the lagoon by creating "hungry water" is unfounded. As noted in Response to Comment I.22, Protocol WQ-9 of the Master Plan requires installation of check dams whenever the velocities in the "bank-full" condition would exceed the thresholds established in the City's Storm Water Design Manual for unlined channels. IHHA indicates that maintenance could increase storm water velocities over pre-maintenance levels. Check dams would be designed to reduce storm water velocities and aid in the re-establishment of vegetation in the channel. Secondly, many of the channels proposed for maintenance have historically been subject to deposition of sediments which has resulted in the need for ongoing maintenance. Thus, sediments normally accumulate in these storm water facilities rather than being transported through them. As a result, the removal of sediment during maintenance would restore the tendency of these channels to capture sediment from upstream areas. Thus, maintenance could actually serve to reduce the deposition sediment within the lagoon.

As a result of the above responses, the City believes:

a. There is no reason to involve the LPL Sediment TMDL Group in the preparation of IMPs.
b. No compensation to the LPL Sediment TMDL Group will be warranted.
c. No compensation to the State Parks or LPL will be necessary as no increased maintenance would be incurred as a result of maintenance.

M.1 cont.

impacts related to development and maintenance activities upstream of these important and extremely valuable areas?

M.2

2. Response N.3, N.4, N.13, and N.14 are inadequate and fail to grasp some of the basic hydrological principals of hydromodification (e.g. increased peak flows and volumes of storm runoff, "hungry water"). If sediment and vegetation is cleared from upstream channels as proposed in the MSWSMP, sediment transport capacity and rates will increase and impacts will occur downstream, as these areas will be at higher risk for scouring of channel banks and thalweg, as well as re-suspension of sediment within the channel with this sediment being deposited within LPL. Evidence of the impacts related to these aspects of hydromodification are not only well documented in scientific literature and related reports, but are also documented in reports submitted to the City's Storm Water Pollution Prevention Program by their consultants.
    a. How will the City of San Diego compensate downstream property owners and LPLF if siltation and sediment loads "not anticipated to increase" due to channel maintenance activities actually do increase due to channel maintenance activities and what guarantees are in place to assure that mitigation of these impacts progresses beyond just City's intent?
    b. How will the City's Operations and Maintenance coordinate with the LPL Sediment TMDL Work Group and compensate them for violating the Clean Water Act and/or costs associated with compliance?

M.3

3. N.5 fails to differentiate between loss of vegetation and loss of functional habitat with regard to wildlife corridors and areas used by wildlife for foraging, protection and nesting.
    a. How will the actions proposed in the MSWSMP mitigate for both impacts to and potential loss of habitat within project footprint and downstream,

M.1 cont.

d. The City is mandated by the Master Program and PEIR as well as NPDES to carry out appropriate measures to avoid significant erosion and sedimentation impacts on the Los Penasquitos Lagoon.
e. No justifications of "violations" of the Coastal Act would not be required because none would occur.

M.2 As discussed in Response to Comment M.1, storm water facility maintenance would not increase storm water volumes in the lagoon nor would it produce "hungry water" impacts. As a result, the City believes:

a. No compensation to the LPL or downstream property owners will be necessary.
b. No coordination with the LPL Sediment TMDL Group will be required. Nor, would the LPL Sediment TMDL Group be entitled to any compensation related to maintenance activities conducted pursuant to the Master Program.

M.3 With the exception of Map 7, the storm water facilities which are included in the Master Program near the Los Peñasquitos Lagoon are surrounded by industrial development. While the storm water facility in Map 7 passes through wetland habitat, it lies within 250 feet of industrial development to the east and is also located in the extreme southerly portion of the lagoon which is surrounded by development. The industrial areas that

M.3 cont.

especially in areas defined in the Coastal Act as Environmentally Sensitive Habitat Areas (ESHA)? How will the City justify potential violation of the Coastal Act that protects Environmentally Sensitive Habitat Areas?

M.4

4. Response N.6 is unacceptable in that downstream impacts can and most likely will occur given the proposed activities in the MSWSMP, regardless of whether they are anticipated or not. The lack of adequate analysis and failure to include key hydrologic principals related to hydromodification in the MSWSMP could be why downstream impacts are not anticipated by the City in this draft PEIR.
    a. How will the City compensate both California State Parks and LPLF for the increased financial burden placed on both of these entities for mitigated downstream impacts caused by the maintenance activities proposed in the MSWSMP, regardless of whether the City anticipates them or not?

M.5

5. Responses N.7 and N.8 do not include adequate public review and/or participation in developing and reviewing the detailed maintenance plans during the CD process.
    a. How will the City assure that meaningful public review and participation will occur with regard to the detailed maintenance plans AND how will public input be integrated into the final version of the detailed maintenance plans?

M.6

6. Responses N.11 and N.12 acknowledge that flood control is given priority over more proactive approaches to address storm water runoff and related impacts within the City's Storm Water Department.
    a. How can the current draft of the MSWSMP and the City's responses to the comment letters submitted for first draft PEIR state that the impacts related to storm water runoff not covered in the PEIR will be most likely managed by other approaches (e.g. LIDs) pursued by the Storm Water Pollution

M.3 cont. surround the storm water facilities included in the Master Program do not support wildlife nor would these areas attract wildlife from within the lagoon. Thus, it is appropriate to conclude that maintenance of these facilities would not interfere with wildlife or wildlife movement within the lagoon and no mitigation measures would be required. Furthermore, as discussed in Response to Comment M.1, maintenance within the facilities located around the periphery of the lagoon would not significantly impact vegetation within the lagoon. Thus, no mitigation due to downstream impacts would be necessary.

With respect to violation of the Coastal Act, the City will secure the permits from the California Coastal Commission needed to conduct the maintenance and will implement mitigation measures required by the California Coastal Commission included as permit conditions.

M.4 As discussed in Response to Comment M.1, maintenance within the facilities located around the periphery of the lagoon would not significantly impact the lagoon. Thus, no compensation to the Foundation or State Parks would be warranted.

M.5 Refer to Response to Comment O.1, regarding the public input process for individual maintenance activities.
With respect to subsequent modifications of IMPs in response to public input, the City will consider recommendations and suggestions regarding the maintenance approach proposed for individual channels provided the alternatives would achieve a comparable reduction in flood risk, be cost-effective and reduce biological impacts. Page 6 of the Master Program has been revised to reflect this commitment.

M.6 The City is required by its Municipal Separate Storm Sewer System (MS4) permit to implement and maintain activities designed to reduce or eliminate storm water pollution. These activities include education and outreach programs, "low-impact development" processes and facilities, development policies and regulations designed to reduce storm water

M.6 cont. Prevention Program when funding for these program will most likely not exist as this money will be re-directed to flood control priorities?

M.7
7. Response N.20 fails to provide an adequate and reliable forum for true public input and consideration of proposed concerns as they relate to the final iteration of the proposed activities under the MSWSMP.
   a. How will the City assure stakeholders that steps will be made to reduce impacts related to activities proposed in the MSWSMP aside from the City intending to coordinate with such groups?

M.8
8. How will the City assure that there is adequate timing and consideration of public and other stakeholder input during Pre-Project Public Review and Post Project Review processes?

M.9
9. How will the City improve its consideration of potential alternatives for each individual channel segment rather than assuming programmatically that specific alternatives are infeasible for all channel segments and how will stakeholder groups be involved in the development and selection of these alternatives?

M.10
10. How will the City assure that Mitigation Monitoring Coordination (MMC) efforts will be funded when this program subject to the funding vulnerabilities associated with drawing from the City's General Fund?

M.11
11. How will the City provide public review and input related to findings, discoveries and reporting by MMC to assure that the appropriate steps were taken to assure that impacts were avoided, and when impacts could not be avoided that the proper documentation was taken and that mitigation steps were prescribed and implemented?

M.6 cont. runoff and pollution, and many other activities specified by the permit.

The City is thus required to establish programs and sufficient budgets for these activities. These programs and budgets are integrated with, and compliment, those for storm water facility maintenance and other infrastructure improvements. They are separate and equally important to the City's overall storm water management efforts.

The Foundation's comment that funding for these programs "will most likely not exist as this money will be redirected to flood control priorities" is speculative and inconsistent with the City's storm water management requirements stated above. In addition, the Foundation's comment seems to ignore the continuing funding priority given to storm water pollution prevention in the City's regularly updated Five-Year Financial Outlook.

M.7 Refer to Response to Comment O.1, regarding the public input process for individual maintenance activities.

M.8 Refer to Response to Comment O.1, regarding the public input process for individual maintenance activities.

M.9 As discussed in Response to Comment M.5 and page 6 of the Master Program, the City will consider other alternatives provided the alternatives would achieve a comparable reduction in flood risk, be cost-effective and reduce biological impacts.

M.10 The applicant permitee/department will be required to provide DSD's Mitigation Monitoring Coordination Section with an Internal Order number that can be used to charge staff time for monitoring oversight. This information will be required prior to, or at, the first preconstruction meeting.

M.11 Pursuant to the requirements of the Master Program, SWD will prepare a Maintenance Monitoring and Mitigation Report to document the

LPLF feels that and the City's responses to our previous comment letter written on August 19, 2009 and the current version of the draft PEIR fail to adequately address LPLF's concerns related to downstream impacts to LPL and the City's ability fully mitigate these impacts. Doing so is essential to satisfy the minimum requirements of the California Environmental Quality Act, CEQA and the Coastal Act. For this reason, LPLF is including the previous comment letter as an attachment to this letter.

LPLF also strongly urges the City to take a more collaborative, integrative and transparent approach to flood control that considers other efforts by the City's Storm Water Pollution Prevention Program that take a more proactive, multiple value approach to addressing impacts related to storm water. We look forward to reading the responses to our comments in the Final PEIR. Please feel free to contact me for any clarifications. If you have any questions, please contact me at (760) 271-0574.

Sincerely,

Mike Hastings

Mike Hastings, Executive Director
Los Peñasquitos Lagoon Foundation

cc:
Mayor Jerry Sanders

Sheri Lightner, Council Member District 1

San Diego Regional Water Quality Control Board

California Department of Parks and Recreation

M.11 cont. maintenance activities and mitigation measures that took place in the preceding year. The results of this report will be presented as an informational item on an annual basis to the Natural Resources and Culture Committee of the San Diego City Council and the Community Planners Committee. At these meetings, the public will have an opportunity to comment on the contents of the annual report.

California Coastal Commission

Army Corp of Engineers

U.S. Fish and Wildlife Service

BRIGGS LAW CORPORATION

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BLC File(s): 1593.99

29 July 2011

Myra Hermann
Environmental Planner
City of San Diego
Development Services Center
1222 First Avenue, MS 501
San Diego, California 92101
DSDEAS@sandiego.gov

Re: Project No. 42981 (Master Storm Water System Maintenance Program)

Dear Ms. Hermann:

I am writing on behalf of San Diegans for Open Government to submit comments and evidence for your consideration and to be included in the administrative record in this action.

N.1 The project description is unduly vague. The PEIR attempts to be a "Jack of all trades," but becomes a "master of none" in that it tries to cover everything, but ends up not meaningfully analyzing any of the impacts of the projects. There is no actual plan for storm water maintenance, but, instead a set of parameters that may be used. Thus, there is no commitment to maintaining any particular facility in any particular frequency, there is no explanation of what portions of channels will be maintained in any given year and if it will rotate within a channel (e.g. dredging of the northern portion of a channel one year and the southern portion in another), and what equipment will be used at any particular site. Given the vagaries in the document, it is impossible to comment with any true specificity. While a program level document can generally be less specific than a project-specific document, the intent of this process is have subsequent substantial conformance review process where the public cannot participate. The document is simply not specific enough for a long-term plan with no project-specific review that follows the ordinary environmental review process.

N.2 There is little analysis of the Project's greenhouse gas impacts and the discussion appears to focus exclusively on equipment emissions. Although the Project will have a significant and unavoidable cumulative solid waste impact, the emissions from the solid waste generated were not estimated. *See* Exs. GHG 7, 8 & 34. Furthermore, there are no mitigation measures proposed, but mitigation measures are available for equipment emissions. *See, e.g.*, Ex. GHG 17, Section 8. For more information on greenhouse gas emissions, please see the remainder of the exhibits in the GHG folder of the attached CD-ROM.

N.3 There is no discussion of the impact of diesel exhaust on sensitive receptors. The EIR acknowledges that there is a potential noise impact on sensitive receptors, but omits a discussion fo the air quality impact on sensitive receptors. Diesel exhaust has a number of harmful effects and should have been analyzed. *See* Exs. AQ 1-18.

N.1 The project description contained in the Recirculated PEIR is specifically designed to present the information needed to provide an adequate programmatic analysis of the potential impacts of the storm water maintenance activities carried out under the proposed Master Program. The project description achieves this goal by providing a sound baseline for each of the facilities. Table 3-1 identifies key characteristics of each facility, including length, facility type (earthen vs. concrete), and hydrologic unit. Comprehensive biological surveys were conducted to identify the vegetation associated with each facility. Lastly, each of the facilities is depicted on both a large-scale and facility-specific aerial photograph.

In order to serve as a basis for analyzing potential impacts of future maintenance, the project description includes a discussion of the common methods by which maintenance occurs and the equipment used to conduct maintenance under each of the methods. In addition, as requested in public comment on the original PEIR, the Master Program identifies specific locations for access, storage and stockpiling for each of the maintenance facilities included in the Master Program.

N.1 cont. The commenter expresses concern that the project description does not include more details regarding how maintenance will be conducted within each of the facilities. Such a level of detail is not required for a programmatic analysis. Furthermore, the approach taken in a specific facility is based on the vegetation and sediment conditions that exist at the time maintenance may be required. Vegetation and sediment conditions in a facility are dependent on a number of variables, including previous rainfall and surrounding development. For example, favorable climatic conditions could result in a substantial increase in the vegetation over that which occurs today. This increased vegetation would change its influence on storm water transport and negate the hydrological analysis used to guide the maintenance by changing the friction coefficient. Similarly, high rainfall could promote erosion and the accumulation of sediment beyond that which would have been assumed when the original calculations were made, which also would negate the results of the hydrology study. As a consequence, new hydrology studies and possibly new maintenance plans could be required if a facility is not maintained within the first year or two of the initial analysis. Having to redo hydrology studies and maintenance plans would not only cost additional money but would render the earlier expenditures a waste of money. The need to prepare new maintenance plans also would negate the impact analysis contained in the Recirculated PEIR.

In recognition of the limitations associated with programmatic analysis and the impracticality of including facility-specific maintenance plans in the PEIR, the Master Program requires any maintenance activities conducted pursuant to the Master Program to undergo a more detailed review through the City's SCR Process. As described in Section 3.3.2 of the Recirculated PEIR, each facility where maintenance is proposed will undergo a comprehensive analysis which will include detailed assessments related to hydrology, biological and historical resources and water quality. The information generated by these studies will be used to guide the maintenance activity as well as identify required mitigation. Furthermore, as discussed in Response to Comment O.1, the SCR process will also provide another opportunity for the general public, as well as the Resource Agencies, to review and comment on each maintenance activity included in an annual maintenance plan.

N.2 In response to this comment, the City conducted additional GHG analysis to identify the potential GHG emissions related to off-site GHG sources including: (1) employee commuting to the maintenance activity, (2) deliveries, and (3) transport of sediment and vegetation for off-site disposal. The results of this analysis are presented in Attachment A.

The GHG emissions related to employee commutes to and from the maintenance activities were based on a total of three employees involved in the average maintenance activity (six trips per day). A total of two deliveries per day were assumed for each activity. Up to 70 daily trucks trips related to transporting material for offsite disposal were assumed. The haul truck trip estimate was based on an estimate from SWD that up to 100,000 cubic yards of sediment and/or vegetation may require transport for off-site disposal on an annual basis. Typically, material is transported to approved disposal facilities in trucks that can carry up 12 cubic yards of material, which would translate into up to 8,334 truck trips per year. Assuming that maintenance occurs over 120 days in a year, this constitutes an average of 70 truck trips per day of maintenance.

Based on off-site GHG sources identified in Attachment A, up to an additional 229 metric tons of CO_2 equivalents could be generated by storm water maintenance on an annual basis. When added to the 270 metric tons of CO_2 equivalents (MT CO_2e) generated from the operation of maintenance equipment on site, the total amount of GHG emissions generated by the project would be approximately 499 MT CO_2e per year. Even with the additional GHG emissions related to off-site disposal, the total anticipated annual GHG emissions would be significantly less than the City's screening criteria of 900 MT CO_2e per year. Therefore, the GHG emissions associated with the Master Program would remain less than significant, and no mitigation measure would be required.

The commenter is correct in assuming that the decomposition of sediment and vegetation would generate GHG emissions. However, the contribution would be nominal and does not warrant quantification. As dredged sediment and vegetation decomposes, anaerobic bacteria produce methane (CH_4) which results in GHG emissions. However, the GHG contribution of sediment disposed in the landfills would be minimal. Stabilization agents, such as cement or lime, are typically added to reduce the production of methane in landfills.

N.2 cont. The SWD, in consultation with the City's Environmental Services Department (ESD) intends to compost as much of the vegetation as possible. This composting would result in decomposition which would involve production of methane. Thus, disposal of vegetation during maintenance could result in GHG emissions. However, the decomposition of channel vegetation would be expected to occur naturally over time with or without maintenance.

The CD-ROM containing the additional exhibits referenced in this comment as well Comments N.3 and N.5 are available for review at the City of San Diego's Development Services Department.

N.3 Maintenance in a specific location is expected to generally occur every three years, but no more often than annually. Furthermore, maintenance normally occurs over a two-three-week period, and rarely extends over a 30-day period. An extended maintenance period would be the result of either heavy vegetation growth or the overall length of the facility. In the case of a longer facility, maintenance operations would move spatially along the channel in a manner that would reduce the exposure to a sensitive receptors. As a result of these factors, the health risk to sensitive receptors, related to diesel exhaust, is not significant.

To document the conclusion that diesel exhaust from maintenance would not be significant, a health risk screening analysis was conducted using the EPA's SCREEN3 dispersion model (Attachment A). Although, as discussed earlier, receptors would not experience prolonged exposure to diesel exhaust, the screening analysis assumed a worst-case condition where sensitive receptors would be exposed to approximately 120 days of equipment exhaust for 9 hours per day. Receptors were placed at distances ranging from zero to 4,920 feet (1,500 meters) away from heavy maintenance activities. This analysis also assumed that the total diesel particulate matter (DPM) emissions would be emitted during the entire maintenance period. The DPM screening analysis results are presented in Attachment A.

Based on the analysis, the highest DPM concentrations and health risks occurred between 25 to 500 feet from maintenance activities; concentrations decreased significantly beyond 500 feet. The maximum incremental cancer risk was determined to be 0.17 in a million and the maximum HI was 0.71; these maximum levels occurred at approximately

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N.4 The basis of the cumulative impact analysis is unclear. The PEIR says that the "cumulative impacts discussion is based on the adopted Final PEIR for the City General Plan (2008) that evaluated region-wise conditions pertaining to cumulative impacts." PEIR, p. 6-1. However, a number of impacts are specific to a particular water system. An overly broad look at cumulative impacts can actually detract from a meaningful analysis because it dilutes the unique problems in a particular area.

N.5 There is no explanation of how this project relates to a number of related plans and processes. For example, the PEIR says that emergency maintenance conducted in 2010 is not included because mitigation for these maintenance activities is being addressed under a separate permitting process. However, there is no explanation of why the fact that they are going through a separate permitting process would exclude them from contributing to the cumulative impacts analyzed in this document and no explanation about how the processes relate to each other. For instance, the City apparently just released a mitigated negative declaration for Tijuana River Pilot and Smuggler's Gulch Channel Maintenance that says that it is to permit previous emergency work and on-going maintenance in the Tijuana River Pilot Channel and Smuggler's Gulch channels. Ex. P1. However, this Project also says that it covers maintenance in the Tijuana River Valley. Which document controls work in that area? There is also no explanation of how this project relates to the flood mitigation plan prepared for the City in 2007, if at all. Ex. P2.

N.6 There is no analysis of the project's potential impacts on agricultural resources. While the PEIR acknowledges that there are agricultural resources in areas covered under the Project, it finds that there is no possibility of a significant impact. However, how channels are maintained impacts the flow of water. The maintenance schedule and areas that are maintained (or not) can in fact have an impact on whether storm water floods onto agricultural land, the proximity of water to agricultural land, and the quality of water on or near agricultural land.

N.7 Finally, there is no real analysis of how contaminated soil that has been dredged will be disposed of. The PEIR acknowledges a potential solid waste impact, but does not adequately address what the solution may be. Particularly because the soil is often contaminated with hazardous substances, this is an issue that warrants thorough discussion.

Thank you for your consideration of these issues.

Sincerely,

BRIGGS LAW CORPORATION

Mekaela M. Gladden

N.3 cont. 427 feet from maintenance activities. An increased cancer risk of 1 in one million is considered potentially significant while an increased cancer risk of 10 in one million is considered significant. As the worst-case DPM emissions were found to be well below these thresholds, storm water facility maintenance would not result in a significant health and safety risk to sensitive receptors from diesel exhaust.

N.4 As acknowledged in the comment, the cumulative analysis is based on the City's General Plan EIR. The City considers this to be the "clear statement" of the basis for the analysis sought by the commenter. Furthermore, as stated on page 6-1 of the Recirculated PEIR, reliance on the cumulative analysis in the General Plan EIR is specifically allowed under Section 15130(b)(1)(B) of the CEQA Guidelines which states that the analysis of cumulative impacts in an EIR may rely on "A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact."

Even though the PEIR cumulative impacts analysis does not specifically list the TJ River Valley project, the cumulative impacts analysis takes into consideration impacts from maintenance work within the TJ River Valley because the analysis is based on the projections of impacts in the General Plan EIR, which include projections relating to maintenance and operation of all of the City's storm water infrastructure over the next 20-30 years (see General Plan pp. PF-29 through PF-30; General Plan PEIR pp. 3.14-4, 3.14-11, 3.14-13, and 5-13 through 5-15).

As the comment does not include any examples of the "number of impacts that are specific to a particular water system," no specific response can be offered to this portion of the comment.

N.5 As indicated on page 6-1 of the Recirculated PEIR, and provided under Section 15130(b)(1)(B) of the State CEQA Guidelines, the analysis of cumulative impacts relies on the summary of projections contained in the PEIR prepared for the City's General Plan. Thus, the analysis of cumulative impacts does not need to identify the impacts related to the emergency maintenance activities or any other specific projects within the City of San Diego. Also see Response to Comment N.4.

N.5 The MND recently prepared for the maintenance of the Tijuana River Pilot and Smuggler's Gulch Channels covers the impacts resulting from the 2009 and 2010 emergency maintenance actions as well as limited future on-going maintenance activities which may be necessary to restore conveyance capacities of the flood control channels and to prevent flooding during the expected five-year period for which regulatory agency permits are projected to be issued under the MND. This work is unable to rely on, or tier off the analysis conducted for the Master Program PEIR, as cited in the comment letter, because the PEIR had not yet been certified at the time that the Tijuana River Pilot and Smuggler's Gulch Channel Maintenance MND was completed. The City intends to rely on the five-year permit expected to be issued in the fall of 2011 for the ongoing maintenance in the Tijuana River Pilot and Smuggler's Gulch. Once (a) this PEIR is certified and effective, and (b) the agency permits under the MND terminate, the City will rely on the Master Program and PEIR.

This work is unable to rely on, or tier off the analysis conducted for the PEIR because the Master Program was on Appeal at the time that the Final MND for the Tijuana River Pilot and Smuggler's Gulch Channels was approved. The City intends to rely on the Site Development and Coastal Development Permits expected to be issued in the fall of 2011 for the ongoing maintenance in the Tijuana River Pilot and Smuggler's Gulch Channels until the Master Plan is approved and the Recirculated PEIR is certified. Once this occurs, the City will rely on the Master Program and Recirculated PEIR for on-going maintenance activities in Tijuana River Pilot and Smuggler's Gulch Channels.

The Flood Mitigation Plan (FMP) identified in this comment was developed primarily to facilitate the process of qualifying for grants under the Flood Management Assistance (FMA) Program administered by the Federal Emergency Management Agency (FEMA). These grants are available for planning and constructing flood control facilities as well as public awareness programs.

The stated focus of the FMP is on (1) identify the flooding sources affecting the City of San Diego's Repetitive Loss Properties (RLPs) and Severe Repetitive Loss Properties (SRLPs), (2) providing specific guidance for potential mitigation measures and activities to best address the problems and needs associated with RLPs and SRLPs, (3)

N.5 cont. establishing floodplain management goals that minimize flood damage to areas vulnerable to natural and human-caused flood disasters, (4) ensuring the natural and beneficial functions of our floodplains are protected, and (5) promoting flood insurance awareness throughout the City of San Diego and neighboring communities.

Although both the Master Program and FMP deal with flood risk management, the focus of the two documents is different. The Master Program is focused on maintaining the existing storm water facilities while the FMP is focused on other ways to reduce flood risk including: (1) enforcing applicable zoning codes to bring properties near storm water facilities into compliance, (2) requiring new development install drainage facilities to reduce runoff, (3) developing an outreach program to increase the public awareness of the need to reduce runoff and comply with local codes, and (4) implementing capital improvement projects to control flooding including modification of existing culverts and bridges, upgrading capacity of storm drains, stabilization of streambanks, and creation of debris or flood/storm water retention basins in small watersheds. As indicated earlier, the Master Program is focused on maintaining existing facilities and specifically excludes the expansion of existing facilities and/or the construction of new storm water conveyance facilities. Thus, implementation of the FMP and Master Program are separate but complementary means to reduce the risk of flooding along the City's urban storm water conveyance system.

N.6 Agricultural resources are discussed in Chapter 8.0, Effects Found Not To Be Significant. Based on this discussion, the Recirculated PEIR correctly concludes that storm water maintenance would not impact agriculture because the storm water facilities are not used for agricultural purposes. Indirect impacts of maintenance on agricultural activities would be positive rather than negative, because it would reduce the adverse effects of flooding on agriculture which poses a risk to livestock and removes topsoil which is critical to crops.

N.7 A determination of whether hazardous materials that may be associated with each of the facilities included in the Master Program would not serve any substantial value in the PEIR because the number and concentrations of hazardous materials in each of these facilities will fluctuate over time. In order to give the reader an idea of the types and concentrations of pollutants that may occur within the storm water facilities, the

N.7 cont. Recirculated PEIR identifies probable pollutants in Tables 4.8-1 and 4.8-2. In addition, in order to provide actual pollutant levels, the Recirculated PEIR includes the results of recent pollutant sampling tests completed for two major storm water facilities included in the Master Program; these levels are identified in Tables 4.8-6 and 4.8-7 of the Recirculated PEIR.

The handling and disposal of contaminated material is strictly regulated by local, state and federal agencies. In addition, the Master Program includes a series of protocols (see page 3-17 of the PEIR) which are intended to reinforce those regulations. In light of the regulations governing the handling of hazardous materials that may be associated with excavated sediment, a discussion of potential impacts from disposal of these materials is considered unwarranted in the PEIR.

Fostering the protection and appreciation SAN DIEGO AUDUBON SOCIETY *of birds, other wildlife and their habitats…*

July 29, 2011

Ms. Myra Herrmann, Environmental Planner
City of San Diego Development Services Center
1222 First Avenue, MS 501
San Diego, California 92101

Via email: DSDEAS@sandiego.gov

Dear Ms. Herrmann:

SUBJECT: Comments on Master Stormwater System Maintenance Program EIR, (Project No. 42891/SCH No. 2004101032) - Version 2.

The San Diego Audubon Society appreciates the need for a comprehensive program for maintaining the City of San Diego's flood water conveyances. Such a program needs to address the range of functions that our waterways and channels perform including reducing flood damage, improving water quality, providing habitat for wildlife, acting as movement corridors for wildlife, and preserving aesthetic values. The proposed Program does not adequately address any of these functions except reducing flood damage and will have negative avoidable impacts on the other functions and values of our waterways. The EIR does not provide adequate measures to avoid or mitigate those impacts. We urge that this EIR not be certified and a new EIR be provided that will actually provide meaningful alternatives and measures to avoid or at least minimize the impacts as required by the California Environmental Quality Act. We will address specific points in the following paragraphs.

PRE-PROJECT PUBLIC REVIEW

The Program document and the EIR have information on the overall impact of the program. However information on individual projects within the program will not be provided until a year or so before the project is to be implemented. This information includes the specific size and extent of the project, hydraulic and hydrologic setting, water quality impacts, wildlife impacts, noise impacts, and impacts due to access and transport of materials. If the project is determined to be consistent with the Master EIR, there will be no meaningful process for public review and input. We have heard that some or all of this information will be posted on a website, but no notification is planned to inform interested people when information is posted.

O.1 We urge that when information is made available for individual projects that a formal process be initiated to inform the public and to provide meaningful opportunity for the public to provide input, and if necessary to appeal the individual project to the City Council. Many members of the public have considerable information on specific channel segments, on the communities through which they run, on water quality issues and concerns, on habitat functions and locations of sensitive species, and on flood impacts of maintenance activities that may occur downstream of the project itself. Many members of the public are environmental professionals or have site specific experience information about the setting of the project that the Stormwater Department staff or its consultants do not have. Providing a meaningful opportunity for these people to review the individual project reports and have a meaningful means of expressing their concerns, may well provide information that may reduce the environmental impacts of some of the individual projects. Therefore we urge that a formal

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O.1 The public will have multiple opportunities to comment on the individual maintenance activities which are included in annual maintenance plans required by the Master Program.

The opportunities for public input are related to the following four areas:

- City's Municipal Code and Charter;
- Master Storm Water System Maintenance Program;
- California Environmental Quality Act; and
- State and Federal Wetland Regulations.

O.1 cont. Municipal Code/Charter

The City's Municipal Code and Charter provide opportunities to comment on the annual maintenance plans in the following ways:

- City Council budget hearings;
- Courtesy notice to affected Community Planning Groups (for IMPs subject to Process One Substantial Conformance Review [SCR]);
- Posting of a Notice of Future Decision at the storm water facility proposed to be maintained (for IMPs subject to Process Two SCR);
- Mailing a Notice of Future Decision to property owners and occupants within a 300-foot radius of a proposed maintenance activity (for IMPs subject to Process Two SCR);
- Mailing a Notice of Future Decision to the appropriate community planning group(s) (for IMPs subject to Process Two SCR);
- Mailing Notice of Decision to appropriate community planning group(s), Coastal Commission, if CDP, and interested parties that requested a Notice of Decision in writing within 10 business day after the initial Notice of Future Decision for IMPs subject to Process Two. A Process Two decision may be appealed to the Planning Commission no later than 12 business days after the decision date; and
- New hearing and appeal rights on a new or amended permit if an annual maintenance plan is found not to be in substantial conformance with the Site Development Permit (SDP)/Coastal Development Permit (CDP).

In accordance with the City Charter, each City department is required to prepare an annual budget to identify programs they intend to undertake and the cost of those programs. These budgets must be approved by the City Council in a public hearing. As mandated by the Charter, SWD will submit its annual budget which will include the channels intended to be maintained under the Master Program. Pursuant to San Diego Charter §265, the Mayor is required to propose a budget to Council and make it available for public review no later than April 15th on an annual basis. In accordance with San Diego Charter § 290, the City Council is then required to hold at least two public hearings and pass a resolution either approving or modifying the Mayor's budget by June 15th. The City

O.1 cont. Council is required to adopt the annual appropriations ordinance during July. As a result, SWD is required to present its annual maintenance program during the Council budget hearings in order to secure the funding needed to carry out the maintenance. The budget hearings are open to the public. As a result, concerns regarding the annual maintenance program can be expressed by the public at the budget hearings.

Once the budget is approved, SWD will submit formal application(s) to the Development Services Department (DSD) seeking approval to undertake the annual storm water maintenance plan, pursuant to the Municipal Code. As outlined in Chapter 6.1 of the Master Program, DSD will make a determination as to whether the annual maintenance activities are in substantial conformance with the Master Program, the SDP/CDP and the certified PEIR through a Process One or Two Decision, in accordance with Municipal Code Section 112.0502 or 112.0503, respectively. DSD may find an annual maintenance plan in substantial conformance with the SDP/CDP if it complies with the objectives, standards, guidelines, and conditions for that SDP/CDP. As the Mitigation, Monitoring, and Reporting Program (MMRP) requirements of the PEIR are incorporated as conditions of the SDP/CDP, the SCR will also evaluate conformance with the PEIR. If DSD determines that an annual maintenance plan is in substantial conformance with the SDP/CDP and within the scope of the PEIR, it may be approved without further CEQA review in accordance with CEQA Guidelines Section 15168.

Maintenance activities outside the Coastal Zone may be approved as in substantial conformance through a Process One decision. In Process One, the City will provide a copy of the application including mandatory technical assessments for each proposed maintenance activity to the appropriate community planning group(s), and distribute a "courtesy notice," as described in the City of San Diego Information Bulletin 500, providing the minimum standards for implementation of Substantial Conformance Review. While a Process One staff decision cannot be appealed, the City staff decision with regard to substantial conformance and CEQA consistency with a previously certified environmental document could be challenged in court. See Public Resources Code Section 21167.

O.1 cont. Maintenance activities inside the Coastal Zone may be authorized through a Process Two decision. For Process Two, the City will post a Notice of Future Decision at the storm water facility proposed to be maintained, and will mail a Notice of Future Decision to property owners and occupants within a 300-foot radius of a proposed maintenance activity as well as the appropriate community planning group(s). If members of the public disagree with the City's decision to authorize one or more individual maintenance activities included in an annual plan, they have the right to object to that decision by filing an appeal in accordance with the Municipal Code which allows the public to appeal any Process Two decision to the Planning Commission.

If DSD concludes that the activity is not in substantial conformance with the Master Program, SDP/CDP or PEIR, then a new or amended permit will be required in accordance with Municipal Code Section 126.0113; these maintenance activities would likely require a Process Four Decision (if environmentally sensitive lands are present). CEQA review would be required for a new or amended permit. This could be in the form of a new environmental document, a tiered environmental document, or a subsequent, supplement or addendum to the PEIR. A Process Four decision and associated environmental determination is appealable to City Council. If appealed to City Council, that decision may be subject to judicial review in court. See Public Resources Code Section 21167.

Master Program Provisions

In order to assure additional opportunities for public input, above and beyond that required by the Municipal Code, SWD has imposed additional requirements on itself through the Master Program by providing the following additional opportunities for public comment:

- Natural Resources and Culture Committee (NR&C) hearing (once annually);
- Community Planners Committee (CPC) meeting (once annually);
- Annual Maintenance Notification List; and
- Substantial Conformance Review.

The Master Program requires that the SWD present its annual maintenance plan to the NR&C of the City Council as well as the CPC. The SWD incorporated these additional public input opportunities into

O.1 cont. the Master Program, which are not otherwise required by law. Both of these meetings would offer opportunities for the public to provide input on the anticipated annual maintenance activities.

As described in City Information Bulletin 501, the Master Plan requires subsequent maintenance activities to go through an SCR process. The SCR process will determine whether the proposed maintenance in fact covered by the Master Program and PEIR. If the review results in a determination that the activity is not in substantial conformance, a new or amended permit will be required. The Master Program includes a comprehensive checklist to be used by DSD to confirm that the annual maintenance plan is in conformance with the conditions and regulations imposed upon storm water maintenance by both the Master Program and the PEIR. In addition, to the checklist, SWD will provide an Individual Maintenance Plan (IMP) and accompanying detailed technical reports addressing water quality, hydrology, biological resources and historical resources. These reports will identify measures which need to be included in each maintenance activity to mitigate potential impacts related to these technical issues.

The Master Program has been amended to require SWD to maintain a list of persons and organizations who have requested, in writing, to be notified regarding the annual storm water maintenance plan process. This list is referred to as the Annual Maintenance Notification List. In accordance with the requirements of the Master Program, SWD will notify those on the list when the Annual Priority List is available. The SWD will also post relevant information on the City's website.

<u>California Environmental Quality Act</u>

The California Environmental Quality Act (CEQA) provides another means for the public to object to annual maintenance plans. Under Section 15162 of the CEQA Guidelines, the public could file a legal challenge against the City if the public believes the City inappropriately relied on the Recirculated PEIR to satisfy the requirements of CEQA pursuant to either a Process One or Two Decision.

Public concerns related to the approval of an individual maintenance facility would most likely relate to the belief that the maintenance could incorporate a mitigation or alternative approach that was not considered

O.1 cont. in the PEIR. In addition, the public could assert that an alternative or mitigation, considered infeasible in the Recirculated PEIR, is now feasible and should be incorporated into a specific maintenance activity. Section 15162 would limit the City's ability to rely on the Recirculated PEIR in making a Process One or Two Decision when the following conditions apply:

- Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative (Section 15162(3)(C)); or
- Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative (Section 15162(3)(D)).

Resource Agency Annual Authorization Process

Lastly, the processes followed by state and federal agencies to authorize annual maintenance offer a fourth opportunity for public input. The public has the opportunity to provide comments directly to any of the resource agencies (U.S. Army Corps of Engineers, Regional Water Quality Control Board and California Department of Fish and Game) during their review of the proposed annual maintenance plans. Those comments can be submitted directly to these agencies. Furthermore, under the provisions of the Master Program, SWD cannot commence proposed maintenance of a facility included in an annual maintenance program until the agencies with jurisdictions over the resources located in that facility have approved the annual maintenance plan.

O.1 cont.

procedure for project level public review and meaningful input be included in the EIR as a mitigation measure.

It appears to us that such a process is required by CEQA as discretionary decisions will be made based on the new project specific information which was not available in the Master EIR process.

O.2

POST-PROJECT REVIEW

We urge that information about each of the projects that were implemented in previous years should also be reviewed annually. This review should include what actions were taken, pre- and post-project water quality measurements, what changes were made from the plan for the project, what mitigation was provided, and how effective the implementation mitigation has been, the extent that sediments, vegetation, and wildlife that have returned to the site, the hydraulic capacity needed in the channel segment, the capacity of the project after the maintenance occurred, and the capacity at the time of that review. This feedback information should be made available to the public, to regulators, and to elected officials to allow evaluation of the effectiveness of the program, evaluation of its actual impacts, and measures that might improve the program in the coming years.

O.3

REJECTED PROJECT ALTERNATIVES

The subject EIR deems that several of the listed alternatives are infeasible using assumptions that may be true for many of the individual channels, but certainly not all of them. The evaluation of the applicability of these alternatives should be done in the analysis of individual projects, not in the programmatic EIR. If these alternatives are rejected in the EIR, a project could not use these alternatives, even if proven to be appropriate because they would not be covered by this EIR.

We will address a few of these inappropriate assumptions to explain the issue.

O.4

Raised Bank Alternative:

On pages 7 and ES-6, the EIR states that raising banks would preclude wildlife access. But raised sides could be sloped berms vs. vertical walls in some locations so they would not impair wildlife access. It also says that this alternative would block side channels that feed into that channel, but many of the channel segments do not have side channels. It states that acquiring land would be too costly, but in many cases the banks would be on unused public property. It states that the raised banks would require a Capital Improvements Project and would not be competitive. However it might be cost effective and environmentally superior to frequent maintenance. It also might be cost effective to increase channel capacity as well as reduce maintenance costs in some cases. The arguments presented by the EIR are relevant in a number of channel segments but clearly not in all. Therefore this alternative should not be rejected for all channels, but should be considered for individual channel segments.

O.5

Channel By-pass Alternative:

On page 7, 8, ES-6, and ES- 7, the EIR states that providing by-pass pipes would require engineering, but so will designing how to access the channels for vegetation and sediment removal. It states that easements and impacts to adjacent property would be costly. Some channel segments are in and adjacent to public property so they might not be costly. The County has selected the Channel By-pass Alternative as being the most cost effective solution in at least one situation.

Widened Channel Alternative:

O.2 As required by the Master Program and Mitigation Measure 4.3.8 of the Recirculated PEIR, SWD will prepare a Maintenance Monitoring and Mitigation Report to document the maintenance activities and mitigation measures that took place in the preceding year. In response to the commenter's request for more specificity regarding the content of the annual report, the Master Program has been modified to specifically require the information required by Mitigation Measure 4.3.8, as well as the following information:

- Results of water quality tests completed before and/or after maintenance;
- Discussion of vegetation growth and sediment accumulation since last maintenance event; and
- Estimate of the conveyance capacity resulting from the past year's maintenance.

As required by the Master Program, the results of this report will be presented as an informational item on an annual basis to the NR&C of the City Council and the CPC. In this presentation, SWD will also outline the maintenance planned to be carried out in the coming year. This same information will be provided to the appropriate state and federal agencies.

O.3 As discussed in Response to Comment M.5 and page 6 of the Master Program, the City will consider other alternatives provided the alternatives would achieve a comparable reduction in flood risk, be cost-effective and reduce biological impacts.

O.4 As discussed in Response to Comment M.5 and page 6 of the Master Program, the City will consider other alternatives provided the alternatives would achieve a comparable reduction in flood risk, be cost-effective and reduce biological impacts.

O.5 cont.

On page 8, ES-7, and ES-8, the EIR states that this alternative would require "Channel-specific hydraulic analysis", but so will each individual channel maintenance project. It states that it could be difficult for maintaining downstream gradients. But, deciding which portions of channel segments will need maintenance and which will not will also requires attention to maintaining downstream gradients. It states that the initial widening would impact the same amount of vegetation as the full channel maintenance. But a channel can be widened without disturbing the existing channel bed if done thoughtfully. On page 9, the EIR states that the cost would be increased by the need to acquire private property and would impact existing homes, but many of the channels are through City property and are not adjacent to developed property. So again the alternative is rejected for reasons that are appropriate for many channel segments but not all of the channel segments in the program.

The Channel Widening approach is particularly appropriate in cases where even full channel maintenance will not provide the needed hydraulic capacity.

O.5 As discussed in Response to Comment M.5 and page 6 of the Master Program, the City will consider other alternatives provided the alternatives would achieve a comparable reduction in flood risk, be cost-effective and reduce biological impacts.

O.6

Off-Site Runoff Reduction Alternative:

On page 9, 10, ES-8, and ES-9, the EIR identifies the many benefits of this approach but then dismisses it as a "stand alone alternative to the proposed Master Program" for cost and timing reasons. But as time goes on, this approach will be required by State and Federal agencies to better protect our water quality, whether or not it is addressed by the Program. As we restore the water retention capability of our developments, peak flows will reduce and the need to remove vegetation from waterways will be reduced.

Again, none of the alternatives are suitable as "stand alone alternatives" but they may well be useful for some of the channels listed for management. The removal of vegetation and sediments is also not appropriate as a "stand alone" measure, in spite of the allegations of this Plan and EIR. But it is appropriate in many cases especially when used in conjunction with other less environmentally damaging alternatives when they are appropriate. But, unfortunately this flexibility is dismissed, program wide, as an alternative with no data or justification.

O.6 As discussed in Response to Comment M.5 and page 6 of the Master Program, the City will consider other alternatives provided the alternatives would achieve a comparable reduction in flood risk, be cost-effective and reduce biological impacts.

O.7

PROJECT ALTERNATIVES NOT ADDRESSED

The EIR does not address the alternative of leaving some of the vegetation and some of the soil in cases in which doing so would benefit water quality, habitat value, or help slow water flow to reduce downstream flooding, thereby reducing environmental impacts. The department staff agreed that it is a viable approach for some situations in previous discussions but failed to include it in this EIR. Paragraph 4.3.2, page 4.3-25 states that "For facilities with a width less than 20 feet it was assumed that the bottom and all of the banks would be disturbed in order to maximize the ability of these narrower facilities to convey flood water. This appears to preclude this alternative for narrower channels. This alternative should be included in the EIR and the determination about whether partial clearing is appropriate should be left to the analysis for each individual channel.

O.7 The Master Program already requires that the IHHA determine how much vegetation can remain in a storm water facility while still achieving the desired increase in storm water conveyance capacity (refer to page 19 of the Master Program). This will assure that vegetation within channels less than 20 feet in width will be retained whenever possible despite the generalized assumption used for the impact analysis in the PEIR.

O.8

MITIGATION, MONITORING, AND REPORTING PROGRAM INCORPORATED INTO THE PROJECT

Mitigation measure 4.1.2, on page 10 requires a qualified biologist to survey areas suspected to serve as habitat for sensitive birds covered by the MSCP. That understates the responsibility of the program. The biologist must identify habitat and nesting of all sensitive bird species including those listed under the California and Federal Endangered Species Acts, the California Fully Protected Species Act, and the International Migratory Bird Treaty Act whether or not they are covered species under the MSCP.

O.8 As detailed on page 4.1-19 of the PEIR, Mitigation Measure 4.1.2 states that a qualified biologist "shall survey those habitat areas inside and outside the MHPA suspected to serve as habitat (based on historical records or site conditions) for the coastal California gnatcatcher, least Bell's vireo and/or *other listed species*." The summary of this mitigation measure provided on page ES-18 has been revised to state, "Mitigation Measure 4.1.2 requires a qualified biologist to survey areas suspected to serve as habitat (based on historical records or site conditions) for state- or federally-listed sensitive bird species."

MITIGATION RATIOS

O.9 Two of the mitigation ratios listed in table 4.3-10 on page C-4 of the EIR are less than those stated in the City's MSCP Subarea Plan. Impacts to disturbed wetlands require 2:1 mitigation in the MSCP, but are listed as 1:1 in the EIR. Impacts to natural flood channels require 2:1 in the MSCP, but impacts to Streambed/natural flood channel are listed as NA in the EIR. We urge that the full MSCP ratios be implemented in this project. The EIR's allegation that the impacts of maintenance are temporary and therefore are not significant is not credible and is based on unsupported assertions in the EIR.

On page C-4 the EIR states that mitigation done in advance or through purchase of mitigation credits would be at a 1:1 ratio. We urge that the program mitigate at least at the ratios adopted by the City in the MSCP Subarea Plan with no exceptions.

IMPACTS ON NATURAL DRAINAGES UNDERSTATED AND MITIGATION MEASURES ARE INADEQUATE

Page 4.1.11 states that
"Maintenance activities will not alter the configuration of the natural drainage courses included in the Master Program. While the Master Program does provide for removal of accumulated sediment and overgrown vegetation that interfere with conveyance of floodwater, it would not allow any physical modifications of the underlying drainage."

O.10 This statement clearly denies the environmental impact of this project. The removal of sediment and vegetation is, in itself, a substantial physical alteration of the configuration of the waterways. It will impact the waterways slope, flow resistance, absorption capability, wildlife support and water quality values as discussed elsewhere in the EIR. Later on Page 4.1-11 it suggests that retention of mature spaced 50 feet apart and leaving vegetation on the banks of most of the channel will achieve the goal of minimizing impacts to natural habitat and wildlife. This may reduce impacts somewhat, but to say that they minimize them is misleading and unsupported. The impacts could be minimized if the program would also address the use of alternative approaches where needed to protect habitat and water quality value, but these approaches have been rejected for this program.

O.11

O.12

This section does state that the IHHAs will minimize the amount of vegetation removal required to improve the ability of a storm water facility to convey flood water. We have strongly supported such a concept. But, in discussions, the City staff and consultants have stated several times that the channels were designed with no excess capacity and must be clean for adequate conveyance, which precludes the minimization approach which is promised in this section. The public will need to be able to review and have meaningful opportunities to provide input on the individual habitat, water quality, and hydrology analysis to see how this apparent conflict will be resolved.

O.13

This section also states that "The retention of mature trees and the ability of the understory vegetation to naturally re-establish within a short period of time will help achieve the goal of minimizing impacts." Again this is misleading and unsupported. A tree left every 50 feet will support nothing like a healthy riparian habitat. In some cases some understory plants can re-establish quickly of there is adequate soil and moisture, but the channel maintenance will remove the soil and it could take many years to deposit again, depending on the intensity of rainfall. Adequate dry season moisture is less likely to be available until sediments or other vegetation form to retain it. Vegetation like cattails will grow quickly when soil and seeds are available. Other plants will take much longer. The recovery of a fully functioning habitat community will depend on the recovery of a diversity of vegetation, animals, and micro-organisms. The document provides absolutely no analysis to state how long they anticipate the

O.14

4

O.9 As discussed in response to comment A.1, the wetland mitigation ratios identified in Table 4.3-10 of the Recirculated PEIR have been revised to match Table 2 of the City's Biology Guidelines. The provision for reducing the mitigation ratios if mitigation credits are used has been eliminated from Table 4.3-10.

O.10 The City agrees that the removal of vegetation and sediment would constitute a physical change in the environment and the Recirculated PEIR explicitly addresses the impacts of the removal of vegetation and sediment. This comment misinterprets the statement that the maintenance program would not alter the configuration of the water ways. This statement is intended to indicate that the Master Program would not allow the excavation of the channel for purposes other than the removal of accumulated sediment for improved storm water conveyance. As are result, the Master Program does not allow the underlying channels to be realigned and/or enlarged.

O.11 The City believes that leaving mature trees which are at least 50 feet apart will minimize impacts. Retaining mature trees provides valuable nesting and perching areas for avian species.

O.12 As discussed in Response to Comment M.5 and page 6 of the Master Program, the City will consider other alternatives provided the alternatives would achieve a comparable reduction in flood risk, be cost-effective and reduce biological impacts.

O.13 As discussed in Response to Comment O.1, the public will have multiple opportunities to review and comment on the proposed maintenance activities on an annual basis. This review will include all of the individual technical assessments prepared in the process of formulating the individual maintenance plan for each facility.

O.14 The City continues to believe that wetland vegetation will re-establish quickly following maintenance based upon empirical evidence that this occurs on a regular basis following maintenance of storm water facilities with earthen bottoms. The City does not disagree with the comment that diverse wetland habitat takes more time to develop, and notes that the PEIR only indicates that riparian scrub (e.g., freshwater marsh) would be expected to return quickly (see page 4.3-35). As the comment does not present any specific evidence, no specific response can be made to

O.14 cont. quick "re-establishment" to take, thus it provides no foundation for the City or for stakeholders to anticipate how much impact is offset by the habitat and water quality value of the re-establishment and how much needs to be mitigated elsewhere. Such an analysis is absolutely needed to allow this program and this EIR to be based on these currently unsupported assumptions.

O.15 In some situations weedy annual species tend to re-establish more quickly than native species and then dominate the site precluding the re-establishment of the appropriate native species. When this occurs it results in a loss of native habitat and it puts downstream wetlands and waterways at risk of invasion of these species. Kikuyu grass, arundo, pampas grass, and curly dock are examples, but there are many more. The EIR does not address whether this clearance and re-establishment will tend to degrade other wetlands by facilitating the invasive of these species and it does not address mitigation measures to prevent it.

O.16 The EIR does not mention the possibility or the impacts of repeated clearances in some conveyances. To what extent will they be cleared, vegetation eventually re-established, and then removal will occur again? Or will full re-establishment ever have a chance to occur between clearances? There should be a different level of mitigation for such projects. The EIR does not address that potential impact, but it must.

O.17 In summarizing the discussion of Issue 1, the EIR alleges that "impacts will be mitigated by enhancing, restoring, or creating new wetland habitat" but, the EIR intends to not mitigate for impacts to Streambed/natural flood channel, in spite of the MSCP, invalidating this assurance in the EIR.

These comments have focused on the section "4.1.2 Impacts" on page 4.1-11, but these weaknesses carry through the entire EIR. Thus this EIR fails in every one of the measures that it alleges, in section 4.1.2, will "achieve the goal of minimizing disturbance to natural habitat." We urge that the EIR be revised to provide adequate analysis of these impacts, consider a more responsive set of alternatives to avoid them, and provide mitigation that will actually offset all the unavoidable impacts. To do anything less would be to violate the letter and the purpose of CEQA.

WATER QUALITY ANALYSIS

O.18 We appreciate the addition of the water quality analysis discussed in section 4.8 and summarized in Figure 4.8-2. Such an analysis will be useful if done correctly. However Figure 4.8-1 presents a concern. It shows a zero net result of plant uptake over time. This is appropriate for elements like metals and sediments that will be taken up and later fully discharged. However many pollutants, such as hydrocarbons, fertilizers, fecal material, some pesticides, and some pathogens are converted to energy and benign substances as they are consumed by the vegetation and the microorganisms that they host. Thus the eventual uptake for such substances exceeds the eventual discharge, a net water quality gain. This is not reflected in the discussion of section 4.8 or in Figure 4.8-1. We must assume that the water quality model is based on the same deficiency. We urge that the analysis in this section and the model be upgraded so this net water quality value of vegetation and organisms in the soil will be accurately reflected.

O.19 On Page 4.8-7, the EIR states that "High flow conditions, during wet weather are not generally conducive to the pollutant removal process because of the high quantities and velocities associated with high flows." No references are provided to substantiate this assertion. During high flows the roots of plants and organisms in the soil are still scavaging nutrients and breaking down pollutants into their components. They are not able to remove as high a

O.14 cont. the claim that re-establishment of freshwater marsh habitat does not generally occur within the 6 to 12-month period identified on page 4.3-35 of the Recirculated PEIR.

The statement that maintenance will hamper re-establishment of wetlands by removing the soil that supports this vegetation type is over-generalized. While this statement would be true for facilities with concrete bottoms, it would not apply to facilities with earthen bottoms. In earthen-bottom channels, maintenance would only remove sediment that has been deposited from upstream sources; the underlying soil would remain and support the wetland regrowth discussed in the PEIR. On the other hand, the statement would be true in concrete channels where sediment may take time to re-establish to sufficient depths to support wetlands. However, it is important to remember that concrete-bottom channels do not support wetlands unless sediment from upstream erosion is deposited within these channels. In either case, the loss of wetlands would be fully mitigated off site. Thus, the regrowth of any amount of wetland after maintenance would constitute a net increase in regional wetland habitat.

O.15 In general, vegetation removal in the course of maintenance would remove invasive species and result in a positive effect on the maintained facility. In addition, this removal of invasive species would also benefit downstream areas by reducing potential seed sources for invasive plants. To limit the potential for maintenance to promote the spread of invasive species, the Master Program contains several specific protocols. To reduce the potential for maintenance to promote the spread of arundo (a major threat to natural wetlands) into downstream areas, Protocol BIO-6 identifies specific methodologies to be followed. In addition, Protocol BIO-5 requires all erosion control measures (e.g., fiber mulch, rice straw, etc.) to eliminate potential sources of invasive species

O.16 The Recirculated PEIR acknowledges that repeated maintenance is expected to occur within the storm water facilities included in the Master Program. Specifically, on page 3-13, the PEIR states that maintenance frequencies typically would occur at three-year intervals. In recognition of the fact that repeated maintenance would limit the ability of wetland habitat within storm water facilities to regain their full functions and services, the City proposes to mitigate the wetland impacts using the same ratios applied to permanent loss even though, as stated earlier,

O.16 cont. some degree of wetland habitat is expected to exist between maintenance events.

O.17 As discussed in response to comment A.1, the wetland mitigation ratios identified in Table 4.3-10 of the Recirculated PEIR have been revised to match Table 2 of the City's Biology Guidelines. Thus, impacts to streambed/natural channel areas would be mitigated at a ratio of 2:1, unless the Resource Agencies allow a lower ratio.

O.18 Figure 4.8-2 is a general depiction of the potential transfers and transformations within "constructed" wetland treatment systems (CWTS) and is not meant as a specific graphic of the subsequently modeled process. There are some conservative assumptions in the Figure 4.8-2 as well as in the process model. Conservative estimates of both sorption (i.e., absorption and adsorption) rates of targeted pollutants and overall wetland assimilation capacities via transfers and transformations do not reflect temporal changes within the wetlands. In fact, the model takes a more conservative approach and assumes the assimilation capacity of the natural system remains constant including low productivity times of the year, such as summer dry, winter dry and during low, wet weather flows. While it is true that biodegradation of some of the targeted contaminants may occur in these CWTSs, the macrofeatures (i.e., hydrodynamics, vegetation, and sediments) identified for contaminant degradation exist in some areas either by accident and/or not at all. Thus, for every section of a channel that facilitates pollutant degradation, there is another segment that increases or enhances pollutant bioavailability. Additionally, the assessment model does not assume any loss of assimilation as may occur during winter-dormant periods and after large wet weather events that wash away sediment, associated nutrients, and vegetation. Temperature, seasonality, nutrient cycling, senescence, degradation rates, herbivory, disease, anthropogenic disturbance, recovery time after a disturbance, etc. will affect the ability of wetland vegetation and the associated microbial community to transfer and transform contaminants from the system.

O.19 During wet weather conditions, where the retention time is significantly reduced due to high storm flows, the potential for plant and sediment uptake of pollutants is negligible. This conclusion is based on the scientific data presented in the over 50 references provided in the White Paper that have established a direct relationship between reduction in retention times to reductions in pollutant uptake. For information relating to the issue see Responses to Comments I.14 and I.17.

O.19 cont. percentage of the pollutants as during lower flows and higher retention times, but there is no reason to assume that their removal quantities are diminished. Since additional moisture tends to stimulate plant growth, the opposite is more likely to be true. We urge that this assumption of diminished removal during high flows not be used in models unless it can be fully substantiated.

SEGMENT 83, FAMOSA BOULEVARD AND VALETA STREET

O.20 Map 83 shows the Valeta Street culvert that feeds into Famosa Slough. It indicates that a narrow strip of mature native CCS vegetation between the culvert and the adjacent parking lot as the Access Area. We urge that this row of vegetation not be removed for this maintenance. It has significant erosion control value and provides a visual barrier for that concrete culvert. Removal of this upland vegetation can be avoided by having equipment reach over the vegetation from the parking lot for access to the channel. The taller vegetation in this strip can be trimmed if needed for access. Another alternative might be for volunteers working with the Park Department to manually remove the vegetation from the channel (under the Master Permit) and place it in the parking lot for Stormwater Department disposal.

CUMULATIVE IMPACTS, SECTION 6

O.21 The EIR fails to identify and analyze other upstream threats to waterways that will have a cumulative impact with the proposed project such as the County Vector Remediation Program, the County channel maintenance requirements, and channel maintenance programs of upstream cities that feed into waterways in San Diego. We urge they be added and impacts identified

SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES, SECTION 9

O.22 This section claims that the program would not result in irreversible changes. This conclusion is not supported by a realistic analysis of the information provided in the EIR. Our region has lost something like 90% of its wetlands and waterways. Our stormwater culverts and pipes have replaced those waterways. The wildlife that depends on them has diminished significantly. A temporal loss of this habitat support value is a real loss. There is not excess habitat for them to move to temporarily. These riparian habitats are fragmented making wildlife relocation more problematic. These channel clearing actions will cause additional fragmentation. Even if the re-establishment occurs quickly as asserted in the document there will be a temporal loss of wildlife support value that will result in reductions in the species that are supported by these habitats. However there is no analysis to show how long re-establishment will take and what measures will be implemented to mitigate for the temporal losses for a quick or a slow re-establishment. We urge that these temporal losses be identified and the cavalier claim that quick re-establishment resolves the temporal losses be abandoned

We urge that this project and EIR be revised so that it can support the claim that the program will not result in net environmental impacts. Otherwise we urge that the no-project alternative be adopted even with its piecemeal approach and regulatory problems.

In case of questions or follow-up, I can be reached at 619-224-4591 or peugh@cox.net .

Respectfully,

James A. Peugh
Conservation Chair

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O.20 The City appreciates the commenter's suggestions on how to minimize the impact of maintenance within Map 83. It is the City's overall goal to minimize impacts to native vegetation resulting from maintenance. In preparing the specific maintenance plan for Map 83, the City will consider the feasibility of leaving the strip of vegetation noted in the comment in place.

O.21 As indicated in Response to Comment N.4, the Recirculated PEIR bases its discussion of cumulative impacts on the General Plan PEIR, which based its analysis on the regional growth projections provided by the 2030 Regional Growth Forecast Update prepared by the San Diego Association of Area Governments (SANDAG). This approach is consistent with the guidance provided in Section 15130(b)(1)(B) of the CEQA Guidelines, which allows a cumulative impact analysis to be based on a regional plan such as the one prepared by SANDAG. As the General Plan PEIR is based on a regional plan, specific projects (e.g., the County's Vector Control Project) are not specifically evaluated. Furthermore, given the lack of specificity with respect to potential wetland impacts associated with the County's vector control plan and storm water maintenance, it would be difficult to provide a quantitative evaluation of the effect of these activities in combination with the proposed Master Program.

O.22 The City acknowledges the historic loss of wetlands in the region. Furthermore, as discussed in Response to Comment O.17, the City proposes to mitigate the wetland impacts using the same ratios applied to permanent loss. Thus, the regrowth of any wetland after maintenance would constitute a net increase in regional wetland habitat.

San Diego Canyonlands
◆ 3552 Bancroft Street San Diego, CA 92104 ◆ 619-284-9399 ◆

July 28, 2011

Myra Herrmann, Environmental Planner
City of San Diego Development Services
Via E-Mail to: DSDEAS@sandiego.gov

Re: MASTER STORM WATER SYSTEM MAINTENANCE PROGRAM (MSWSMP)
Draft Program Environmental Impact Report (PEIR)
Project No. 42891/SCH No. 2004101032

Dear Ms. Herrmann:

San Diego Canyonlands (SDCL) is a non-profit organization dedicated to restoration and preservation of the unique canyon and creek habitats throughout San Diego County. We have reviewed the City of San Diego's Master Storm Water System Maintenance Program (MSWSMP) re-circulated Draft PEIR and we strongly encourage the City to reject the current version. It should be revised to include several less environmentally damaging maintenance and flood control alternatives, a meaningful opportunity for the public to comment on Individual Maintenance Projects once the details are known, and additional multi-beneficial mitigation alternatives.

The resources at risk with the current proposal are essential components of our city's green infrastructure. They serve flood and erosion control, water quality, air quality, wildlife conservation goals and community aesthetic values. Their health is necessary toward the important goals of environmental and economic sustainability.

SDCL would like to thank the Storm Water Department, other city staff and consultants for their time meeting with us including a field visit, and for the revisions made in this new PEIR. **Revisions include:**

- elimination of approximately 61 channel segments that do not require maintenance,
- establishment of protocol to kill the invasive *arundo donax* before removal from the creek channels,
- providing access routes and staging areas on the vegetation maps,
- eliminating development of new access routes with this PEIR,
- adding species of concern to the maps.

The disagreements that remain include but are not limited to:

- the Public Process for review of Individual Maintenance Projects (IMPs) once the details and the impacts of the projects are known,
- complete rejection of important, integrated, maintenance alternatives,
- mitigation areas are still subject to exportation from core urban areas, (especially from Districts 2, 4, & 8) including mitigation for all upland habitat impacts,
- habitat mitigation is not integrated with water quality and flood control goals,
- Hydrology and Hydraulic analysis will be incomplete as planned.

Because these issues have yet to be resolved, many of our comments and recommendations made on the first PEIR still apply.

P.1

Conflicts with the General Plan
The proposed methods of flood control and lack of less damaging alternatives are in conflict with several goals of the adopted General Plan (Public Facilities, Services, and Safety Element) including:

- Protection of beneficial water resources through pollution prevention and interception efforts.
- A storm water conveyance system that effectively reduces pollutants in urban runoff and storm water to the maximum extent practicable.
- Public utility services provided in the most cost-effective and environmentally sensitive way.
- Public utilities that sufficiently meet existing and future demand with facilities and maintenance practices that are sensible, efficient and well-integrated into the natural and urban landscape.

1) Public Review Process

P.2

The Storm Water Department (SWD) still insists on a single CEQA process (California Environmental Quality Act process) that will cover all "conforming" channel maintenance activities for a full 20-year period. Critically important details, such as hydrology and hydraulic analysis cannot be known until a time that is relatively close to the maintenance time-frame. We understand the reasoning for this, but there must be a subsequent CEQA process that discloses such important details so the public can make informed comments on the project in an open comment period. We have requested a "tiered CEQA process" that would allow for review of important project details when they were available and timely. Despite the fact that all the studies and details that are not available in the PEIR now, must be assembled for detailed review by resource agencies before the IMPs can go forward, the SWD continues to deny the public a CEQA-based opportunity to review these essential details.

At recent public meetings staff has vowed to share the details of the Individual Maintenance Plans (IMPs) with the public at the same time they make the information available to resource agencies as part of the Substantial Conformance Review (SCR). However, this method of disseminating the information would not have the requirements for noticing to the public, or a comment period with corresponding written responses. Furthermore, the decisions of staff would not be appealable and there would be no CEQA-based, legal remedy for stakeholders with grievances. Accountability to community stakeholders will be effectively stifled.

P.3

Local input from stakeholders during development of IMPs is important
Local citizens often have unique knowledge of the site conditions beyond what could be gathered by consultants in a few visits. They have knowledge about the behavior of the creek system during storm events and sources of erosion that are causing increased sedimentation. They have knowledge of nesting species or sensitive species beyond what consultants can gather in a single site visit. They can point to potential opportunities for nearby mitigation sites, close to the project impacts or within the same watershed. Local groups may be able to recommend alternatives that meet the project purpose but that avoid the project impacts. For these reasons we feel that involving local stakeholders such as Friends of Canyon/Creek groups during development of the Individual Biological Assessment and IMPs is essential for creating appropriate plans/projects. However, noticing of local stakeholders, for the most part, will not be required given the planned process. Furthermore, no response to any comments that may be generated is required and there is no accountability to stakeholders for poor IMPs.

2

P.1 Maintenance of the storm water facilities does not necessarily achieve the underlined portions of the goals identified in the comment because maintenance is intended to promote storm water conveyance. Furthermore, it is not unusual for a project to not be able meet every goal and objective of the General Plan because of the wide-ranging nature of those goals, which the City has to balance. For example, the General Plan recognizes both the need to protect wildlife and open spaces as well as the need to maintain essential public facilities. The Master Program appropriately balances those goals. Specifically, the Master Program does contain a series of protocols to reflect General Plan goals related to maintaining water quality and retain the wildlife and visual attributes of nature drainages. The Master Program identifies specific maintenance protocols designed to minimize water quality impacts from maintenance, including installation of interim devices (i.e., interception efforts) to control transport of sediment and pollutants (Appendix C of the Recirculated PEIR). Impacts on aesthetic and wildlife values would be reduced by retaining mature trees which are at least 50 feet apart and minimizing vegetation removal wherever possible. Mitigation for impacts to biological resources will be required to be conducted within the watershed where the impacts occurred, unless the SWD can demonstrate that no suitable location exists within that watershed.

P.2 As indicated in Response to Comment O.1, the public will have many opportunities to comment on individual maintenance plans on an annual basis.

P.3 The SWD recognizes the unique knowledge of a specific storm water facility that local citizen and conservation groups may have. In order to make sure that these entities are able to review the IMPs included in the annual maintenance plan, the Master Program has been revised to include the requirement for a Maintenance Contact List so that interested persons and conservation groups will be notified when the annual storm water maintenance plan is available for public review. In addition, as noted in Response to Comment O.1, the public will have a number of opportunities to comment on the IMP which are included in SWD's annual storm water maintenance plan. Lastly, as discussed in Response to Comment M.5 and page 6 of the Master Program, the City will consider other alternatives provided the alternatives would achieve a comparable reduction in flood risk, be cost-effective and reduce biological impacts.

P.4 The PEIR does serve to frame the worst case scenario for impacts and can serve as a program CEQA document for many purposes, but a subsequent CEQA document is needed to disclose the details of the IMPs for review and comment by an informed public to assure that the environmental impacts will be minimized.

P.5 **RECOMMENDATION 1** We recommend that the SWD submit a group of priority IMPs for projects to be implemented within a 2, 3, 4, or 5 year period and circulate a Mitigated Negative Declaration (MND) that provides IMP details and refers to the PEIR for the CEQA components it covers. The document would be relatively easy to assemble because all of the detailed studies will have to be assembled for agency review anyway. This would also reduce the number of notices and CEQA documents circulated -and the number of public review periods substantially.

2) PEIR fails to include feasible, less-damaging alternatives

Despite objection from many informed stakeholders, this revised PEIR continues to propose mainly two variations of a single method to reduce flooding - the removal of vegetation and sediment from creek channels. The two variations proposed are mechanical and non-mechanical means of removing the materials. Rejected alternatives that would be less damaging, that may provide multiple benefits, and that could be used in some cases, in some channel segments are:

- Raising the channel banks by constructing walls or berms along the top of the channels;
- Diverting storm water in pipes around constrained segments;
- Widening channels to accommodate vegetation; and/or
- Reducing off-site runoff generation through use of low impact development measures.

The primary basis for rejection of these alternatives is that "*the cost would be increased by the need to acquire private property*". Please see PEIR, Page 7-15 where the text submits that a "majority" of the channels are bordered by residential or commercial development. The text reads: *"Given the limited City right-of-way, and the fact that the majority of the affected channels are immediately bordered by residential or commercial development, a large number of homes and businesses would likely need to be eliminated to accommodate the widened channels."* (emphasis added). Clearly not all segments are bordered by private and residential properties.

In reviewing the channel site maps, there are many cases where the city owns substantial land adjacent to the channel. A preliminary review shows nine channel segments that have substantial city-owned property adjacent to them.

Channel Name	Section(s)	EIR Map # (Appendix D.2)	Notes - City Ownership
Tijuana River	2,3	138b, 138c	City owns segment and extensive adjacent area.
Smugglers Gulch	2	139	City owns segment and area adjacent.
Nestor Creek	1	131	City owns adjacent area to the North
Jamacha	1,2,3	113, 114, 115	City owns segments and extensive adjacent area on both sides of channel.
South Chollas Creek	1,2	94, 95	City owns adjacent area South of segment on West side of S. 39th St and E side of I-5 (Father Brockhaus Park).

P.4 As discussed in Response to Comment O.1, the SCR process will provide detailed information regarding each individual maintenance activity which will be made available for public review and comment.

P.5 Due to the number of variables which dictate the need to perform maintenance, the SWD cannot accurately predict which facilities would need maintenance and exactly when it would be needed over a 2-5 year period. Annual rainfall, and the resulting vegetation growth and accumulation of sediment, will vary annually.

P.6 **Please explain** why analysis for possibly using the less damaging alternatives is simply rejected rather than being included within this PEIR in a suite of alternatives that could be considered, case-by case, IMP by IMP, to lessen the impacts of the project?

Channel Widening

P.7 We understand that channel widening will be considered as a mitigation measure and we support this provision but use of widening as a flood control measure is completely rejected and this is unacceptable. In both cases, unsubstantiated arguments are made that the temporary impacts of widening would be the same as channel clearing. **Please substantiate the assertion** that vegetation in the middle of the channel would necessarily be impacted and why methods for widening the sides could not be employed to avoid impacts to established vegetation in the center.

P.8 Widening the channel for flood control would be self mitigating because the net result would be creation of new wetlands with no loss of existing wetlands. "Creation" is the most valued form of wetland mitigation (PEIR 7-17). It is possible that widening could provide a surplus of created wetlands providing mitigation for other, unavoidable project impacts. Widening reduces maintenance requirements, avoids eliminating pollutant removal capabilities of in-channel vegetation and avoids long term water quality impacts, (PEIR at 7-14, 7-16).

P.9 **Most importantly, a widening alternative will decrease flooding in downstream areas and is a very important alternative where downstream capacity is so limited that flooding will continue on a predictable, routine basis despite channel clearing in those segments.**

P.10 **Flooding will still occur in some downstream segments even after channel clearing occurs.** During field visits with Storm Water Department staff, hired city consultants admitted that even after clearing of sediment and vegetation, certain channel segments would still overflow far too frequently. For example, during a site visit in August 2010, the SWD's consultant, Denis Bowling, opined that the segment of Chollas Creek at 33rd and National Ave. and Gregory Street (vegetation map 93) might still flood every 20 years. This is one example. There are probably cases where flooding will still happen more frequently even after channel clearing occurs. Here are two sites that represent examples of where widening would provide reduction of flooding in downstream areas where it would substantially help protect lives and property.

P.11 **Maps 131 & 133**: Please see attached "Google Earth screen shot" of channel segment and Map# 131. It shows city-owned property on the Nestor Creek Channel west of 30th Street with substantial room adjacent to the creek. Widening the entire portion of the channel on the north would provide substantial room for flood waters to spread out across the floodplain, slow down, and absorb into the ground. The land currently consists of fill and disturbed, ruderal upland habitat and non-native grasslands. Map #133 shows a channel segment north of Coronado Avenue where the channel could be substantially widened to the west. The western side of the channel, which consists of disturbed upland habitat, presents an ideal space for widening because it is unpaved and seemingly unused. South Bay Union School District owns this parcel, 6273108100, and can be contacted at (619) 628-1600. The residences downstream of these creek segments, along Grove Avenue and at Cerrissa Court are dangerously close to the creek and are vulnerable to flooding. They are located immediately adjacent to the channel and buildings are not far above the top of the embankments.

P.12 **Maps 113, 114 and 115 along Jamacha Road in the upper reaches of the Encanto Branch of Chollas Creek:** Please see two attached "Google Earth screen shots" of channel segments which are surrounded by a linear series of City-owned parcels. All through this 1.5 mile stretch of Chollas Creek, channel widening would provide all of the same benefits discussed in the paragraphs above

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P.6 The City acknowledges there are locations where it may be possible to widen existing channels to increase the capacity of the channel and allow varying amounts of vegetation to remain within the channel. These will be considered on a case by case basis and require further studies to determine the impacts associated with widening. It is likely that such projects would be carried out by the City's Engineering and Capital Projects (E&CP) Division and would compete for funding and resources with other ECP project city-wide. Furthermore, as discussed in Response to Comment M.5 and page 6 of the Master Program, the City will consider other alternatives provided the alternatives would achieve a comparable reduction in flood risk, be cost-effective and reduce biological impacts.

P.7 Upon further consideration of the discussion contained in the Recirculated PEIR regarding potential impacts to existing wetland vegetation as a result of widening, the City has determined that the original statement was over generalized. In many cases, the widening could be done on either side of the wetland vegetation within the bottom of a widened channel. Page 7-14 of the Recirculated PEIR has been revised to acknowledge the fact that, in many cases, channel vegetation could remain in the course of widening channels.

P.8 The City acknowledges the benefits of the channel widening alternative which are identified in this comment. However, for the reasons stated on pages 7-16 and 7-17 of the Recirculated PEIR, implementation of this alternative is not considered feasible.

P.9 The commenter's suggestion that the need to maintain downstream storm water facilities could be reduced or avoided by upstream channel widening is unfounded. While upstream widening may reduce downstream flows during low flow conditions, by slowing low flow runoff and allowing increased percolation, reductions in the high flow conditions, which are required to reduce flood risk, would be insignificant and, in many instances, immeasurable due to the size of the watersheds within which storm water facilities are located. Typically, these watersheds are very large; in some cases, comprised of many square miles. Thus, any increased storage generated by upstream widening would not be large enough to improve the flood protection or reduce peak flow rates within downstream channels. Measurable reductions in the need for downstream maintenance would require a large-scale detention facility which would not only be outside the purview of the Master Program

P.12 cont. including wetlands creation, reduction in maintenance requirements, opportunities for wetlands and uplands mitigation within the watershed, maintenance of long term pollution filtration and most importantly, added flood control for downstream communities that are still vulnerable to flooding despite channel clearing.

Because the above proposed alternative in the Jamacha location would implement the adopted Chollas Creek Enhancement Plan (CCEP), which envisions both restoration of Chollas Creek and a linear park, funding resources could be combined to accomplish the goals for community amenities along the creek and the SWD goals for flood control. The CCEP contemplated this use of the areas along the creek in this branch for habitat mitigation. "*Habitat Restoration– $100,000 funding should be sought from permit habitat mitigation requirements, habitat restoration programs, open space or other available grants*", (page 64 of CCEP).

P.13 **RECOMMENDATION 2** Revise the PEIR to indicate the channel widening alternative will be analyzed for each IMP weighing the economic benefits and the public safety, water quality, aesthetic, and habitat values the alternative provides against the routine clearing maintenance alternative and its' continual mitigation requirements.

Low Impact Development Techniques for Capturing Runoff

P.14 **The values of low Impact Development (LID) techniques for flood control have been understated in the PEIR.** LID techniques seek to capture significant quantities of runoff from developed urban areas to improve water quality and reduce downstream flows. The city must seek solutions that reduce the volume and velocity of runoff that is funneled through our creek channels because these unnatural, accelerated flows erode and destabilize the creek banks, damaging the natural water retention functions and water filtration benefits. The benefit of capturing and slowing the runoff via LID goes beyond the reduction in volume of water and pollutants entering the creeks. It will also allow the natural sponge-like functions of the wetlands downstream of the LID projects to mend and restore water retention capabilities. Reducing erosion also reduces sediment generation and thus reduces maintenance requirements in downstream channels.

The impermeable surfaces and other components of urbanization has increased volume and velocity of water being funneled to downstream areas creating uncontrollable flood conditions. We must invest in ways to reverse the poorly engineered development patterns undertaken decades ago. During field visits with Storm Water Department staff, hired city consultants admitted that even with clearing of sediment and vegetation, certain channel segments would still overflow.

Check Dams In the "Maintenance Program" page 11, one of the water quality protocols reads: "*Install a check dam or other comparable mechanism to slow runoff velocities at the downstream end of a maintenance area when hydrology and hydraulic studies indicate that maintenance could adversely impact downstream areas. These structures may be removed when vegetation growth has reached a point where the structure is no longer required*."

P.15 Opportunities to use check dams or similar practices exist in natural stream channels throughout each of the watersheds where unnatural amounts of runoff have caused deeply incise stream channels. Check dams in upstream locations would not only slow runoff to downstream areas providing flood control, but would serve to restore the spongy layers of sediment where they have been eroded away. This would restore the efficient and sustainable water retention capabilities of our creeks and canyons and provide flood control for downstream areas.

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P.9 cont. but would likely result in significant environmental impacts. Therefore, upstream widening is not considered a viable alternative to the proposed Master Program.

P.10 As discussed in Response to Comment M.5 and page 6 of the Master Program, the City will consider other alternatives provided the alternatives would achieve a comparable reduction in flood risk, be cost-effective and reduce biological impacts.

P.11 The City appreciates the commenter's recommendations for areas in which the conveyance capacity of associated storm water facilities could be increased by widening existing channels. Furthermore, the City acknowledges that the feasibility of widening these facilities would be enhanced by the fact that the adjacent land is vacant and publicly owned. As indicated in Response to Comment P6, the City will consider widening at these locations at the time maintenance is required in these areas and/or in the course of identifying mitigation opportunities within the Chollas Creek watershed..

P.12 As discussed in Responses to Comments P6 and P11, the City appreciates the commenter's recommendations and will consider widening at these locations at the time maintenance is required in these areas and/or in the course of identifying mitigation opportunities within the Chollas Creek watershed.

P.13 As discussed in Response to Comment M.5 and page 6 of the Master Program, the City will consider other alternatives provided the alternatives would achieve a comparable reduction in flood risk, be cost-effective and reduce biological impacts.

P.14 The City agrees that LID is an important way to reduce pollutants as well as runoff entering storm water facilities. However, as discussed on page 7-21 of the Recirculated PEIR, implementation of LID measures would have no substantial impact on the probability of flooding and would, therefore, fail to help alleviate flooding. LID measures target the low intensity storms and have very little to no effect on the storms beyond a 10-year storm event which are responsible for flooding. Thus, LID is not considered a viable alternative to removal of vegetation and sediment to improve the ability of storm water facilities to convey flood water.

P.16 **Locations of Severe Erosion, -Turning Lemons into Lemonade** Many canyons have many large, unnatural chasms where storm water runs off of street cal-d-sacs because engineers intentionally designed development to funnel storm water runoff, as quickly as possible, into the canyons. Decades ago the consequences of this poor development design were unknown. Now we know it will blow out large sections of canyon slopes, destroy stream embankments, cause erosion and massive sediment deposits increasing downstream maintenance requirements, increase pollution to coastal waters, and cause downstream flooding. While research still needs to be done, and designs need to be developed, these unintended canyon chasms off the ends of the streets could be retrofitted to collectively capture substantial amounts of water. This water could be used by the local community for landscaping or used in the canyons for habitat restoration projects. At worst case, this water could be released slowly after storm events have subsided.

P.17 San Diego Canyonlands plans to conduct a study to quantify the area within these chasms to measure the amount of water that could be captured by retrofitting them with a storm water capture and release system. When considering all of the canyons in the upper reaches of the Chollas Creek/Pueblo watershed and the number of locations where these chasms have been carved out by storm drain outfalls, the amount of water that could be managed is substantial. As written, the current PEIR would preclude the use of such an alternative to reduce downstream flooding and also reduce project impacts, for a full 20 years.

P.18 **RECOMMENDATION 3** Revise the PEIR to indicate that LID techniques (infiltration, conversion of impermeable surfaces to permeable surfaces, detention basins, check dams and other water retention BMPs will be analyzed for each IMP weighing the economic benefits and the public safety, water quality, aesthetic, and habitat values the alternative provides against the routine clearing

P.19 alternative and its' continual mitigation requirements. **Provide a periodic CEQA process that will allow new alternatives to be considered.**

3) Mitigation as planned will result in exportation of resources out of urban areas.

The majority of wetlands and upland impacts will take place in the Pueblo Watershed which includes core urban areas in the Chollas Creek sub-watershed in districts 3, 4, and 8.

The PEIR indicates that "***mitigation done in advance or through purchase of mitigation credits would be at a 1:1 ratio***". Mitigation credits are usually sold in association with a mitigation bank.

P.20 **Where are there mitigation banks for uplands in the Pueblo Watershed? Will they be used? Where are there mitigation banks for wetlands in the Pueblo Watershed? Will they be used?**

Mitigation should not be exported out of watersheds where impacts occur.

- The Army Corps of Engineers Public Notice for the MSWSMP indicates that impacts *in the Pueblo San Diego Hydrologic Unit may be mitigated either through one or a combination of the following two actions: (1) implementation of restoration proposals identified in the Chollas Creek Enhancement Program - potentially carried out in cooperation with the nonprofit Groundwork organization or other non - profit organization, or (2) through purchase of mitigation credits from the Rancho Jamul Mitigation Bank.*

P.21
- **We support implementation of the Chollas Creek Enhancement Program**, which includes removal of concrete lining and widening of the creek where feasible. This could serve both as a self-mitigating alternative to clearing vegetation out of Chollas Creek channels and as a mitigation alternative where clearing vegetation cannot be avoided.

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P.15 As indicated in the Master Program, check dams may be installed to reduce the risk of erosion and sedimentation related to storm water maintenance. However, they would be temporary facilities and in place as long as required to control potential erosion and sedimentation effects. As indicated in the goals and objectives stated in the Master Program, the Master Program is focused on maximizing the ability of storm water facilities to convey storm water and, thus, reduce flood risk. As such, permanent check dams or comparable structures would not be appropriate (or allowed) under the Master Program.

P.16 The canyon formations described are a result of hydromodification. The storm events influencing hydromodification have been identified as discharges as low as 10% of 2- to 10-year storm events. The storm events of concern for the Master Program are flood flows up to the 100-year storm event. Thus, the hydrologic processes of these two discharge scenarios (hydromodification discharges vs. flood control discharges) are not comparable. Similarly, the mitigation measures for these two discharge scenarios cannot be interchanged. The volumes of runoff generated in the hydromodification storm events could be stored for re-use by others, however the construction of storage devices and cisterns for water re-use are not applicable for 100-year flood flows, as no guarantee could be made that they would be empty when needed for runoff storage. Thus, the eroded chasms identified in this comment could not retain sufficient volumes of high storm water runoff to eliminate the need for the maintenance identified in the Master Program.

P.17 As indicated in the previous response, the use of existing chasms to detain water is not considered a viable technique to reduce the need for storm water facility maintenance. However, the City has previously indicated a willingness to consider any method of reducing the need for maintenance and would not eliminate a viable option just because it wasn't specifically discussed in the PEIR.

P.18 As discussed in Response to Comment M.5 and page 6 of the Master Program, the City will consider other alternatives provided the alternatives would achieve a comparable reduction in flood risk, be cost-effective and reduce biological impacts.

P.22

- **Other city-owned areas for possible mitigation within the Pueblo Watershed include** but are not limited to Encanto and Radio Canyons, Chollas Lake Park, upstream of the Sunshine Bernadine Ball Fields, Home Avenue Neighborhood Park, and along the creek on the north side of Fairmount Avenue where it intersects with 47th Street.

P.23

- **Mitigation at the Rancho Jamul Mitigation Bank is unacceptable**. There is already an imbalance in open space amenities and access to natural settings and parks in urban San Diego. City Heights and Southeast San Diego for example are deficient in these resources falling short of prescribed General Plan standards. This project will further exacerbate this inequity where it exports open space resources such as riparian forests and willow trees from highly urbanized areas to other, more suburban and less developed areas as part of the mitigation strategy. This component of the plan conflicts with the Land Use Element Goal to have "***equitable distribution of public facilities, infrastructure and services throughout all communities***." The PEIR acknowledges the conflict that the loss of vegetation will have with goals of the Urban Design Element, but does not acknowledge how this project, and proposed "off-site" mitigation strategies further the environmental injustice that already exists in many urban communities.

P.24

- Payment into the City's Habitat Acquisition Fund is **an unacceptable mitigation** alternative for these upland impacts. Since the cumulative impacts of this project for each separate watershed are already estimated, treating the impacts of each IMP separately is a form of piece-mealing. The cumulative impacts are known and should be treated as a whole. The cumulative impacts to uplands within each watershed should be mitigated through purchase or restoration within the same watershed and as close to the project sites as feasible.

P.25

RECOMMENDATION 4 Revise the PEIR to direct mitigation to areas within the same watershed but as a priority, where possible, within the same contiguous channel (not necessarily the same channel segment) in which the impact occurs. **No mitigation requirements shall be exported out of the watershed where the impact occurs.**

4) Hydrology and Hydraulic Analysis

P.26

Hydrological and hydraulic analysis must be conducted to reveal how downstream areas will be affected by the increase in volume and velocity of runoff after wetlands that absorb and slow urban runoff are removed. Consistency with MSCP indicates that ***".... review must include impact to upstream and downstream habitats flood flow volumes, velocities and configurations",*** (Page 62, table MSCP Consistency Evaluation 4.1-2)**.** Old hydrological studies should not be relied upon because things throughout the watersheds have changed considerably over the years.

Under ***Impacts and significance Criteria***: page 4.5-12, several categories of significance thresholds (City 2007) in regards to hydrologic impacts are listed including:

- *Substantially increase flooding of upstream or downstream properties or to environmental resources;*
- *Substantially modify existing drainage patterns if there would be significant impacts on downstream properties or to environmental resources;*
- *Grade or clear, or grub more than one acre of land that would drain into a sensitive body of water or stream causing uncontrolled runoff resulting in erosion and sedimentation; or*

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P.19 The City is unaware of any upland or wetland mitigation banks that exist within the Pueblo watershed. However, should mitigation credits become available in this watershed, the City would consider acquiring them as mitigation with the approval of the Resource Agencies with jurisdiction over these resources.

P.20 The City is unaware of any upland or wetland mitigation banks that exist within the Pueblo watershed. However, should mitigation credits become available in this watershed, the City would consider acquiring them as mitigation with the approval of the Resource Agencies with jurisdiction over the resources for which mitigation credits are proposed.

P.21 The City is aware of the interest in converting concrete-lined channels within the Chollas Creek watershed, and will work with the local conservation groups and other City Departments to find ways to accomplish this goal as a part of the mitigation program for storm water maintenance activities.

P.22 As a part of its efforts to provide mitigation within the same watershed as the impact, the City will explore opportunities to accomplish mitigation for storm water maintenance activities on City-owned land within the Pueblo Watershed, including the sites identified in this comment.

P.23 Due to the highly developed nature of the Pueblo Watershed, opportunities for wetland mitigation have been historically limited. As indicated in Responses to Comments P.22 and P.23, the City intends to attempt to find suitable sites within the urbanized communities in this watershed. However, in the event that suitable opportunities are not available, the next best option will be to accomplish mitigation in an adjacent watershed. In this event, credits from the Rancho Jamul Mitigation Bank would qualify as mitigation for wetland impacts occurring from maintenance within the Pueblo Watershed and could be used by the City.

P.24 Upland impacts identified in the PEIR are based on a worst-case scenario analysis and may be greater than the impacts which actually would occur on any given channel during maintenance activities. Direct impacts will be quantified based on the results of each IBA and appropriate mitigation identified in accordance with the Biology Guidelines and the adopted PEIR MMRP. The City's Habitat Acquisition Fund (HAF) was established by City Council Resolution R-275129, adopted on February

- *Extract water from an aquifer resulting in decreased aquifer recharge resulting in significant impacts on hydrologic conditions and well water supplies.*

P.27

The analysis of these thresholds determines project impacts to be ***non-significant.***

This analysis must be rejected! These thresholds are all key components of the proposed project, and seem to describe the project itself. The removal of soil and vegetation from our wetlands will surely cause at least an increase in flow velocity which can/will result in many different adverse impacts to hydrology including flooding and erosion. In some cases, the results of this project may be the opposite of the proposed goal and instead cause an increase in flooding by grading away ecological mechanisms that can slow the flow of water preventing downstream flooding and erosion/sedimentation. **Thorough, updated analysis is needed to determine the impacts of the potentially changed hydrology from this proposed project.**

5) Many Channel Segments Proposed for Clearing Need To Avoid Restoration Projects

P.28

Many staging areas and channel segments proposed for clearing are in areas where the community has worked hard to restore natural creek habitat and remove/control invasive plants. These are places where only non-native vegetation should be removed, removal should be done surgically using hand tools and impacts of access must be minimized.

These maps/locations include, but are not limited to:

Map 95, Community Park on Chollas Creek in Southcrest at 38th Street and Alpha.
Map 97a, In Southcrest on Chollas Creek off of 4100 block National Avenue. The proposed staging area appears to engulf an existing native plant garden that receives routine stewardship by a local church group. This is a small upland area outside of the creek channel on the northeast corner of the National St. bridge where it crosses Chollas Creek. **Will the IMP avoid this native plant garden?**
Map 97a, North of National Avenue is a segment that does not flood and has a shallow layer of sediment that provides filtration of low-flow urban runoff and small storm events. **Why is this location included for maintenance?**
Map 97a South of National Avenue is a segment of the creek that has had extensive maintenance by the community removing vast amounts of arundo donax and planting native plant species on the shore. This segment doesn't flood but because the SWD disallowed community stewardship in the channel itself, the arundo donax plague has grown back. Here, the invasive plants should be removed by hand tools avoiding impacts to natural habitat. **Will this be the method used for this IMP?**
Map 104, is Chollas Creek as it flows between Euclid Avenue and Market Street. While some portions of this segment is choked with the arundo donax, other portions have received stewardship and have mature native vegetation and trees. **Will native vegetation be avoided in this IMP?**
Map 35 at Rose Creek should be removed from the project. The PEIR includes the earthen bottom creek from Mission Bay Drive to Grand Avenue.
Map 34 at Rose Creek. The earthen bottom section of Map 34 should be removed from the program. Both channel segments 34 and 35 are rich feeding grounds for birds and serve as fish nurseries. Both areas have benefited from extensive restoration work by community groups with support of resource agencies.

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P.24 cont. 12, 1990 and codified in Section 143.0141d(a)(1)(C) of the Municipal Code. The HAF is intended to be used for the mitigation of impacts to small, isolated sites with lower long-term conservation value. For the purpose of the HAF, small is generally considered to be less than five acres, but could in some cases be considered up to 10 acres. Payment into the HAF is an acceptable form of mitigation for upland habitat impacts as further described in the Biology Guidelines

P.25 Mitigation Measure 4.3.9 in the Recirculated PEIR, already provides language that encourages mitigation to occur within the same watershed as the impact. The mitigation measure gives first priority to mitigating within the impacted watershed. It further requires the City to demonstrate that there are no suitable locations within the impacted watershed before it can implement mitigation in other watersheds. While every effort will be made to mitigate within the watershed where the impact would occur, the City cannot commit to limiting mitigation to the area of impact if a suitable opportunity does not exist. To do so would limit its ability to fulfill its obligation under the City Charter to maintain storm water conveyance systems to reduce flood risk.

P.26 Prior to each maintenance activity, the Master Program requires the preparation of an IHHA. The IHHA specifically requires a qualified hydrologist consider the potential upstream and downstream impacts from maintenance (e.g., vegetation removal) and to recommend specific controls (e.g., check dams) to minimize any risk to upstream and/or downstream property.

P.27 The thresholds used in the PEIR have been established by the City for evaluating the impact of activities on hydrologic conditions. While some of actions associated with storm water maintenance (e.g. excavation) may have the same characteristics as other forms of development, the thresholds are equally applicable to storm water maintenance

As discussed in Response to Comment I.18, the City's impact analysis recognizes the potential for the removal of vegetation to increase erosion. In response to this potential impact, Protocol WQ-9, of the Master Program, requires a maintenance plan to include a temporary check dam when the IHHA indicates that runoff velocities could increase after maintenance. The check dam would be designed to reduce storm water velocities and aid in the re-establishment of vegetation in the

CONCLUSION

Page 4.1-3 under Land Use the PEIR states: "***The purpose of the Conservation Element is for our City to become an international model of sustainable development and conservation."***

San Diego Canyonlands would like to partner with the city to make this noble goal become a reality. Indeed the city has taken some steps in this direction. The "**Think Blue**" program is raising public awareness on pollution sources. With the goal of cleaning up our urban runoff, the City has adopted a policy for "**Low Impact Development**" where new development and significant redevelopment, captures and filters a greater percentage of the storm water runoff generated by the impermeable surfaces. Water conservation is now mandated and enforced. These are significant steps, but there needs to be a host of other measures that we take to restore the beneficial uses of our waters and complete our long term goals.

The filtration functions of the MSWSMP subject wetlands are now more important than ever because we have eliminated ~90% of our wetland inventory over the decades. Before us is an opportunity to leverage funding and partner with agencies and non-profits to increase our wetlands and restore the natural and efficient services they provide which are extremely important toward our species conservation goals, to fisheries, and to tourism where clean beaches are concerned. Add to that the opportunities to achieve our community open space goals and the aesthetic values of the riparian woodlands. Aesthetic values include the promotion of healthy individual and community activities, the 'wild' nature of undeveloped space in an urban setting, and the consequent increased property values. Importantly, wetlands expansion also serves the project purpose of flood control.

There are available resources, and opportunities to partner with agencies and non-profits that would help us serve the project goals while simultaneously rebuilding our green infrastructure and building environmental and economic sustainability. If we're going ***to become an international model of sustainable development and conservation*** we need to stop wasting our green infrastructure and natural resources.

Please reject certification of this PEIR and ask staff to resolve the many important and outstanding issues contained herein.

Thank you for the opportunity to comment on this MSWSMP, for answering questions, and for carefully considering our comments and recommendations.

Sincerely,

Eric Bowlby
Executive Director
San Diego Canyonlands
eric@sdcanyonlands.org
savewetlands@cox.net

P.27 cont. channel. Check dams would be installed during maintenance whenever the velocity of storm water during a "bank-full" storm event would be expected to exceed the velocities identified for unlined channels in the City's Storm Water Design Manual.

P.28 The SWD has coordinated in the past with the various communities and non-governmental organizations to issue right-of-entry (ROE) permits to legally access City owned property, such as storm water facilities, to pick up trash/debris and remove/control invasives. The ROE permit process requires the appropriate liability insurance, regulatory permits and CEQA analysis to be provided. A conservation easement recorded against the property would prohibit the clearing or maintenance responsibilities within an existing drainage easement. As discussed below, staff is not aware of any conservation easement(s) over any of the channel segments (maps) identified in this comment. However, the SWD is committed to continue to work with the community to improve and maintain its facilities.

Map 95: This segment of Chollas Creek 38th Street and Alpha is within City-owned property managed by the SWD. As identified on Map 95, proposed access would be taken from existing dirt footpaths and an existing gate and concrete ramp on 38th Street. There is a recorded utility easement at this location.

Map 97a: The church group's native plant garden is located on City-owned property managed by SWD. The City will work with the church group in formulating the IMP to avoid or minimize impacts to the garden.

Map 97a, north of National Avenue: This segment of Chollas Creek is within an existing easement managed by SWD, and, therefore, has been included in the Master Program. If the IHHA prepared prior to maintenance indicates that maintenance would not be necessary, no maintenance would be performed.

Map 97a, south of National Avenue: The SWD has worked with Groundworks-Chollas, I Love a Clean San Diego and the City's Park & Recreation Department (Southcrest Park) to issue ROE permits to maintain this Chollas Creek segment, south of National Avenue, in 2007 and 2010. The SWD will continue to work with the community and

cc
Senator Chris Kehoe
Assemblymember Toni Atkins
Mayor Jerry Sanders
City Council Members
U.S. Fish & Wildlife Service
California Department of Fish & Game
U.S. Army Corps of Engineers
California Regional Water Quality Control Board

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P.28 cont. non-governmental organizations to eradicate arundo in this area and reduce costs associated with potential mitigation. Depending on the maintenance activities prescribed by site-specific IHHA and IBA; hand tools could be used in this segment of Chollas Creek.

Map 104: This segment of Chollas Creek is located within an existing drainage easement managed by SWD. Staff is not aware of a recorded conservation easement within the drainage easement that could prohibit the removal of native vegetation or trees. The site-specific IHHA and IBA will identify sensitive biological resources and recommend avoidance and/or minimization measures to mitigate impacts. Should maintenance require the removal of sensitive native vegetation, SWD will be required to mitigate accordingly.

Map 34: As indicated in Response to Comment L.8, the City believes that maintenance within this segment may be required to minimize flooding on adjacent property.

Map 35: As indicated in Response to Comment L.8, the City believes that maintenance within this segment may be required to minimize flooding on adjacent property.

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July 27, 2011

Via e-mail to DSDEAS@sandiego.gov
Myra Hermann, Environmental Planner
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1222 First Avenue, MS 501
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Re: Project No. 42891, Re-circulated Draft Programmatic EIR for the Master Storm Water System Maintenance Program (MSWSMP)

Dear Ms. Hermann:

San Diego Coastkeeper submits the following comments on the Master Storm Water System Maintenance Program (Master Program) and the Programmatic Environmental Impact Report (PEIR). San Diego Coastkeeper reserves the right to rely on any other comments submitted.

A. The Master Program permitting process is not consistent with the Municipal Code.

1. The Municipal Code does not authorize a "Master" Site Development Permit.

Q.1

The City Stormwater Department is seeking a "Master" Site Development Permit to cover all 115 separate creeks and channels listed in the Master Program. *See* Public Notice issued June 14th, 2011. But the San Diego Municipal Code provides no avenue for approving a permit of this kind. The Municipal Code allows the Development Services Department to issue a "Site Development Permit," but does not include a process for issuing a "master permit" anywhere.

According to the code, "*Development permit* means a permit issued pursuant to Land Development Code Chapter 12, Article 6." San Diego Municipal Code ("Municipal Code") §113.0103. The code explains that "*Development permits* include the following: Neighborhood Use Permits, Conditional Use Permits, Neighborhood Development Permits, Site Development Permits, Planned Development Permits, Coastal Development Permits, and Variances." Municipal Code §113.0103. Nowhere does the Code permit the City to issue a "Master" Site Development Permit.

Further, a "Master" Site Development Permit that purports to cover 115 separate sites in one permit defeats the purpose of a site development permit, which is "to apply ***site-specific conditions*** as necessary to assure that the development does not adversely affect the applicable land use plan and to help ensure that all regulations are met." Municipal Code §126.0501.

Q.1 The commenter is correct. The Municipal Code does not provide for "master" permits. As a result, the Master Program and Recirculated PEIR have been revised to eliminate references to "master" permits. Nevertheless, the City still intends process a Site Development Permit which covers all future maintenance carried out in accordance with the Master Program and the PEIR. The City bases this approach on the fact that the SCR process mandated by the Master Program will assure that the impacts of future maintenance are accurately determined and mitigated.

Q.1 cont. The City should adopt the Master Program as what it is—a program—and seek site-specific site development permits for each project completed within the program.

2. Site Development Permits must expire within six years.

Q.2 The code requires site development permits to expire within six years of issuance. A development permit "grants the applicant 36 months to initiate utilization of the permit." Municipal Code §126.0108. The code provides that a development permit's expiration date "may be extended one or more times, provided the extensions do not exceed a total of 36 months beyond the expiration of the initial utilization period." Municipal Code §126.0111. This means that the City cannot grant itself a Master Site Development Permit intended to cover the full duration of the 20-year Master Program, because all development permits must expire within six years.

3. Coastal Development Permits must expire within six years.

Q.3 Like site development permits, coastal development permits must also expire within six years of issuance. The same time limitations that apply for site development permits also apply to coastal development permits. *See* Municipal Code §126.0713 (applying the 36-month initial utilization period from §126.0108); §126.0715 (applying the limited 36-month extension period from §126.0111). This means that the City cannot grant itself a coastal development permit intended to cover the full duration of the 20-year Master Program, because all coastal development permits must expire within six years.

4. The Program fails to explain how Initial Studies and Individual Maintenance Plans will be incorporated into the Master Site Development Permit.

Q.4 The Master Program provides no explanation about how Initial Studies, Individual Maintenance Plans, technical reports, and DS-3032 permit applications will be incorporated into the Master Site Development Permit.

Q.5 If the Individual Maintenance Plans and related materials are addenda to the "Master Site Development Permit," the Municipal Code requires "addenda to environmental documents more than 3 years old to be distributed to the public for review for 14 days, along with the previously certified document." Municipal Code §128.0306(b). The Program has no plans to provide public review for all Individual Maintenance Plans after the first three years.

Q.6 If the Individual Maintenance Plans and related materials are considered amendments to the Master Site Development Permit, then the City is seeking a permit it knows from the outset that it plans to amend every year for 20 years. This approach is contrary to public policy.

Q.2 Pursuant to the City's Municipal Code, permits which are "utilized" within 36 months of issuance do not expire. SDMC Section 126.0108, Initial Utilization of a Development Permit: Section 126.0108(a) states: "A development permits grant the applicant 36 months to initiate utilization of the permit. If none of the actions listed in Section 126.0108(b) has occurred within 36 months after the date on which all appeal have expired, the development shall be void."

Pursuant to Section 126.0108(b), "A development permit may be utilized by the following methods:

1. Issuance of a construction permit for the entire project or for substantial portion of the activity regulated by the development permit, as determined by standards developed by the City Manager;

2. Compliance with the terms contained in the individual permit, such as a phasing program, or the terms contained in an approved Development Agreement

3. Evidence of substantial use in progress, according to standards developed by the City Manager; or

4. Approval of a final map or a parcel map, if the map was a condition of the development permit."

Conducting the first maintenance activity allowed in the Master Program would constitute utilization under Section 126.0108(b)(3). As indicated earlier, once the Site Development Permit for the Master Program is utilized, it remains in full force. As long as the conditions of the permit are not violated, the Site Development Permit will remain effective for the life of the Master Program.

Q.7 Unless the Individual Maintenance Plan and mitigation plans are incorporated into the Master Site Development Permit, it is unclear how these requirements become enforceable.

B. The Environmental Review Process proposed in the Master Program and PEIR does not comply with CEQA.

1. Each creek or channel clearing is a separate "project" under CEQA.

Q.8 Each individual creek or channel-clearing project within the Master Program qualifies as a separate "project." CEQA defines a "project" as "an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and which is… an activity directly undertaken by any public agency." *See* Cal. Pub. Res. Code § 21065(a). Because each creek or channel-clearing activity is undertaken by the City of San Diego, a public agency, and may cause a direct physical change to the environment, each creek or channel-clearing activity is a project under CEQA. Regardless of whether the Master Program as a whole is considered a "project," each individual creek or channel clearing is also a "project."

2. CEQA Guideline 15162 does not preclude project-specific EIRs or negative declaration for each creek or channel-clearing project.

Q.9 If the PEIR for the Master Program was certified, CEQA Guideline 15162 only limits subsequent environmental review on the Master Program itself, not to projects contemplated within the Master Program.

Q.10 Further, CEQA Guideline 15162 recognizes that subsequent environmental review is appropriate where new information shows that "[m]itigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative." 14 Cal. Code Reg. ("CEQA Guideline") 15162(a)(3)(C). Because the City has no plans to re-assess feasibility of alternatives on a project-by-project basis, even in those cases where the less-impactful alternatives may be feasible, subsequent environmental review is appropriate.

3. The City has failed to show that tiering is infeasible, therefore, it must use tiered environmental review.

Q.11 CEQA requires that "environmental impact reports *shall* be tiered whenever feasible." *See* Cal. Pub. Res. Code § 21093(b)(emphasis added). The law clarifies "that tiering is appropriate when it helps a public agency to focus upon the issues ripe for decision at each level of environmental review." *See* Cal. Pub. Res. Code § 21093(a) Further, tiering allows agencies to defer otherwise required site-specific analysis to a later time, to be provided in later environmental documents. CEQA Guideline 15152(c).

Q.3 The "utilization" rule described in Response to Comment Q.2 also applies to Coastal Development Permits issued by the City. Thus, once the first maintenance activity has occurred in accordance with the Coastal Development Permit, it will be valid for the life of the Master Program.

Q.4 The documents identified in the comment will not be formally "incorporated" into the Site Development Permit. The term and conditions of the Site Development Permit will not need to be modified as a result of the annual maintenance plan. The studies will be conducted in accordance with the Master Program and the PEIR, and maintained in the files associated with the Master Program.

Q.5 The studies required by the Master Program are not "addenda" to the SDP/CDP. These studies are required as part of the SCR submittal package, and will be reviewed by staff for conformance with the Master Program and PEIR. Therefore, the Municipal Code requirements for distribution of Addenda to environmental documents over three years old would not apply.

Q.6 As discussed in responses to comments Q.4 and 5, the IMPs and associated technical studies will not be addended to the PEIR and would not require any amendments to the Site Development or Coastal Development Permits issued for the Master Program.

Q.7 The Site Development Permit requires that all of the aspects of the Master Program as well as the PEIR be implemented. Thus, conformance with the IMPs and associated technical assessments will be assured during the SCR process, which will identify the site specific mitigation measures applicable to the channel. These measures will be carried contained in the IMP and contract documents which will be further addressed at the pre-maintenance meeting for each maintenance activity. DSD MMC staff are responsible for ensuring that all applicable mitigation measures are carried out in accordance with the approved permit conditions and associated technical reports/plans.

Q.8 The City does not dispute the fact that individual maintenance activities are separate actions. However, as allowed under Section 15168 of the CEQA Guidelines, the PEIR prepared for the Master Program

Q.11 cont.

The City recognizes that "an up-front project-specific analysis is infeasible." PEIR Appendix A2, RTC-6. It has, in essence, adopted a tiered impact review process, committing in the Master Program and PEIR documents to complete extensive site-specific impacts review for hydrology, water quality, biology, historical resources, and noise and to create site-specific monitoring and mitigation plans. *See* Master Program at 23-26. San Diego Coastkeeper supports the City's commitment to detailed site-specific environmental impacts review.

Because the City is committed to additional, site-specific environmental impact review, it must provide the public notice and a formal opportunity to comment on the site-specific review before the City gives final approval for each of the site-specific projects.

4. <u>The PEIR and the review process for projects completed under the Master Program must comply with tiering Guidelines.</u>

Q.12

The CEQA Guidelines recognize that a Program EIR is a type of tiering document. *See* CEQA Guideline 15152(h)(3). Further, the City must tier because it is not infeasible. Therefore, analysis of projects included in the Master Program and analyzed in the PEIR must comply with the tiering guidelines.

5. <u>The tiering guidelines provide for a later EIR or negative declaration for individual projects.</u>

Under the tiering guidelines, "a later EIR shall be required when the initial study or other analysis finds that the later project may cause significant effects on the environment that were not adequately addressed in the prior EIR." CEQA Guideline 15152(f). The guidelines provide that a negative declaration may be appropriate in limited situations. *See id*.

6. <u>Projects completed pursuant to the Master Program are subject to a later EIR or negative declaration.</u>

Q.13

The guidelines state that the agency can only find that "[s]ignificant environmental effects have been 'adequately addressed'" if the effects have already "been mitigated or avoided as a result of the prior environmental impact report" or "they have been examined at a sufficient level of detail in the prior environmental impact report to enable those effects to be mitigated or avoided by site specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project." CEQA Guideline 15152(f)(3).

The PEIR fails to examine project-specific impacts at a "sufficient level of detail" to allow the effects to be mitigated by site-specific revisions. On the contrary, the PEIR and Master Program acknowledge the lack of site-specific impacts analysis and plan to

Q.8 cont. appropriately evaluates maintenance activities on separate channels as one large project by virtue of the fact that they are related geographically and are logical parts of a series of contemplated actions. In further recognition of the individual differences between maintenance activities, the Master Program and PEIR include a number of provisions to assure that individual effects of maintenance are addressed on case by case basis.

Q.9 Pursuant to Section 15378 of the CEQA Guidelines, "'Project' means the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and includes activities requiring the issuance of permits." Implementation of the Master Program requires the issuance of permits (the SDP/CDP) for work that may be conducted on an as needed basis within all identified channels, staging, access, and storage areas in accordance with the protocols and mitigation requirements of the Master Program and PEIR. While there will be later discretionary approvals associated with implementing annual maintenance plans, these later approvals are considered part of the Master Program project and do not constitute separate projects for the purposes of CEQA.

Q.10 As concluded in *Sierra Cub v. County of Sonoma*, 6 Cal. App. 4th 1307 (1992), "'[A]fter an EIR has been prepared for a project, section 21166 prohibits agencies from requiring a subsequent or supplemental EIR unless 'substantial changes' are proposed in the project or in its circumstances which will require 'major revisions' in the EIR, or unless certain new information becomes available."

Preparation of a MND or EIR for individual maintenance activities included in the Master Program would be inconsistent with Section 15168(c)(2) of the CEQA Guidelines which specifically allows a PEIR to be used for those projects within the scope of the project described in the program EIR in order to streamline environmental review

Q.13 cont.

comprehensively assess those impacts yearly on a project-by-project basis. Further, since neither the Master Program nor the PEIR require implementation of any mitigation measures at the program level and defer selection and implementation of all mitigation to that necessary on a project-by-project basis after the yearly analysis, no impacts will be "mitigated or avoided as a result of" the PEIR.

7. The Development Services Department cannot legally conclude in its "Substantial Conformance Review" that the PEIR has "adequately addressed" the impacts of individual projects under the Master Program.

Q.14

The Development Services Department intends to make a determination, after reviewing Individual Maintenance Plans and completing an Initial Study, whether or not the PEIR has "adequately addressed" the impacts of the individual maintenance project. *See* Master Program at 23. However, since Guideline 15152(f)(3) governs all determinations of whether impacts have been "adequately addressed" in a tiered process, and since none of the impacts have been mitigated at a program level or examined at a sufficient level of detail in the PEIR, Development Services Department could never determine that the PEIR has "adequately addressed" the impacts. Indeed, the fact that the City plans to prepare comprehensive site-specific analysis demonstrated that PEIR has not adequately addressed project-specific impacts.

8. The Program EIR guidelines provide for later EIRs or negative declarations.

Q.15

The Program EIR guidelines state "If a later activity would have effects that were not examined in the program EIR, a new Initial Study would need to be prepared leading to either an EIR or a Negative Declaration." CEQA Guideline 15168(c)(1). The PEIR failed to examine the effects of each individual creek or channel-clearing project and instead defers site-specific analysis to be prepared on an annual basis. Because these individual effects "were not examined in the program EIR," Development Services Department must prepare an Initial Study. *See* CEQA Guideline 15168(c)(1). They have already agreed to do so. *See* Master Program at 24.

However, the Development Services Department has suggested that it may determine that "no further environmental review will be required." *See* Master Program at 24. This is not consistent with Guideline 15168(c)(1), which mandates that an EIR or negative declaration follow an Initial Study prepared on later projects completed that were initially contemplated in a program EIR.

Q.11 The quote of the CEQA Guidelines section is accurate. The City does intend to comply with Sections 15168 and 15162 of the CEQA Guidelines as discussed in Responses to Comments P.11 through P.13.

Q.12 The response to comments cited in this comment is related to the original PEIR, prior to recirculation. The City has since re-evaluated the Master Program and PEIR and made substantial revisions to both documents. Those revisions included narrowing down the number of channels proposed for maintenance; identifying specific access, staging, and spoils storage areas; limiting the extent of vegetation and tree removal; and adding mitigation measures. These revisions were accompanied by updated analysis of the potential impacts that may result from implementation of the Master Program. The City has provided analysis of the reasonably foreseeable environmental impacts within the Recirculated PEIR that may result from Program implementation.

To clarify, the future analysis and studies prior to IMP approval are to verify whether the work and impacts are within the scope of the PEIR and SDP/CDP or whether new or amended permits and additional environmental review is required. The analysis will also ensure that the applicable mitigation from the PEIR is being applied to channel-specific IMPs.

Q.13 CEQA Guidelines Section 15168(c)(1) would require preparation of a tiered environmental document if the environmental effects of an IMP were not covered in the PEIR or the IMP proposes a different project than was evaluated in the PEIR.

Q.14 The PEIR was revised and recirculated to comprehensively address the reasonably foreseeable environmental impacts of implementation of the Master Program via storm channel facility maintenance activities. Specifically, the Recirculated PEIR evaluates Master Program revisions that narrow down the number of channels proposed for maintenance; identifies specific access, staging, and spoils storage areas; limits the extent of vegetation and tree removal; adds mitigation measures and enforceable protocols to follow for maintenance activities. Based on the level of detail and analysis currently in the PEIR, it is believed that subsequent IMPs and Master Program implementing activities could be found within the scope of the PEIR.

9. The Individual Maintenance Plans and individual assessments function as later environmental review constituting either an EIR or a mitigated negative declaration.

Q.16 The Individual Maintenance Plans, along with the Individual Biological Assessment, Individual Historical Assessment, Individual Hydrologic and Hydraulic Assessment, Individual Noise Assessment, and Individual Water Quality Assessment constitute subsequent environmental review. By examining site-specific impacts in detail and developing site-specific mitigation to address significant impacts, the City is already contemplating subsequent environmental review that constitutes either an EIR or mitigated negative declaration.

The only piece missing is the public notice and comment that would accompany subsequent environmental review. Public review of a negative declaration or mitigated negative declaration is 20 days, while public review for an EIR is 30 days. *See* CEQA Guideline 15073(a); 15087(d).

C. The Environmental Review Process proposed in the Master Program and PEIR does not comply with the Municipal Code.

1. The Municipal Code requires compliance with Guideline 15153 when a previously certified EIR is used for a later project.

The Municipal Code states: "An EIR prepared in connection with an earlier project may be used for a later project, if the circumstances of the projects are essentially the same and are consistent with the State CEQA Guidelines, Section 15153." Municipal Code § §128.0209(c).

2. Compliance with Guideline 15153 requires public review when a previous EIR is used.

Q.17 Guideline 15153 governs use of an EIR from an earlier project. To determine whether or not a prior EIR can be used, the lead agency prepares an Initial Study to determine whether the prior EIR would adequately describe: "(A) The general environmental setting of the project, (B) The significant environmental impacts of the project, and (C) Alternatives and mitigation measures related to each significant effect." CEQA Guideline 15153(b)(1).

If the agency concludes the requirements of Guideline 15153(b)(1) are met, "it ***shall provide public review*** as provided in Section 15087 stating that it plans to use the previously prepared EIR as the draft EIR for this project." CEQA Guideline 15153(b)(2). The public notice must describe the project, state the agency plans to use the prior EIR, list the places where that EIR may be examined, and include a "statement that the key issues involving the EIR are whether the EIR should be used for this project and whether

Q.14 cont. The analysis of annual IMPs pursuant to the Program is the method by which the City will establish the factual basis to determine whether the IMP is covered within the scope of the PEIR, and verify that required mitigation is included. The PEIR includes a Mitigation, Monitoring and Reporting Program (MMRP) that requires mitigation and protocols to be incorporated into each IMP, as appropriate. The MMRP compliance has been made a condition of the SDP/CDP, and therefore, is enforceable to mitigate or avoid impacts.

Q.15 As discussed in Responses to Comments P.11 through P.13 and Q.13, the PEIR will be adequate to address future maintenance that is determined through the SCR process to be consistent with the Master Program and PEIR.

Q.16 Section 15063(f) of the CEQA Guidelines allows for a previous EIR to serve as the Initial Study required by Section 15063(c) of the CEQA Guidelines. The PEIR, in combination with the SCR documentation, will be used to determine whether the previously prepared PEIR could be used with later IMP approvals. In accordance with Section 15168 of the CEQA Guidelines, the City will use the information in the PEIR and the SCR documentation to form the factual basis for a determination as to whether an IMP is within the scope of the PEIR, whether an environmental document should be tiered from the PEIR, or whether a subsequent or supplemental environmental document is required.

Q.17 The City will evaluate IMPs in light of the certified PEIR. The studies and assessments listed are intended to verify adherence to the Program requirements and to form the factual basis for a determination as to whether an IMP is within the scope of the PEIR, whether an environmental document should be tiered from the PEIR, or whether a subsequent or supplemental environmental document is required. Public comment on tiered or subsequent environmental documents would be provided in accordance with CEQA.

Q.17 cont.

there are any additional, reasonable alternatives or mitigation measures that should be considered as ways of avoiding or reducing the significant effects of the project." *Id.* Guideline 15153 requires the agency to consider and respond to comments submitted and file a notice of determination. Guideline 15153 also permits the agency to use a previously prepared EIR as "part of an Initial Study to document a finding that a later project will not have a significant effect. In this situation a Negative Declaration will be prepared." CEQA Guideline 15153(c). In either situation, the public would have the right to appeal the City's environmental determination.

If the City complied with Guideline 15153 governing use of a previously prepared EIR and safeguarding the public's right to review, comment on, and receive responses to comments related to reasonable alternatives or mitigation measures, it would go a long way toward resolving Coastkeeper's concerns regarding the Master Program and PEIR.

3. <u>The Program fails to explain how Initial Studies and Individual Maintenance Plans will be incorporated into the PEIR.</u>

Q.18

The Master Program provides no explanation about how Initial Studies, Individual Maintenance Plans, technical reports, and DS-3032 permit applications will be incorporated into the PEIR. If these materials are Supplements to the PEIR, they require "the same kind of notice and public review as is given to a draft EIR." CEQA Guideline 15163. Unless the Individual Maintenance Plan and mitigation plans are incorporated into the PEIR, it is unclear how these requirements become enforceable.

4. <u>The Municipal Code does not contemplate using Substantial Conformance Review for use with Program EIRs.</u>

Q.19

The Master Program and PEIR set out a plan to use "Substantial Conformance Review" to comply with CEQA requirements. The City's "Substantial Conformance Review" process is not designed as a CEQA-compliance mechanism.

"Substantial Conformance Review" is mentioned nowhere in the sections of the Land Development Code potions of the Municipal Code related to CEQA compliance. *See* Municipal Code Chapter 12, Article 8, Divisions 1, 2, and 3. Instead, the term "substantial conformance review" is sprinkled throughout various portions of the land development code in reference to correction and amendment of maps (§125.0141, 125.0142), extension of time, minor modifications, and amendments to a development permit (§126.0111-.0113, §143.0303), procedures and regulations for project-specific land use plans (§143.0213, §143.0115), and construction change to a public right-of-way permit (§129.0752). None of those sections apply to the Master Program and PEIR. Therefore, use of "Substantial Conformance Review" to approve individual projects completed under the Master Program is inconsistent with the Municipal Code.

Q.18 As the PEIR is intended to cover IMPs within the scope of the Master Program project, they are not considered separate projects. Thus, Section 15153 CEQA Guidelines, which addresses the use of an EIR for an earlier project for a later separate project, is not considered applicable.

Q.19 The PEIR analyzes the environmental impacts of implementation of the Master Program. The documents referenced will not be included in the PEIR, but are requirements of implementation of the Master Program itself. As described in Responses to Comments Q.15 and Q.16, they will form the basis of future determinations as to whether IMPs are covered by the scope of the PEIR.

D. The Environmental Review Process proposed in the Master Program and PEIR is contrary to the public interest because it does not promote transparency, accountability, and informed decision-making.

1. Process One and Process Two do not allow the public to hold City staff accountable as CEQA requires.

a. The City chose review processes that avoid accountability.

Q.20 CEQA documents are intended to be documents of accountability. Municipal Code 128.0103(b) reflects that requirement, stating that the Development Services Director should only have as much independence in implementing CEQA as necessary to assure City departments and *the people of San Diego* that Development Services is acting in their best interest.

But public accountability measures do not exist under the process the City has chosen for reviewing channel sites. The City has designed a largely internal process for deciding when, whether and how channel sites will be maintained. The City could have chosen a more public process (either Process Three or Process Four), but has decided not to. Instead, it has confined the majority of channel site review to a Process One, and some to Process Two.

b. Up to 75% of Maintenance Activities Can Be Approved with No Notice and No Accountability to the Public.

Q.21 The Master Program is designed so that over 75% of channel maintenance activities can be reviewed and approved under Process One by a single City official and without public input. *See* Master Program 23, PEIR Table 3-1, and Municipal Code §112.0502.

According to the PEIR, all channel maintenance sites outside of the Coastal Zone will be reviewed under Process One if the impacted biological resources do not exceed impacts discussed in the PEIR, and mitigation measures identified in the Mitigation Monitoring and Reporting Program are incorporated in the Individual Maintenance Plans. These conditions will likely be true for 86 channel maintenance sites.

c. The PEIR examines worst-case scenario impacts, not project-specific impacts.

Q.22 The PEIR describes an overly broad and dismal array of significant environmental impacts resulting from this program, but fails to provide any actual details. Because the PEIR cumulative impacts have been painted with such broad strokes, it would be impossible for the impact from one channel to exceed impacts discussed. CEQA requires an agency to examine not the worst-case scenario, but the likely impacts based on the project that will be completed.

Q.20 As discussed in Response to Comment Q.15, the SCR process will be used in addition to the PEIR as the basis to determine whether annual maintenance activities are within the scope of the PEIR.

Q.21 The annual maintenance program will not be a "largely internal process" as stated in the comment. As discussed in Response to Comment O.1, the process will provide multiple opportunities for the public to review and comment on the proposed maintenance activities.

Q.22 As discussed on page 4.3-25 of the Recirculated PEIR, the assumptions upon which biological impacts are based have been tightened up to reflect the results of recent hydrology studies performed by SWD. Whereas the original PEIR assumed that all channels would be cleared from bank to bank, the Recirculated PEIR assumes that clearing will be limited to the channel bottom and the adjacent two feet whenever the total channel width exceeds 20 feet. Thus, the impacts estimated in the Recirculated PEIR are more conservative than the original PEIR.

Q.23 Similarly, because the mitigation program provides a laundry list of mitigation measures that could be applied to any project, it is highly unlikely any channel project will use mitigation measures not previously identified. The Master Program's process will therefore commit 86 channel maintenance sites to Process One, an internal review process with no public input.

d. Process Two will not provide interested residents and community groups a meaningful opportunity to comment.

Q.24 Twenty-four percent of maintenance activities are subject to Process Two review solely because they are within the Coastal Zone. *See* Master Program at 24-25, *and* PEIR Table 3-1. Process Two allows only minimal opportunity for public review, and notice will likely not reach all interested parties. For example, a Notice of Future Decision will be mailed to residents within 300 feet of channel sites, as well as appropriate planning groups. Master Program at 25, Municipal Code §112.0302. The PEIR and Master Program offer no provision for ensuring residents more than 300 feet from the site or other interested parties will receive a Notice of Future Decision.

Further, the Municipal Code guarantees a minimum of 11 business days after the Notice of Future Decision is mailed for residents and interested parties to submit comments. Municipal Code §112.0503. But, the PEIR fails to note that this small window of review exists. Master Plan at 25. Also, because the window for public review is so short, and because local planning groups only meet on a monthly basis, it is likely that channel maintenance decisions could be made before planning groups are aware of, and have an opportunity to discuss, the projects.

e. The Development Services Department is requiring an appeal process to generate public discussion that should occur before decisions are made.

After a decision is made under Process Two, a Notice of Decision will be mailed only to parties that requested that information no later than 10 days from when the Notice of Future Decision was mailed. Master Plan at 25. Residents or interested parties then have 12 business days to file an appeal with the Planning Commission. But this process requires filing an appeal to retroactively generate public dialogue that should occur before maintenance decisions are made.

f. Review of Development Permits for Environmentally Sensitive Lands is either Process Three or Four.

Q.25 The Municipal Code requires that City determinations involving environmentally sensitive lands should be made under either a Process Three or Process Four. Because the Master Program and PEIR have not provided detailed, site-specific impacts to environmentally sensitive lands or have demonstrated what measures it will use in each

Q.23 The City acknowledges the fact that the Master Program and PEIR identify a number of mitigation measures. Furthermore, the SCR process mandated by the Master Program will assure that the appropriate mitigation measures and protocols are applied each maintenance activity. As the comment does not identify any specific mitigation measures that are not included in the PEIR, the City cannot comment on the claim that maintenance will not include "mitigation measures not previously identified."

As discussed in Response to Comment O.1, there will be multiple opportunities for the public to comment on individual maintenance activities whether they are authorized under Process One or Two.

Q.24 As discussed in Response to Comment O.1, there will be ample opportunities for the public to comment on individual maintenance activities whether they are authorized under Process One or Two. As discussed in Response to Comment O.1, the public will be aware of the annual storm water maintenance plan well in advance of the monthly local planning group and Community Planners Committee meetings.

In addition, the Master Program has been amended to require SWD to maintain a list of persons and organizations who have requested, in writing, to be notified regarding the annual storm water maintenance plan process. In accordance with the requirements of the Master Program, SWD will notify those on the list when the Annual Priority List is available. The SWD will also post relevant information on the City's website.

Q.25 It should be noted that the initial approval of the Master Program is subject to Process Four due to the potential impacts to areas considered Environmentally Sensitive Lands. However, subsequent approvals of maintenance in accordance with the Master Plan would not subject to a Process Four hearing as long as the activities are determined to be in

Q.25 cont.

area to mitigate site-specific impacts, the review of the site-specific plans must go forward under a Process Three or Process Four. Further, because the Master Program and PEIR propose mitigation ratios that are not consistent with the Biology Guidelines, all approvals of site-specific impacts environmentally sensitive lands and mitigation for those impacts must proceed under Process Four.

g. The Municipal Code has not contemplated city staff members alone approving the use of a prior EIR.

Q.26

The City is only authorized to use previous EIRs to approve subsequent projects if several conditions are met. *See* CEQA Guidelines 15162, Municipal Code §128.0209. In addition to meeting these conditions, the Municipal Code requires the Planning and Development Review Director to provide decision-makers with an "explanatory cover" explaining why the subsequent project does not trigger further environmental review. Municipal Code §128.0209.

But under this PEIR and Master Program, this requirement is entirely internal and circular. The current review configuration would require the Development Services Department, as both reviewer and decision-maker, to literally send a cover letter to itself justifying its use of the PEIR to approve subsequent projects. This procedural conundrum demonstrates that the Municipal Code does not contemplate city staff members approving the use of a previous EIR through a substantial conformance review process.

2. <u>The City should make all Individual Maintenance Plans, supporting analysis, and mitigation details available on its website as soon as it is complete.</u>

Q.27

The City has expressed a willingness to provide the public with detailed information regarding the individual projects to be completed under the Master Program. The City should post all Individual Maintenance Plans, impacts analysis, and mitigation on its website as soon as it is available. The City should make this commitment in the Master Program and PEIR documents.

3. <u>The City should maintain an "Interested Persons" list and provide to all interested persons notice of availability of Individual Maintenance Plans and supporting documentation</u>.

Q.28

Merely posting the Individual Maintenance Plans and supporting documentation does nothing to increase transparency unless the public is informed that these documents are available. The City should maintain an "Interested Persons" list and provide notice to those on the list whenever information related to the projects to be completed under the Master Program becomes available.

Q.25 cont. conformance with the Master Program and the PEIR. The level of review related to the SCR process will assure that activity-specific impacts are accurately quantified and mitigated in accordance with the PEIR. Thus, subsequent maintenance activities conforming to the Master Program and PEIR are appropriately authorized through either Process One or Two.

As discussed in Response to Comment A.1, the wetland mitigation ratios in the Recirculated PEIR have been revised to match Table 2 of the City's Biology Guidelines.

Q.26. As discussed in Response to Comment O.1, the annual maintenance plan approval process will not be "internal and circular" as implied by the comment. Further, as discussed in Response to Comment Q.24, the Master Program has been amended to require SWD to maintain a list of persons and organizations who have requested, in writing, to be notified regarding the annual storm water maintenance plan process. In accordance with the requirements of the Master Program, SWD will notify those on the list when the Annual Priority List is available. The SWD will also post relevant information on the City's website.

Q.27 As discussed in Response to Comment Q.24, SWD will post information related to the annual maintenance plan on the City's website.

Q.28 As discussed in Response to Comment Q.24, the Master Program has been amended to require SWD to send an email to interested parties notifying them of the City's intent to begin processing an annual storm water maintenance program.

4. The City must guarantee a mechanism by which citizens can hold the City accountable for its project-level decisions.

Q.29 Currently, the City plans for all project-level review and CEQA approval to occur at the staff level, with only an opportunity for the Regional Water Quality Control Board, the Army Corps of Engineers, and California Fish and Game to provide comments.

The Municipal Code provides safeguards to ensure that when "environmental determinations" are made at the staff level, interested persons have the right to appeal. *See* Municipal Code at § 112.0520; §113.0103. These appeals are heard before the City Council. *See* Municipal Code at § 112.0520(c).

Because the City staff is planning to make an environmental determination of whether or not a previously-certified EIR adequately assessed the impacts of a later project, this qualifies as an "environmental determination" that interested persons must have the right to appeal. Any attempt to remove the public's mechanism for holding the City staff accountable for its decisions is contrary to public policy and the spirit of the Municipal Code.

5. There is no evidence in the record that the Regional Water Quality Control Board or the U.S. Army Corps of Engineers is requiring the City to seek a 20-year Master Development Permit and preclude formal public review and comment on site-specific project impacts.

Q.30 In several public hearings and meetings, City staff members have responded to public comments that there should be a formal public review and comment period of a shorter development permit by saying that the Regional Water Quality Control Board and the U.S. Army Corps of Engineers is requiring the City to use this process. There is no evidence in the record to support this claim. In fact, neither the Regional Water Quality Control Board nor the U.S. Army Corps of Engineers submitted comments on the Draft EIR. If this process was mandated by those agencies, one would expect to see the agencies commenting in support of this process.

6. Permitting and environmental review required for each individual project mean that the City's proposed approach will not streamline the review process.

Q.31 The City must receive a Clean Water Act § 404 permit from the U.S. Army Corps of Engineers and a § 401 permit from the Regional Water Quality Control Board before it can begin work on any project included in the Master Program. The Army Corps may only issue a §404 permit once the applicant has demonstrated that it has selected the "least environmentally damaging practicable alternative." 40 C.F.R. 230.10 (a). The City will not be able to show that it has selected the least environmentally damaging

Q.29 As discussed in Response to Comment O.1, the City has provided opportunities for the public to comment on individual maintenance activities. As discussed in Response to Comment M.5 and page 6 of the Master Program, the City will consider other alternatives provided the alternatives would achieve a comparable reduction in flood risk, be cost-effective and reduce biological impacts.

"*Environmental determination* means a decision by any non-elected City decision maker, to certify an environmental impact report, adopt a negative declaration or mitigated negative declaration, or to determine that a project is not subject to the California Environmental Quality Act (CEQA), under State CEQA Guidelines section 15061(b)(2) or (3)." It does not include determinations as to whether IMPs would be within the scope of a previously certified PEIR.

Q.30 While the agencies have not directed the City to prepare "master" permits in writing, the issue has been discussed at a number of meetings. The absence of comment letters from the Corps and Regional Water Quality Control Board should not be construed as reflecting a lack of interest or support for the "master" permit process.

Q.31 Pursuant to the provisions of the Master Program, state and federal agencies (e.g., the Corps) must concur with the annual maintenance plans before maintenance can begin. During this annual review, these agencies will be provided copies of the individual maintenance plans as well as the accompanying technical analyses. At that time, the state and federal agencies will have an opportunity to determine if there are any less damaging practical alternatives to the proposed maintenance.

Q.31 cont. practicable alternative for each creek or channel until it has completed the Individual Maintenance Plans and supporting analysis.

Q.32 Likewise, the Regional Water Quality Control Board cannot issue a § 401 water quality certification until the City has demonstrated that the individual project protects water quality. The City will not be able to show that the individual projects protect water quality until it has completed the Individual Maintenance Plans and supporting analysis.

Q.33 Further, before the Corps can issue a §404 permit, the Corps must comply with the National Environmental Policy Act. The PEIR the City has prepared for the Master Program will not satisfy NEPA's requirement that project-specific impacts be examined before permit issuance. Therefore, the City will not be able to demonstrate NEPA compliance until after the Individual Maintenance Plans and supporting analysis is completed.

Q.34 The City cannot justify its decision forego future public notice and comment on site-specific impacts by saying that avoiding public comment will speed up the permitting process and its ability to clear channels. Clean Water Act and National Environmental Policy Act obligations the Regional Water Quality Control Board and Corps must meet dictate that the approvals will not move forward with the speed the City is predicting. Therefore, guaranteeing the public's ability to review and comment on site-specific analysis will not slow down the permitting process.

7. <u>The City has failed to demonstrate that guaranteeing public notice and comment period and an appeal process is too costly or time-intensive</u>.

Q.35 At multiple public hearings and meetings, City staff members have dismissed comments from the public asking for a guaranteed public notice and comment period and appeal process as too expensive or time-intensive. The City has failed to provide any evidence in the record to back these claims. Instead, the City suggests that the public has an opportunity to comment on the site-specific details of the individual projects by opposing approval of the Stormwater Department's budget. The budget approval process is an inappropriate vehicle for commenting on site-specific alternatives and mitigation for projects within the Master Program.

Instead, the City should foster transparency in its decision-making and provide for mechanisms through which the public can hold City staff accountable for their decisions. The City already has to provide the resource agencies with an opportunity to comment on the site-specific impacts. It has provided no explanation of why a public comment period could not run concurrently with the resource agency review period. Further, the City cannot explain why safeguarding the public's ability to participate in the decision-making process is prohibitively expensive. Rather than attempting to block the City Stormwater Department's budget in order to have an opportunity to comment on individual projects,

Q.32 As a state resource agency with jurisdiction over maintenance activities, the Regional Water Quality Control Board would have the same review authority discussed in Response to Comment Q.31.

Q.33 The commenter is correct in stating that the U.S. Army Corps (Corps) must go through the NEPA process before it can issue a 404 permit for the Master Program. While the PEIR will not, in and of itself, satisfy the requirements of NEPA, it is anticipated that the Corps will utilize much of the information contained in the PEIR in preparing the NEPA documentation.

However, the commenter it is not correct in the assumption that the Corps will not be able to issue a multi-year 404 permit based on the level of information available in the PEIR. The City has had extensive conversations with Corps staff on the level information it needs to issue a multi-year 404 permit for the Master Program. In the course of these conversations, the Corps has indicated it will be able to issue a 404 permit based on the SCR process that is proposed as part of the Master Plan. Similar to the City procedures, the Corps will utilize the information associated with the SCR package to confirm that the individual maintenance activities are completed in accordance with the guidelines and mitigation measures contained in the Master Program and MMRP. In the event, the Corps determines that any individual maintenance activity does not comply with these documents, it can withhold authorization. This will prevent that maintenance activity from taking place until it has been modified to the Corps' satisfaction because the City will not proceed with any maintenance activity which has not been authorized by Corps.

Q.34 The City is not forgoing future public notice and comment on the annual maintenance plans. As indicated in Response to Comment O.1, there will be numerous notices provided to the public.

Q.35 cont. San Diego Coastkeeper would prefer that the Stormwater Department's budget is robust enough that public participation in this process could be guaranteed.

E. The CEQA Review within the PEIR is Inadequate.

1. The City's alternatives analysis is insufficient.

Q.36 The City has analyzed alternatives at the programmatic level, but has no plans to examine whether any less environmentally damaging alternative is available for each project within the program.

Although some less environmentally damaging options such as channel-widening may not be available or appropriate on a program-wide basis, those options could be viable for individual channels. The City must re-analyze the alternatives for each channel, because work in each channel in itself qualifies as a "project" under CEQA, and demonstrate that channel clearing is the least environmentally damaging viable alternative before it can clear a channel. Merely showing that the channel clearing to be done is the minimum necessary from a hydrology standpoint does not satisfy this requirement.

Guideline 15162 mandates subsequent environmental review when new information demonstrates that alternatives that were not feasible have become feasible, but the agency refuses to adopt them. The City's current refusal to further consider alternatives at the project level triggers additional environmental review.

2. The City failed to assess potential impacts related to hazardous waste.

Q.37 It is possible that historic uses of channel areas may have released hazardous materials into channel sites the Master Program identifies for maintenance. The Department of Toxic Substances Control commented that future EIRs should identify all potentially contaminated channel sites within the Master Program. PEIR Appendix A2 at 22. In response, the City stated that a "Phase One Environmental Site Assessment" would be conducted for every channel maintenance site. *Id.* However, the Master Program does not require a Phase One Environmental Site Assessment for each site. Without analyzing the potential impacts of hazardous waste, the PEIR fails to comply with CEQA.

3. The cumulative impacts analysis fails to comply with CEQA.

Q.38 The PEIR has determined that "Cumulative impacts related to the following issues would be significant and unavoidable: aesthetics/neighborhood character, air quality/climate change, biological resources, historical resources, paleontological resources, solid waste and water quality." PEIR at ES-4. The PEIR has failed to provide substantial evidence that there are no mitigation measures that would reduce the Master Program's cumulative impact on aesthetics/neighborhood character, air quality/climate change, historical resources, paleontological resources, solid waste, and water quality to less than significant.

Q.35 As discussed in Response to Comment Q.24, the Master Program has been amended to require SWD notify persons and organizations who have requested notification regarding the annual storm water maintenance plan. In addition, SWD will post information related to the annual maintenance plan on the City's website.

Q.36 As discussed in Response to Comment M.5 and page 6 of the Master Program, the City will consider other alternatives provided the alternatives would achieve a comparable reduction in flood risk, be cost-effective and reduce biological impacts.

As discussed in Response to Comment O.1, under Section 15162(3)(C)) of the CEQA Guidelines, the public will have the right to lobby for alternatives and mitigation measures not considered in the PEIR but which have subsequently been determined to be effective and feasible.

Q.37 As discussed in Response to Comment F.1, the IWQA required for each maintenance activity requires the sediment to be removed be tested for hazardous materials. Should hazardous materials be identified which require special handling pursuant to local, state and federal regulations governing hazardous materials, the City will identify appropriate measures, and implement them in the course of maintenance.

Q.38 In accordance with Section 15130(b)(1)(B) of the CEQA Guidelines, it is appropriate for the Recirculated PEIR to rely on the conclusion of the General Plan PEIR relative the feasibility of mitigation for, as well as the significance of, cumulative impacts. As no feasible mitigation for significant cumulative impacts was identified in the General Plan EIR; the Recirculated PEIR may draw the same conclusion.

Instead, the PEIR merely parrots a 2008 General Plan PEIR anticipating significant impacts. *See* PEIR at 6-5 through 6-7. That General Plan EIR biological impacts analysis states:

> However, the degree of future impacts and applicability, feasibility, and success of future mitigation measures cannot be adequately known for each specific future project at this program level of analysis. Therefore, incremental biological resources impacts cannot be precluded, and when viewed in connection with regional impacts to unprotected species, habitats and other resources, are considered cumulatively significant and unavoidable.

General Plan EIR at 5-4, 5-5. That analysis makes no attempt to mitigate for potential cumulative impacts, but instead assumes the impacts "cannot be precluded." By simply adopting the General Plan analysis, the Master Program and PEIR make no attempt to address and mitigate the Program's cumulative impact—which defeats the whole purpose of programmatic environmental review. The City's failure to examine reasonable, feasible options for mitigating or avoiding the Master Program's contribution to any significant cumulative impacts renders this CEQA analysis insufficient.

Q.38 cont.

The City could have proposed and adopted mitigation measures to reduce the Master Program's contribution to significant cumulative impacts. For example, to address cumulative loss of biological resources, the City could increase the habitat mitigation ratios or undertake additional habitat restoration programs above and beyond what would be required for each channel-clearing project. To address cumulative water quality impacts, the City could restore wetlands that would filter pollutants from stormwater or undertake additional low impact development to reduce the amount of pollution entering creeks and channels. To address aesthetics/neighborhood character cumulative impacts, the City could support neighborhood or canyon beautification projects to improve aesthetics and neighborhood character.

4. <u>The City's hydrology analysis is insufficient because it is not supported by evidence in the record and fails to analyze downstream impacts</u>.

The PEIR's hydrology impacts analysis recognizes that impacts would be significant if the Master Program or any project in the Master Program could "[s]ubstantially increase flooding of upstream or downstream properties or to environmental resources…." PEIR at 4.5-2. The PEIR concludes that "No significant adverse impacts on hydrology would be expected," in part because the purpose of the program is "to reduce potential flood hazards from the accumulation of materials and vegetation within storm water facilities…." PEIR at 4.5-3.

Q.39

But the PEIR fails to support the conclusion the there will be no significant adverse impacts on hydrology with evidence in the record. While the Master Program is

Q.38 cont. The comment indicates that the Recirculated PEIR could have included mitigation measures to reduce the cumulative impacts associated with maintenance. The City maintains that the mitigation measures included in the Recirculated PEIR would not only serve to reduce direct impacts but would also reduce cumulative impacts. For example, the mitigation requirement to replace wetland and upland vegetation impacts at ratios, in many cases, greater than 1:1 would help offset cumulative biological impacts associated with storm water maintenance. Similarly, the protocol encouraging mature trees to be retained within storm water facilities, as well as limitations imposed on vegetation removal in excess of the minimum needed to achieve desired storm water conveyance capacity, would reduce cumulative impacts on visual quality as well as biological resources. In addition, water quality and erosion control measures mandated by the Master Program and/or Recirculated PEIR would help reduce cumulative water quality impacts.

Q.39 Prior to each maintenance activity, the Master Program requires the preparation of an IHHA. The IHHA specifically requires a qualified hydrologist to consider the potential upstream and downstream impacts

Q. 39 cont.

designed to clear specific portions of creeks and channels where flooding has occurred historically, the City has performed no analysis regarding the impacts of upstream channel clearing on downstream flooding. This lack of analysis is particularly troublesome to downstream communities that are concerned that when clearing channels to solve a flooding problem in one community, the City may be creating a flooding problem in a downstream community. The potential for downstream flooding due to upstream clearing is a potentially significant impact that must be addressed.

Q.40

Not only has the City failed to perform this analysis at the programmatic level, but there are no plans to perform such an analysis on a project-by-project basis. Although Individual Maintenance Plans will be based on individual hydrology assessments, those assessments are limited to assessing the minimum amount of vegetation removal necessary to maximize flow within the individual channel being studied. The hydrology analysis contains no component analyzing downstream channel capacity or the potential for downstream flooding. This lack of analysis at both the programmatic and project level violates CEQA.

5. <u>The City's water quality analysis is insufficient because it fails to consider analyze downstream impacts</u>.

Q.41

The Water Quality White Paper (PEIR Appendix F) does not sufficiently address the channel clearing impacts on downstream areas. Its focus is on the immediate channel clearing area. Removing sediments and vegetation from one area may increase the velocity and thus force of the water in the system, increasing the chance of mobilizing and depositing sediments in downstream segments of the stream. Further, the White Paper does not analyze impacts to downstream areas where there is a chance for channel clearing to mobilize more pollutants than it removes (impacts exceed benefits) – if those mobilized pollutants are deposited in downstream areas that are also polluted, than channel clearing may cause or contribute to water quality impairment.

6. <u>The City's assumption that there is no water quality benefit to vegetation growing in channels unless there are "dry-weather flows" is not protective of water quality or supported by the evidence in the record</u>.

Q.42

The Water Quality White Paper assumes that if upon a single visit to a creek section there is no flow at that moment, then there is no further need for an assessment of the water quality impacts of channel clearing. PEIR Appendix F, Water Quality White Paper at 14, Figure 3 and Appendix A, at 1. This simplistic approach could lead to erroneous conclusions about the potential impacts of channel clearing. Notably, it will fail to analyze whether the vegetation present plays a significant role in capturing pollutants in intermittent but low flows during dry weather.

Q.39 cont. from maintenance (e.g., vegetation removal) and to identify specific controls (e.g., check dams) to minimize any risk to upstream and/or downstream property.

Q.40 As discussed in the previous response, detailed hydrology studies will accompany each individual maintenance plan to consider the potential upstream and downstream impacts from maintenance and to identify specific controls (e.g., check dams) to minimize any risk to upstream and/or downstream property.

Q.41 The primary purpose of the White Paper was to evaluate the potential for storm water maintenance to adversely affect the ability of vegetation and sediment to capture water pollutants and sediment, and to determine a methodology by which potential impacts on water quality could be quantified and mitigated. However, the White Paper does identify the role vegetation and sediment play with respect to the downstream transport of pollutants. Critical Point #1, on page 2, acknowledges "the ability of plants and sediment to retard downstream migration of and retain potentially harmful constituents in storm water and urban runoff flows". Also, on page 2, the White Paper discusses the fact that "the high velocity of a storm event may result in mobilization of detained constituents in sediment and plants, resulting in adverse impact(s) to downstream water and sediment quality".

The evaluation of the potential effects of increased pollutant levels that could result from maintenance is discussed in Section 4.3 of the PEIR. On page 4.3-15, the PEIR acknowledges the fact that increased levels of pollutants resulting from maintenance could result in an indirect impact on biological resources. Further quantification of the nature of this impact would be speculative given the fact that the pollutant type and concentrations within each storm water facility will vary.

F. The City has Failed to Provide Substantial Evidence to Support a Statement of Overriding Consideration for the Cumulative Impacts.

Q.43 The information and analysis included in the PEIR do not rise to the level of substantial evidence sufficient to support a statement of overriding consideration for significant cumulative impacts to aesthetics/neighborhood character, air quality/climate change, historical resources, paleontological resources, solid waste, and water quality. The City has made no attempt to propose or adopt mitigation measures to reduce the Program's cumulative impacts. Further, to the extent there will be significant unmitigated impacts for any individual project, the City must make a statement of overriding consideration for each specific project, not only for the Master Program as a whole.

G. The City's Proposed Wetland Mitigation Ratios Fail to Comply with the Land Development Code's Biology Guidelines.

Q.44 The City has set out its proposed wetland mitigation ratios in Table 4.3-10 of Appendix C to the Master Program. That chart indicates that the City will not provide mitigation for impacts to "streambed/natural flood channels." *See* Master Program at C-4 (listing mitigation ratio as "NA"). By refusing to mitigate for direct impacts to the "streambed" or "natural flood channels," the City is refusing to mitigate for impacts at the heart of this "flood control" program—those that occur in our creeks or flood channels. These mitigation ratios are inconsistent with the Biology Guidelines in the Land Development Manual. *See* Land Development Code, Biology Guidelines at 16.

The table below compares wetland mitigation ratios required in the Master Program with those required in the Biology Guidelines.

Wetland Type	Mitigation Ratio in Program	Mitigation Ratio from Biology Guidelines
Southern riparian forest	3:1	3:1
Southern sycamore riparian woodland	3:1	3:1
Riparian woodland	3:1	3:1
Coastal saltmarsh	4:1	4:1
Coastal brackish marsh	4:1	4:1
Southern willow scrub	2:1	2:1
Mule fat scrub	2:1	2:1
Riparian scrub	2:1	2:1
Riparian scrub in coastal overlay zone	**2:1**	**3:1**
Freshwater marsh	**1:1**	**2:1**
Freshwater marsh in coastal overlay zone	**1:1**	**4:1**
Cismontane alkali marsh	4:1	4:1
Disturbed wetland	**1:1**	**2:1**
Streambed/natural flood channel	**NA**	**2:1**

Q.42 As discussed in Response to Comment I.14, the intention of the assessment is to estimate the dry weather flows as accurately as reasonably possible. Historical data should be used and augmented with field verification. If there is evidence of intermittent flow, the flow should be considered in the assessment by installing monitoring equipment to calculate flow or by using conservative approaches based on empirical data gathered during the water quality assessment. Additional clarification of this has been added to the White Paper. See Response to Comment I.14 for more information on this issue.

Q.43 CEQA Section 15093(a-c) requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable." When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the Final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the Final EIR and/or other information in the record. The Statement of Overriding Considerations must be supported by substantial evidence in the record. If an agency makes a Statement of Overriding Considerations, the statement must be included in the record of the project approval and should be mentioned in the Notice of Determination. This statement does not substitute for, and shall be in addition to, findings required pursuant to Section 15091.

Although not all cumulative impacts can be fully mitigated, mitigation are included in the PEIR which not only mitigate direct impacts but would also reduce the project's contribution to cumulative impacts. A Statement of Overriding Considerations will be provided to the decision-maker for adoption along with certification of the PEIR and approval of the Master Program. See further discussion in PEIR, Section 6.0 – Cumulative Impacts.

Q.45 The table also includes a footnote stating: "Mitigation done in advance or through purchase of mitigation credits would be at a 1:1 ratio." *See* Master Program at C-4, Table 4.3-10. This inappropriately reduces mitigation even further below the requirements set out in the Biology Guidelines, which provides no "discount" in mitigation if mitigation is done in advance or through mitigation credits. On the contrary, mitigation accomplished through purchase of mitigation credits is likely performed off-site, at a distance from where the impacts are occurring, which would support requiring *more* mitigation, not less.

Q.46 The PEIR's conclusion that "Mitigation measures would be carried out in compliance with the ESL Regulations and Biology Guidelines" is not supported by the evidence. *See* PEIR at 4-1.17. Any argument that the wetland impacts are only temporary find no support in the Biology Guidelines, which specifically require that "As part of the project-specific environmental review pursuant to CEQA, all unavoidable wetlands impacts (both temporary and permanent) will need to be analyzed and mitigation will be required in accordance with Table 2…." Biology Guidelines at 14 (emphasis added).

Q.47 The Biology Guidelines acknowledge that "[t]emporary disruptions of habitat and temporary staging areas that do not alter landform and that will be revegetated are generally not considered to be permanent habitat loss." Biology Guidelines at 9 (emphasis added). However, to qualify for that mitigation exemption, there must be a plan "to ensure that appropriate revegetation and restoration will be completed as part of the development process." *Id*. Here, the City has no plan to revegetate the streambeds or natural flood channels. On the contrary, the City wants to avoid revegetation to avoid further channel clearing.

Q.48 Further, the City's claim that cumulative impacts to biological resources are "significant and unavoidable" is unsupportable when the City refuses to apply even the modest protections set forth in the Land Development Manual.

H. The Substantial Conformance Review Checklist Does Not Include Water Quality Mitigation Measures and Fails to Robustly Reflect Other Mitigation Measures.

Q.49 The Substantial Conformance Review Checklist is a key tool under the Master Program for approving Individual Maintenance Plans. Yet, the checklist fails to include the mitigation measures for Water Quality outlined in the Mitigation Monitoring and Reporting Program. *See* PEIR Appendix C at 29, *and* Master Program Appendix J at 10. The checklist includes both mitigation measures (outlined in the Mitigation Monitoring and Reporting Program) and maintenance protocols (outlined in the Master Program) for biological resources, historical resources and land use. But areas of the checklist addressing water quality include maintenance protocols only. Therefore the water quality

Q.44 As discussed in Response to Comment A.1, the wetland mitigation ratios identified in Table 4.3-10 of the Recirculated PEIR have been revised to match Table 2 of the City's Biology Guidelines. Thus, impacts to streambed/natural channel areas would be mitigated at a ratio of 2:1, unless the Resource Agencies allow a lower ratio.

Q.45 As discussed in Response to Comment A.1, the wetland mitigation ratios identified in Table 4.3-10 of the Recirculated PEIR have been revised to match Table 2 of the City's Biology Guidelines. The provision for reducing the mitigation ratios if mitigation credits are used has been eliminated from Table 4.3-10.

Q.46 As discussed in Response to Comment A.1, the City has revised the mitigation ratios in Table 4.3-10 of the Recirculated PEIR to match Table 2 of the Biology Guidelines.

Q.47 The City is not seeking an exemption from wetland mitigation. Since the primary purpose of removing vegetation is to maximize the ability of facilities to convey water, replanting the facilities after maintenance would be counter-productive. Thus, the City is proposing to mitigate for all impacts to wetlands in accordance with the provisions stated in the City's Biology Guidelines and the LDC ESL Regulations

Q.48 As discussed in Q.38, the mitigation measures required to reduce direct impacts would also reduce cumulative impacts of maintenance on biological resources.

Q.49 The SCR checklist has been modified to require a determination as to whether the IMP incorporates mitigation measures identified in the IWQA and/or Table 4.8-8 of the Recirculated PEIR.

Q.49 cont. assessment for Substantial Conformance Review is insufficient, since it fails to include necessary mitigation measures.

Q.50 Further, the Substantial Conformance Review in some areas fails to robustly reflect the full language of the mitigation measures as explained in Appendix C of the Master Program. The Substantial Conformance Review checklist must be modified to robustly reflect all elements of each mitigation measure.

CONCLUSION

San Diego Coastkeeper cannot support the Master Program and PEIR because, as proposed, they lack transparency and a way to hold city staff accountable for their decisions. Coastkeeper urges the City to modify the process to consider the Individual Maintenance Plans and supporting documentation a tiered EIR or mitigated negative declaration and to put in place the public notice, comment, and appeal rights that go along with those CEQA documents and decisions.

Sincerely,

Jill M. Witkowski
Staff Attorney

Q.50 In the absence of specific recommendations, the City cannot respond to the statement that the SCR process is not sufficiently "robust".

San Diego County Archaeological Society, Inc.
Environmental Review Committee

2 July 2011

To: Ms. Myra Herrmann
Development Services Department
City of San Diego
1222 First Avenue, Mail Station 501
San Diego, California 92101

Subject: Recirculated Draft Program Environmental Impact Report
Master Storm Water System Maintenance Program

Dear Ms. Herrmann:

I have reviewed the subject document on behalf of this committee of the San Diego County Archaeological Society.

R.1 Based on the information contained in the subject DPEIR and its accompanying archaeological analysis report, we agree with the impact analysis and mitigation measures as proposed.

Thank you for providing this recirculated DPEIR to us for our review and comment.

Sincerely,

James W. Royle, Jr., Chairperson
Environmental Review Committee

cc: Affinis
SDCAS President
File

P.O. Box 81106 • San Diego, CA 92138-1106 • (858) 538-0935

R.1 Comment noted.

THE CITY OF SAN DIEGO
WETLANDS ADVISORY BOARD
600 B STREET, SUITE 800, MS 908A
SAN DIEGO, CA 92101

CARY LOWE, PH.D., AICP, CHAIRMAN
TEL.: (619) 255-3078

July 28, 2011

Myra Herrmann, Environmental Planner
City of San Diego Development Services Center
1222 First Avenue, MS 501
San Diego, CA 92101

Re: Master Storm Water System Maintenance Program
Recirculated Draft Program EIR

Dear Ms. Hermann:

On behalf of the City of San Diego Wetlands Advisory Board, I would like to offer comments on the Recirculated Draft Program Environmental Impact Report for the Master Storm Water System Maintenance Program. These comments are based on input from Board members with knowledge and experience in the field of wetland biology, and represent the consensus position of our Board. This letter supplements previous correspondence from our Board, dated April 17, 2009 and May 12, 2010, commenting on prior Draft EIR's for this program. We continue to support the proposed program, but believe that the Final EIR should address the issues described below.

Our comments relate both to program-level issues and to specific portions of the analysis and mitigation measures, as follows:

S.1 1. Annual Review. We are concerned that the program in question is complex and long-term, and therefore needs to be assessed on a regular basis to ensure that it is functioning in the most environmentally benign manner possible, consistent with the program requirements. A mitigation measure should be added, requiring that an annual public review and comment process be incorporated into the program. A report should be made to a regulatory agency such as the Regional Water Quality Control Board, for their review and comment, followed by a public hearing at which additional comments could be submitted. This would provide a regular opportunity to determine the effect of maintenance work under the program upon water quality, habitat value and wetlands mitigation in the preceding year and to assess plans for the following year. Such a process would have the goal of improving the Storm Water Division's maintenance practices. The annual public review would be used as a feedback mechanism to guide future planning and identify needed corrective action.

S.2 For example, for the annual review, the Storm Water Division could present water quality monitoring results from downstream of areas where substantial vegetation and/or soils

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S.1 As discussed in Response to Comment O.1, the public will have ample opportunities to review and comment on each of the City's annual maintenance plans for storm water facilities. Thus, a separate mitigation measure dealing with public review of annual maintenance plans is not required. As required by the Master Program, the Regional Water Quality Control Board as well as other state and federal agencies with jurisdiction over wetlands will be provided an opportunity to review each annual maintenance program and determine if the activities are within the scope of the permit(s) issued by those agencies for storm water maintenance. The information provided to these agencies will include a discussion of past efforts as well as information on proposed maintenance.

S.2 In accordance with Mitigation Measure 4.3.8, the City will prepare an annual report related to biological impacts associated with storm water maintenance. This report is required to include a "Description of the status of mitigation which has been implemented for past maintenance

THE CITY OF SAN DIEGO

S.2 cont. have been removed. The status of habitat value at maintenance sites from previous years' work, and the status of mitigation projects, also would be presented. The review would further present the plans for maintenance, monitoring and mitigation, and an analysis of alternatives being considered, for the upcoming years. In cases where the review discloses that maintenance work has degraded water quality or habitat value, or that wetlands mitigation measures have not been effective, corrective actions would be identified.

S.3 2. Relation to Other Programs. Operating this program in isolation increases the likelihood of undesirable impacts. The program should be a component of a comprehensive city-wide flood control plan that would include needed capital improvements, land use policies, and relocation of frequently flooding development. At minimum, a mitigation measure should be added, requiring coordination of this program with other flood control-related activities of the City, to minimize degradation of water quality and instead improve water quality wherever possible.

S.4 3. Maintenance Frequency. The Biological Resources Mitigation Measures should be supplemented with a measure requiring more frequent and routine clearing of areas which are particularly prone to overgrowth and/or areas that particularly attract sensitive species (which later would be harmed or killed in the course of less frequent clearing).

S.5 4. Seasonal Protections. Biological Resources Mitigation Measures 4.3.16 – 4.3.25 should be expanded to include a prohibition against clearing vegetation during the breeding seasons of any sensitive or listed animal species.

S.6 5. Scope of Surveys. The Biological Mitigation Measures should state clearly that surveys will be performed for both flora and fauna.

S.7 6. Mitigation Standards and Timing. The Wetland Mitigation Plan referenced in Biological Mitigation Measure 4.3.10 should be consistent with Multiple Species Conservation Plan mitigation ratios for Diegan coastal sage scrub and Coastal sage-chaparral scrub, including ensuring that mitigation occurring outside the impact area is at a ratio of not less than 2:1. Also, the Wetland Mitigation Plan should ensure that new, enhanced or restored wetlands are maintained and protected in perpetuity.

S.8 7. Incentives. Discussion of the Off-Site Runoff Reduction Alternative should include proposed incentives for achieving long-term solutions, e.g., on-site water recycling and reduced outdoor irrigation.

Thank you for the opportunity to comment on this document.

Sincerely,

Cary D. Lowe

Cary D. Lowe, Ph.D., AICP
Chairman

CDL/mb

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S.2 cont. activities." As discussed in Response to Comment O.1, the public and Resource Agencies will have a chance to review this report at the time each annual maintenance program is considered.

S.3 SWD is already coordinating with other City Departments, such as Engineering & Capital Projects (E&CP), to identify, prioritize, and budget for other flood control projects throughout the City to meet water quality objectives. For example, the SWD is currently working with the City's Public Utilities Department to restore wetlands that would improve water quality. SWD is also pursuing an integrated approach to implementing watershed-based projects with the SWD's Pollution Prevention Section that could meet both flood control and water quality objectives under the City's Storm Water Municipal Permit (MS4).

S.4 The Master Program is designed to maintain the included facilities at frequencies that reduce the risk of flooding. As result, the facilities will be maintained based on the hydrological conditions. The City does not believe that a mitigation measure requiring more frequent maintenance in channels that support wildlife is warranted. However, it is anticipated that the facilities which have a tendency to support dense vegetation which is favored by wildlife will be maintained at greater frequencies in an effort to increase their capacity to transport storm water.

S.5 Applying the seasonal restriction on maintenance included in Mitigation Measure 4.3.25 to other animals is not considered necessary. No state- or federally-listed non-avian species are expected to be associated with the storm water facilities proposed for maintenance. While non-listed, sensitive animal species such as the salt marsh skipper, orange-throated whiptail, San Diego horned lizard, two-striped garter snake, yellow-breasted chat, and Mexican long-tongued bat are expected to occur in some of the facilities, there is no evidence presented by the commenter that suggests that maintenance activities would significantly impact these species if they were to occur within the normal avian breeding season.

THE CITY OF SAN DIEGO

cc: Members, Wetlands Advisory Board
Staff, Wetlands Advisory Board

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S.6 As appropriate, the mitigation measures in the Recirculated PEIR specify whether they apply to animals and/or plants.

S.7 By their nature, restoration/enhancement performed pursuant to Mitigation Measure 4.3.10 will be restricted to wetland habitats. Thus, mitigation ratios for Diegan coastal sage scrub and coastal sage-chaparral scrub (both upland habitats) would not be applicable to mitigate impacts to wetland habitats.

Table 4.3-11 differentiates mitigation ratios within and outside the MHPAs, as specified in the City's Biology Guidelines. To the greatest degree possible, the City intends to mitigate upland impacts within the MHPA.

As indicated in Mitigation Measure 4.3.10 of the PEIR, wetland mitigation plans are required to specify a long-term maintenance and preservation plan.

S.8 As discussed in the Recirculated PEIR, the Off-site Runoff Reduction Alternative is not considered feasible. Nevertheless, the City is actively pursuing ways to implement the principles of this alternative. As evidence of this fact, City regulations already require new development to include LID measures.

CalSorrento Ltd.

June 27, 2011

Myra Herrmann
Environmental Planner
City of San Diego Development Services Center
1222 First Avenue MS 501
San Diego, CA 92101

Via email: dsdeas@sandiego.gov

RE: Project No. 42891/SCH No. 2004101032

Dear Ms. Herrmann,

I represent Cal-Sorrento Ltd., the largest property owner (over 600,000 SF of buildings) in the Sorrento Valley area of San Diego.

T.1 The City owned concrete storm drainage channels that run adjacent to many of our buildings are cracked, leaking and completely blocked by overgrown vegetation to the extend that they pose a significant risk to life and property. In the storm of December 2010, water, mud, and debri overflowed from the blocked channel adjacent to the railroad tracks and rushed into two of our buildings **flooding them up to 4 feet high** (see attached photos). Obviously this resulted very significant damage to our property and to the personal property of our tenants. Earlier in the year (January 2010) a different drainage ditch also overflowed with similar results (see attached photos). It is apparent that if the drainage channels are not maintained, flooding of our properties will continue to occur.

In addition to the flooding threat that the overgrown channels pose, the standing water in them (present year-round) is also a very serious health threat. The City constructed these drainage channels to carry the runoff out of the area; not to create standing polluted water that is a tremendous mosquito breeding ground and deep enough that a child could drown.

It is imperative that the City of San Diego implements a program to regularly maintain these drainage channels to protect life and property from future flooding before any further damage or injury occurs.

Thank you,

Terri Ducey

Terri Ducey
Cal-Sorrento Ltd
attachments

10951 Sorrento Valley Rd. • Suite 2-H • San Diego, CA • 92121-1613 • Tel: (858) 453-0020 • Fax: (858) 458-0920

T.1 The City is aware of the flooding and vector problems described in this comment. As suggested in the comment, implementation of the Master Program would help alleviate these problems.

Herrmann, Myra

From: John Gabaldon [john.trvea@gmail.com]
Sent: Monday, July 11, 2011 11:20 AM
To: DSD EAS
Subject: Project No. 42981

I have reviewed the recirculated storm water plan. I have ridden by horseback, hiked, and maintained trails in the Tijuana River Valley (TRV) for over 15 years; I have a historically progressing view on how this plan will affect this valley.

U.1 --the clean-out footprint of the riverbed and channels is insignificant in relation to the area flooded during even moderate rain events. Furthermore, any wildlife in this planned clean-out footprint and beyond would be wiped out (nests, habitat, food) during even small rain events. Therefore, I advise the biological engineers to allow a clean-out area large enough to properly revitalize the riverbed, and not to concentrate on only flood prevention by maintaining a minimum-impact maintenance area.

U.2 --wildlife is flourishing crazily beyond any idea that there are endangered species "on the edge" in the TRV. The riverbed is densely forested and cannot be walked into by hikers. From the cacophony of animal calls in the forest, and the abundance of sightings of well fed birds, predators, and flora, destruction of critical habitat is not an issue. This plan is overly conservative on the handling of footprint area of clean-out.

U.3 --it is time to allow the TRV to restore its own biological health. The greatly accumulating pollutants are now gathering upstream in the river areas and will involve unimaginable expense for maintenance programs (and human and animal health and safety) if accumulation at the new pace continues. Because even small rain events in these last years cause flooding, it's time to immediately implement ***something***.

U.4 --mention of how County water projects are cross planned for integration during the permitting period should be included in this plan.

U.5 --ad hoc riverbed maintenance by private land owners is required to protect their livelihoods and to protect the food and animals, services and good they provide to the region. While protecting themselves, it is likely the overall area is becoming further hydrologically modified in an incoherent pattern with questionable outcomes. This recirculated plan addresses this type of activity with savings to all including the private landowners who incur great costs to protect themselves where this money could better be used to expand business and employment.

U.6 --regular maintenance as-needed as described in the recirculated plan will open the waterways to function as nature intends in order to improve the health of the water near the urban areas. Although it might be counter-intuitive, allowing water to move more naturally will improve the quality of the water (and land). Allowing stream, river, and channels to constrict is reducing water and land quality, and in turn reducing the biological quality of San Diego's recreational areas and natural ecosystems.

The recirculated plan addresses concerns on both sides of the maintenance program argument. We don't get all that we want, but there is sufficient coverage in this program that meets far more than our minimum requests for health, safety, biodiversity, and recreation to the program areas.

John Gabaldon
President, Tijuana River Valley Equestrian Association
www.trvea.org
619-920-1282

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U.1 Clearing of vegetation would only be limited when such an action would not interfere with the primary goal of the Master Program to maximize the ability of the drainages within the Tijuana River Valley to handle high storm water flows.

U.2 As indicated in Response to Comment U.1, the City will not restrict vegetation clearing and will implement measures identified in the PEIR to mitigate for impacts to wildlife in the affected area(s).

U.3 The Recirculated PEIR acknowledges the potential benefits of removing polluted sediment in the course of storm water maintenance (refer to discussion of water quality in Section 4.8 of the PEIR).

U.4 A discussion of the County's storm water maintenance activities in the area need not be explicitly included in the Master Program. However, the City does intend to coordinate with the County in its efforts to reduce risk within the Tijuana River Valley.

U.5 The City agrees with the commenter's observation that the Master Program represents an efficient, cost-effective mechanism for reducing flood risk in the area.

U.6 The City agrees with the commenter's observation regarding the benefits of regular maintenance in accordance with the proposed Master Program.

From: Andrea Bitterling
Sent: Tuesday, August 02, 2011 2:56 PM
To: Vanessa Brice
Subject: FW: Project No. 42981

From: Szymanski, Jeffrey [mailto:JSzymanski@sandiego.gov]
Sent: Thursday, July 28, 2011 8:22 AM
To: Herrmann, Myra; Bruce McIntyre
Cc: Jarque, Anne; Grabski, Patricia; Andrea Bitterling
Subject: FW: Project No. 42981

Hello,

Here is another comment for the Stormwater PEIR. This was sent to the DSD EAS email.

Thanks,

Jeff

From: Kevin Johnston [mailto:kevinjohnston1972@yahoo.com]
Sent: Wednesday, July 27, 2011 8:38 PM
To: DSD EAS
Subject: Project No. 42981

Thanks for the opportunity to comment and the improvements in the plans.

I would like to comment on two major issues that I think have not been sufficiently addressed in the PEIR.

V.1 There should be more consideration of the serious social justice impacts for urban residents and biological impacts to sensitive urban wildlife habitats by continually exporting mitigation out of the urban area.

V.2 I understand the funding issues facing the city today, but we need to find creative ways to include some form of cost efficient short public review, public workshop, or other opportunity for consideration of public input once future maintenance projects are planned - even if you have to group them together for particular areas.

Kevin Johnston
Serra Mesa resident

V.1 The City recognizes that the community and the Resource Agencies prefer mitigation to occur in the vicinity of the impact. As discussed in Response to Comment P.25, Mitigation Measure 4.3.9 in the Recirculated PEIR already provides language that encourages mitigation to occur within the same watershed as the impact.

V.2 As discussed in Response to Comment O.1, the annual maintenance plan approval process has ample opportunities for the public to get involved and comment on the future maintenance activities.

From: Herrmann, Myra
To: Bruce McIntyre; Vanessa Brice; Jarque, Anne
Subject: FW: Project No. 42981 - Isabel Kay - UCSD
Date: Thursday, August 11, 2011 9:58:13 AM

-----Original Message-----
From: Isabelle Kay [mailto:ikay@ucsd.edu]
Sent: Friday, July 29, 2011 4:54 PM
To: DSD EAS
Cc: Isabelle Kay; Robert Little; llevin@ucsd.edu
Subject: Project No. 4298

Myra Herrmann, Environmental Planner, City of San Diego, Development Services Center, 1222 First Avenue, MS 501, San Diego, CA 92101.

Dear Ms. Herrmann:

I have not been able to thoroughly review the DEIR. However, I am concerned that some stormwater facilities that require maintenance have not been included at all, as far as I can tell.

They are:

W.1 1) The lower reach of the Olney Street drain, where it empties into the Mission Bay Park, downstream of the interceptor at the intersection with Pacific Beach Drive. This channel is in dire need of attention: Campland has added additional discharge pipes directly into it; there is broken concrete block in the channel; a significant amount of coarse sediment remains in the channel where it empties into the wetland and the bay, as the result of a water main break several years ago. My recommendation is that this channel and the reach above the interceptor be carefully looked at for opportunities to incorporate it into the upcoming wetlands restoration in the vicinity of Campland, and that the Master Stormwater Plan should include it.

2) The Noyes Street drain, where it empties into the Kendall-Frost Marsh Reserve, property of the University of California Regents. For years the residents and managers of the property immediately across (on the north side of) Pacific Beach Drive have complained about their garage flooding. Your department stated its intention to deepen the channel leading into the marsh; however, no plans were developed or submitted to the UC Natural Reserve System, the Coastal Commission, or the resource agencies for review. This situation appears to be the result of inappropriate engineering and permitting in the past, resulting in a back up of stormwater at high tide. This facility needs to be included in the Master Plan.

W.2 In fact, the entire Mission Bay Interceptor System should be explicitly included in the plan, since it is entirely within the coastal zone, and the structures have in general not worked as anticipated and will need re-construction in fewer than 20 years.

Please do not hesitate to contact me if you would like clarification on these comments.

Sincerely,

Isabelle Kay
Academic Coordinator and Reserves Manager
Natural Reserve System
UC San Diego
La Jolla, CA 92093-0689
ikay@ucsd.edu
office: 858-534-2077
cell: 858-229-4677
http://nrs.ucsd.edu

W.1 The channel segment along Pacific Beach Drive, just north of Campland is included in the Master Program, and identified as Map 37. However, the City's GIS database does not show an open channel facility downstream of Map 37; nor does the SWD have any record of ever maintaining an open channel where it empties into Mission Bay Park. Additional research is required to determine if there is an existing drainage easement on the property and whose responsibility it may be to maintain the channel. Regardless of who maintains the channel, the SWD would be interested in working with the managing department or entity to identify mitigation opportunities that may exist in the area.

The SWD is unaware of any plans to deepen the channel leading into the marsh. While there is always the possibility that the situation is the result of inappropriate engineering and permitting, it would be irresponsible for the SWD to make such claims without having obtained the appropriate permits and researching the project. The commenter is correct in stating that, before any work is performed at the site, tidal effects should be considered. This facility is being researched, and if it is the responsibility of the SWD, it could be added to the Master Program at a later date through an amendment to the Master Program.

W.2 The Master Program covers on-going maintenance of open channel segments managed by SWD. The interceptor systems are an entirely different type of facility and, as such, go through different design and permitting processes. They are not being included in the Master Program

W.2 cont. because of these differences. Upgrades and improvements to the Mission Bay Interceptor would be initiated by their managing departments, and then handed off to the City's Engineering & Capital Projects (E&CP) Department. Further information regarding these activities can be found on the City's E&CP webpage at: www.sandiego.gov/engineering-cip, or by calling the public information line at (619) 533-4207.

From: Robert Little [mailto:robert.little1939@sbcglobal.net]
Sent: Friday, July 15, 2011 2:44 PM
To: DSD EAS
Subject: Fw: Project No 42981

Myra Herrmann,

I attended a public information session on the Master Storm Water System Maintenance program on 7/14/11.

I have not been able to read the whole draft PEIR so some of my comments/questions may be obvious and in the documents already.

X.1 1) I get the impression that the proposed workscope of cleaning out major drainage channels is one of "deferred routine maintenance" so now it has become a major issue. Is this a valid impression? Since most or all of these channels have existed for many years if routine maintenance had been an ongoing activity there would not be such a complicated process to now go through. If I am correct, part of the problem is that people have become used to the existing channels being "environmentally sacrosant" hence uproar.

X.2 2) I suspect that many of the channels could be cleaned out adequately by starting at the downstream end and digging out debris and sediment and transporting it downstream without impacting any of the edges. This would really minimize the need to have access to the banks. Is this a valid approach?

X.3 3) Somewhere in the PEIR there is a note about taking one sediment sample per 1000 cubic yards of the removed material. This seems a very coarse sampling. At present I do not know how much material each project will remove, but I suspect that at least one sample per 100 cubic yard would be more useful, and there should be at least two samples for each project.

X.4 4) I suspect that vegetation and sediment will recover in 1-2 years after a channel has been cleaned out. Is there a typical recovery time? If the recovery time is as I just postulated then the channels have to be recleaned on this kind of period. Is this in the plan? In addition, if the channels are clean all the sediment and contaminants will be flushed downstream so the problem just gets moved downstream. This aspect would appear to be another reason for cleaning out the channels frequently if vegetation is supposed to catch the contaminants. A better question might be how long does it take for a given amount of vegetation and sediment to reach saturation as far as absorbing contaminants? Is it quantified as how much a certain amount of vegetation and sediment contributes to flooding?

X.5 5) Is there an existing review and corresponding prioritized backlog of channels for cleaning?

X.6 6) Is there a budget and staffing for this "new or additional" scope of work?

X.7 7) A better process for keeping the public informed about upcoming decision points would be appreciated.

Thanks,
Robert Little.

X.1 The inability of the City to conduct routine maintenance while processing the Master Program has allowed vegetation and sediment to continue to accumulate in the storm water facilities. Without this delay, the City would have been conducting routine maintenance to take care of locations where this accumulation increased the risk of flooding.

X.2 As discussed on page 8 of the Master Program, maintenance is only expected to affect the channel bottom and adjacent two feet whenever channel width exceeds 20 feet. Thus, in many cases, the vegetation on the channel bank would be unaffected by maintenance.

X.3 Taking a sample for every 1000 cubic yards will provide a reasonable representation of the level of pollutants within the sediment. The White Paper has been revised to state that a minimum of two samples for each project shall be collected and analyzed.

X.4 As indicated in the PEIR, wetland vegetation is expected to begin re-establishing within 6 to 12 months after maintenance. The frequency of maintenance will be proportionate to the rate of accumulation of vegetation and sediment in each channel segment. Maintenance will be performed when determined to be necessary in accordance with the procedures identified in the Master Program.

X.5 As described in Section 5.0 of the Master Plan, the City will annually compile a Maintenance Needs Assessment List which will identify those facilities in need of maintenance.

X.6 The cost of monitoring the condition of storm water facilities to determine maintenance needs is already included in the annual budget for the SWD. No additional funding is required.

X.7 As discussed in Response to Comment O.1, the annual maintenance plan approval process provides ample opportunities for the public to get involved and comment on future maintenance activities.

From: Herrmann, Myra
To: Bruce McIntyre; Vanessa Brice; Jarque, Anne
Subject: FW: Project No. 42981 - Joseph Steinbach
Date: Thursday, August 11, 2011 10:00:07 AM

-----Original Message-----
From: jhsteinbach@ucsd.edu [mailto:jhsteinbach@ucsd.edu]
Sent: Thursday, July 28, 2011 12:08 PM
To: DSD EAS
Subject: Project No. 42981

Y.1 Rose Creek west of Mission Bay Drive should be removed from a vegetation clearing program.
This area is habitat for many species and is part of a wildlife corridor to upper Rose Creek and San Clemente Creek.
The cross-sectional area of this part of Rose Creek Channel is much larger than the upstream creek channel on the otherside of the I-5 freeway so it should not contribute to neighborhood flooding.

Joseph Steinbach

Y.1 As indicated in Response to Comment L.8, the City understands that these portions of Rose Creek contain sensitive biological resources. However, the City believes that maintenance within these segments may be required to minimize flooding on adjacent property which is why they are included in the Master Program.

From: Herrmann, Myra
To: Bruce McIntyre; Vanessa Brice; Jarque, Anne
Subject: FW: "Project No. 42981" - Comments on Draft Master Storm Water System Maintenance Program Environmental Impact Report
Date: Wednesday, August 10, 2011 5:55:25 PM

From: Don Wood [mailto:dwood8@cox.net]
Sent: Saturday, July 23, 2011 1:03 PM
To: DSD EAS
Subject: "Project No. 42981" - Comments on Draft Master Storm Water System Maintenance Program Environmental Impact Report

July 23, 2011

To: Myra Herrmann, Environmental Planner

City of San Diego, Development Services Center

Subject: "Project No. 42981" - Comments on Draft Master Storm Water System Maintenance Program Environmental Impact Report (PIER)

The Pacific Energy Policy Center is a pro-bono policy advisory organization that counsels California utilities, state energy regulatory agencies and the legislature on energy policy related issues. We also focus on the state's water policies, since 20% of California's energy is utilized in the capture, transportation, treatment and distribution of water.

Z.1 We believe that the emphasis of this current effort should not be on flushing potable rainwater more efficiently into the ocean. We believe that the San Diego region needs a more effective system for capturing and harvesting storm water for treatment and potable uses in the future.

To achieve this goal the city storm water agency should refocus your efforts into developing a new region wide system of catch basins that would route rainwater into existing cleaned up groundwater aquifers and a new system of below grade cisterns from which rainwater could be routed to the city's water treatment plans and added to the local potable water supply. With the cost of imported water scheduled to go up by a magnitude of order over the next few years, simply wasting potable

Z.1 The SWD agrees with the suggestions regarding the importance of finding more ways to reduce runoff and the pollutants it carries. However, as indicated in the goals and objectives stated in the Master Program, the Master Program is focused on maximizing the ability of storm water facilities to convey storm water and, thus, reduce flood risk.

It is also important to note that the SWD implements several programs that work to address storm water quantity and quality including LID and hydromodification (including reducing peak flow rates and increasing peak flow capacities).

rainwater by dumping it into the ocean, at the same time the region's population continues to grow,
is madness.

The existing stormwater system needs to be carefully planned and upgraded with a goal of capturing
and harvesting more potable rainwater for use in our existing potable water treatement and distribution
system instead of being dumped into the sea.

Thanks for this opportunity to comment on the draft PIER and we ask that these comments be fully
addressed in the final PIER.

Don Wood
Senior Policy Advisor
Pacific Energy Policy Center
4539 Lee Avenue
La Mesa, CA 91941
619-463-9035
dwood8@cox.net

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Attachment A

OFF-SITE VEHICULAR TRIP EMISSIONS

Master Storm Water System Maintenance Program

Attachment A to Responses to Comments
Off-site Vehicular Trip Emissions

Source	Fuel	Max. No. of Vehicles per Day	Max. Miles per Vehicle per Day	Max. Total Vehicle Miles per Day	Max. Total Times Material Loaded/Unloaded per Vehicle per Day	PM_{10} Emission per Vehicle Loaded/Unloaded[5]	$PM_{2.5}$ Emission per Vehicle Loaded/Unloaded[6]	Max. Daily PM_{10} Emissions from Fugitive Material Handling Dust	Max. Daily $PM_{2.5}$ Emissions from Fugitive Material Handling Dust	Offroad Round Trip Distance (mi)	Offroad Round Trips per Day	Max. Total Offroad Vehicle Miles per Day (mi/day)	Fugitive Dust Emissions Factor (lbs/mi)	Max. Fugitive Dust Emissions (lbs PM/day)[7]	Max. Fugitive Dust Emissions (lbs PM_{10}/day)[7]	Max. Fugitive Dust Emissions (lbs $PM_{2.5}$/day)[7]
Deliveries to the Site	Diesel	2	10	20	N/A	N/A	N/A	N/A	N/A	0.25	2	1	5.45	2.13	1.26	0.27
Offsite Disposal [1]	Diesel	70	14	980	70	0.003372	0.000701	0.236059	0.049100	0.75	70	52.5	3.47	71.05	42.20	8.95
Employee Commuting to Site (Light Trucks)	Gasoline	7	10	70	N/A	N/A	N/A	N/A	N/A	0.25	7	1.75	0.68	0.46	0.28	0.06
Total from Off-site Trips[4]								**0.236059**	**0.049100**						**42.71**	**9.06**

[1]Maximum miles per vehicle per day calculated by dividing the total number of miles driven by all dump trucks for this portion of the project by the product of the number of dump trucks and the total number of days they will be on site.
[2]CEQA Air Quality Handbook, South Coast Air Quality Management District, Table A9-8-D
[3]Emissions factors are conservatively assumed to be the 2012 scenario year presented in SCAQMD spreadsheets available at http://www.aqmd.gov/ceqa/hdbk.html; PM2.5 data from http://www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html
[4]The total presented in boldface font is the sum of the unrounded data displayed in this table in its rounded form.
[5]Emission factor calculated per SCAQMD methodology outlined in the CEQA Air Quality Handbook (1993), page A9-101.
[6]$PM_{2.5}$ calculated as a fraction of PM_{10} emissiosn based on guidelines found at http://www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html
[7]Assumes compliance with SCAQMD Rules 403 and 1186

Source	Fuel	Max. No. of Vehicles per Day	Max. Miles per Vehicle per Day	Max. Total Vehicle Miles per Day	Emission Factors[3] (lb/hr or lb/mi)						Maximum Emission Rates (lbs/day)					
					CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$
Deliveries to the Site	Diesel	2	10	20	0.010215	0.002528	0.030924	0.000040	0.001496	0.001294	0.2043	0.0506	0.6185	0.0008	0.0299	0.0259
Offsite Disposal [1]	Diesel	70	14	980	0.010215	0.002528	0.030924	0.000040	0.001496	0.001294	10.0109	2.4771	30.3053	0.0396	1.4657	1.2677
Employee Commuting to Site (Light Trucks)	Gasoline	7	10	70	0.007655	0.000796	0.000776	0.000011	0.000090	0.000058	0.5358	0.0557	0.0543	0.0008	0.0063	0.0040
Total from Off-site Trips[4]											**10.55**	**2.53**	**30.36**	**0.04**	**1.47**	**1.27**

Source	Fuel	Max. No. of Vehicles per Day	Max. Miles per Vehicle per Day	Max. Total Vehicle Miles per Day	CO_2 Emission Factor (lb/hr or lb/mi)	CH_4 Emission Factor (lb/hr or lb/mi)	Max CO2 Emissions (lbs/day)	Max CH4 Emissions (lbs/day)	Max CO2eq Emissions (metric tons/year)
Deliveries to the Site	Diesel	2	10	20	4.2159	0.000117	84.32	0.00	4.59
Offsite Disposal [1]	Diesel	70	14	980	4.2159	0.000117	4,131.59	0.11	224.89
Employee Commuting to Site (Light Trucks)	Gasoline	7	10	70	1.1005	0.000072	77.04	0.01	4.19
Total from Off-site Trips[4]							**4,208.63**	**0.12**	**229.09**

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

ES-1 INTRODUCTION

This summary provides a brief synopsis of the project description, the results of the environmental analysis and the project alternatives considered within this Recirculated Program Environmental Impact Report (PEIR). By necessity, this summary does not contain the extensive background and analysis found in the document. Therefore, the reader should review the entire document to fully understand the project and its environmental consequences.

This PEIR addresses the potential environmental effects of maintenance activities associated with the proposed Master Storm Water System Maintenance Program (Master Program). This document addresses modifications to the Master Program which were made subsequent to preparation of the Final PEIR (referred to as the "original" PEIR) for this project, dated March 17, 2010. This Recirculated PEIR also includes additional information that has become available since the public review of the original PEIR. Most notably, this Recirculated PEIR includes additional information on water quality effects which are derived from an analysis commissioned by the City after public review of the original PEIR. A more detailed discussion of these changes is contained in Subchapter 3.5, History of the Project.

In light of the changes to the Master Plan and the additional water quality analysis, the City has modified the original PEIR and is recirculating it for an additional 45 days. Although not required by CEQA, the City has included the responses to the comments received during the public review of the original PEIR to make this information readily available during the review of the PEIR. These comments and corresponding responses are located in Appendix A.2 of the Recirculated PEIR.

In accordance with Section 15088.5(f)(1), the City is requiring reviewers to submit new comments on the Recirculated PEIR. As the comments and associated responses to the original PEIR are included in Appendix A.2, the Final Recirculated PEIR will only include responses to comments submitted during the public review period for the Recirculated PEIR.

ES-2 PROJECT DESCRIPTION AND LOCATION

The subject of this PEIR is a long-term maintenance program proposed by the City of San Diego to assure that the municipal storm water system provides adequate flood control. To guide maintenance activities, the City has prepared a Master Program. The Master Program describes the maintenance techniques to be employed as well as the protocols to be followed to minimize the impact of maintenance activities with respect to environmental resources.

The primary objectives of the Master Program include:

- Fulfill the mandate of Section 26.1 of the San Diego City Charter to provide essential public works and public health services by maintaining the storm water conveyance system for the purpose of reducing flood risk;

- Develop a comprehensive program that will govern the future maintenance of the City's storm water system in an efficient, economic, environmentally and aesthetically acceptable manner for the protection of property and life in accordance with Council Policy 800-04;

- Ensure implementation of Best Management Practices (BMPs) and maintenance protocols during maintenance activities to avoid and/or minimize effects to environmental resources, and incorporate the analysis of the operational and pollution prevention benefits of each proposed project; and

- Create an integrated comprehensive review process for annual maintenance activities that will facilitate authorizations from local, state and federal regulatory agencies.

The City's storm water system is comprised of a number of different types of facilities designed to transport storm runoff through the metropolitan area. The storm water system includes a series of natural and man-made channels which are used within the City to convey storm water.

Maintenance of channels primarily involves the removal of vegetation and/or sediment to maximize conveyance of storm water. Vegetation causes flooding by slowing the velocity of floodwater while sediment diminishes the capacity of the facility to handle flow. In addition to restoring flood capacity, removal of sediment often has a positive impact on water quality by removing pollutants that have accumulated in the sediment (e.g. heavy metals and bacteria).

Vegetation and sediment are most frequently removed by mechanized equipment operating within the facility or from the banks. When access is unavailable to accommodate transport of equipment necessary to conduct maintenance, maintenance will be done using hand tools and removed by hand. Maintenance may occur as often as once a year depending on the accumulation of vegetation and/or sediment. In some cases, maintenance may only have to occur once during the permit period. Normally, maintenance on a specific segment would be completed with one to two weeks; for longer more difficult segments, maintenance may last up to two months.

The Master Program includes first, a process by which individual storm water facility maintenance would identified and prioritized annually through an evaluation process that considers the costs and benefits of maintenance of each facility in meeting flood control and water quality service goals. On an annual basis, SWD will prepare an Annual ~~Maintenance Assessment~~ Needs List to identify storm water facilities which may require maintenance. Based on further evaluation of those storm water facilities, including hydrology studies, the SWD will establish an a~~A~~nnual ~~Maintenance Priority List~~ annual maintenance plan for the coming year. Second, the Master Program includes a process by which annual storm water facility maintenance would be authorized through a process known as Substantial Conformance Review (SCR).

Under the SCR process, the City's Development Services Department (DSD) would evaluate the potential impacts associated with annual maintenance proposals and compare them with the impacts analyzed in the certified PEIR and with the objectives, standards, guidelines, and conditions for the ~~Master~~ Site Development Permit/Coastal Development Permit (SDP/CDP). If DSD determines that the proposed maintenance activities are in conformance with the approved ~~Master~~ SDP/CDP and certified PEIR; DSD may authorize each individual maintenance proposal. The SCR process would utilize a comprehensive checklist included in the Master Program to confirm that the proposed maintenance is consistent with the Master Program and PEIR. The checklist includes an itemized list of the mitigation measures contained in the PEIR and maintenance protocols included in the Master Program. In completing the SCR checklist, the City will determine whether applicable measures and protocols have been included in the proposed maintenance.

As a part of the SCR process, the City would prepare Individual Maintenance Plans (IMPs) for each proposed maintenance activity. An Individual Hydrology/Hydraulic Assessment (IHHA) would be conducted to determine the minimum amount of vegetation and sediment removal needed to facilitate conveyance of floodwater. An Individual Water Quality Assessment (IWQA) would also be conducted to determine if maintenance could adversely impact water quality and define appropriate actions to mitigate potential impacts. The IMP would be based on the results of the corresponding IHHA and IWQA.

Based on the IMPs, site-specific assessments would also be performed to determine if these activities would impact sensitive biological or historical resources; these studies would be referred to as Individual Biological Assessments (IBAs) and Individual Historical Assessments (IHAs). Where potential impacts could occur, the associated IBA or IHA would describe the mitigation measures from the Mitigation Monitoring and Reporting Program (MMRP) to be implemented to minimize impacts.

If the City determines based on the IHHA, IBA, IHA, IWQA, and SCR checklist that the proposed maintenance activities are included in the Master Program, adequately addressed in the PEIR and include the maintenance protocols, PEIR mitigation measures and Best Management Practices (BMPs) required by the Master Program PEIR, the City may authorize the proposed annual maintenance activities. If a maintenance activity is determined not to be in substantial conformance, then a new or amended permit would be required.

On an annual basis, the IMPs, IHHAs, IWQAs, IBAs and IHAs would be submitted for authorization by state and federal agencies. Based on a review of this information, the state and federal agencies would decide whether to authorize the maintenance activities as proposed or with modifications.

At the end of the annual maintenance, an annual maintenance monitoring report would be submitted to designated City departments and state and federal agencies. This report would include a summary of the amount and type of biological or historical resources impacted and the mitigation measures that were implemented.

Implementation of the maintenance activities included in the Master Program would require a variety of discretionary actions. Due to the long-term nature of the Master Program, ~~long-term (master)~~ permits from the City as well as state and federal agencies are being sought to streamline the maintenance process. Long-term authorizations include an SDP (City of San Diego), CDP (City of San Diego), Section 404 Permit (U.S. Army Corps of Engineers [Corps]), 1605 Streambed Alteration Agreement (California Department of Fish and Game [CDFG]), and Section 401 Certification (California Regional Water Quality Control Board [RWQCB]). If surface discharges of water are involved, maintenance would require a Wastewater Discharge Permit from the RWQCB.

ES-3 SUMMARY OF ENVIRONMENTAL EFFECTS AND MITIGATION

The PEIR addresses the following major environmental issues: aesthetics/neighborhood character, air quality, greenhouse gas emissions (GHG), biological resources, historical resources, hydrology, land use, noise, paleontological resources, and water quality. The analyses and conclusions for each environmental issue are found in Sections 4.1 through 4.8. The environmental effects discussed in Chapter 4.0, Environmental Analysis, of the PEIR are summarized in Table ES-1, Impacts and Proposed Mitigation. In addition, Table ES-1 summarizes the mitigation measures identified in Chapter 4.0, Environmental Analysis that would reduce project impacts and indicates whether implementation of the mitigation measures would reduce impacts to below a level of significance. Direct impacts with respect to biological resources, historical resources, land use policy, paleontological resources, and water quality are considered significant but mitigable. Direct impacts with respect to air quality/GHG emissions, hydrology and noise are considered not significant. Cumulative impacts related to the following issues would be significant and unavoidable: aesthetics/neighborhood character, air quality, biological resources, GHG, historical resources, paleontological resources, solid waste, and water quality.

ES-4 ALTERNATIVES

Based on the requirement that alternatives meet most of the basic objectives of the proposed project and reduce significant impacts associated with the proposed project, this EIR analyzes the following alternatives which would reduce the need for regular maintenance of storm water facilities.

- No Project: No Maintenance;
- No Project: Maintenance Pursuant to Separate Permits;
- Raising the channel banks by constructing walls or berms along the top of the channels;
- Diverting storm water in pipes around constrained segments;
- Widening channels to accommodate vegetation; and/or
- Off-site Runoff Reduction.

Alternative locations are not considered given the nature of the proposed project. Proposed maintenance activities must occur within the channel segments included in the Master Program in order to achieve the primary goal of protecting life and property from flooding. Conducting

maintenance activities in other locations would not achieve this goal and would result in continued flooding of adjacent property.

Table ES-2, Comparison of Environmental Effects of the Proposed Project with Project Alternatives, summarizes the direct and cumulative environmental effects of the project in comparison with the alternatives. These alternatives are summarized below. As illustrated in Table ES-2, the No Project: No Maintenance Alternative would be the environmentally-preferred alternative because it would eliminate all impacts associated with the proposed project. The Off-site Runoff Reduction Alternative would be the next environmentally preferred alternative but it is considered infeasible, as discussed below.

No Project: No Maintenance Alternative

Under this alternative, the City would not conduct any maintenance activities within the storm water system. Vegetation would grow unchecked within the facilities and sediment would not be removed.

Although this alternative would avoid all impacts of the proposed project, the City rejected the alternative because it would not fulfill the basic objective to protect life and property from flooding, as mandated by Section 26.1 of the San Diego City Charter. The overgrowth within the storm water facilities that would occur from lack of regular maintenance would impede flood waters and cause flooding.

No Project: Maintenance With Separate Permits Alternative

Under this alternative, storm water maintenance would occur pursuant to separate permits issued for individual maintenance projects, as it has been historically done in the City. In addition, a Master Program would not be adopted to guide future maintenance activities. Thus, no comprehensive maintenance protocols and individual technical assessments would be performed prior to maintenance.

This alternative would not result in a reduction of environmental maintenance because maintenance would still be performed. Other potential impacts related to aesthetics/neighborhood character, historical resources, land use policy, solid waste and water quality would be comparable to the proposed project.

Maintenance with separate permits was rejected because it would not provide the comprehensive approach to maintenance which characterizes the proposed Master Program. The CDFG, RWQCB and Corps have all expressed concern about the way the City has conducted storm water maintenance in the past. Historically, the City has conducted maintenance under separate Streambed Alteration Agreements and Section 404 Permits. As a result, mitigation has been on a case by case basis. These agencies have also objected to the fact that separate permits do not allow consideration of cumulative effects of maintenance activities or the creation of larger more viable mitigation areas.

Raised Bank Alternative

Under this alternative, structures (e.g. levees or walls) would be added along the top of channels to allow them to contain vegetation without compromising their ability to convey flood waters. The structures would offset the effect of vegetation and sediment by allowing water elevations to increase without spilling out into adjacent developed areas. However, accumulation of sediment and vegetation would ultimately eliminate the increased flood capacity created by the structures. Channel-specific engineering would be undertaken to determine the additional "bank" height needed.

Although this alternative would potentially impact less wetlands, allow natural removal of urban pollutants to continue and generate less solid waste, the City rejected the alternative for factors related to impacts to wildlife habitat, cost, visual quality, public safety, and the temporary nature of the solution. With respect to wildlife habitat, the structures along storm water facilities would have an adverse impact on wildlife by making it more difficult for upland wildlife to access the channels for water, food and cover. Walling off the storm water facilities would also have an adverse visual impact. With respect to public safety, allowing the channels to fill with sediment could block side drains that empty into the channels which could cause water to back up and flood adjacent public and/or private properties. This accumulation of sediment would likely eventually offset the additional capacity created by the structures.

With respect to financial feasibility, the cost of designing and constructing structures along existing drainage facilities would be substantial. In addition, the cost would be increased by the need to acquire private property to construct the structures. Given the number of miles of drainage channels within the City, the cost of increasing flood capacity by constructing walls or levees is considered infeasible. Funding would be required to design and construct these structures. Council Policy 800-04 (Drainage Facilities) states that all projects with significant or total funding by the City shall be specifically identified and scheduled in the Capital Improvement Program (CIP). Council Policy 800-14 (Prioritizing CIP Projects) outlines the prioritization and funding policy for which projects compete. The prioritization process allows for the analytical comparison of the costs and benefits of individual project as well as providing an opportunity to evaluate projects against one another on their relative merits. This alternative would, therefore, compete with other CIP projects for funding and implementation. Construction could be delayed indefinitely until funding is available while the need to maintain facilities would still exist. Also, due to the uncertainty associated with the ultimate approval of these structures as a CIP project, this alternative is considered infeasible.

Channel By-pass Alternative

This alternative would involve construction of underground pipes that would divert some or all of the runoff around a channel segment to allow the channel to be naturally vegetated. Channel-specific engineering would be undertaken to determine the location and sizing of by-pass pipes to assure that vegetated channel segments can continue to support vegetation without resulting in flooding.

Although this alternative would be the next environmentally-preferred alternative (after the No Maintenance Alternative) because it could potentially result in reduced impacts related to wetlands, water quality and solid waste disposal, the City rejected the alternative as financially infeasible. As with the Raised Bank Alternative, the cost of constructing the by-pass pipes would be high. Beyond the cost of acquiring easements, adjacent development would make it difficult to construct by-pass pipes without impacting structures including homes and businesses. Condemning structures would further add to the cost of the by-pass alternative. As discussed with the Raised Bank Alternative, pursuant to Council Policy 800-14, this alternative would compete with other CIP projects for funding and implementation. Construction could, therefore, be delayed indefinitely until funding is available, or never occur because the by-pass structures would not be approved as a CIP project.

In addition, this alternative would not be effective in the long-term because accumulation of sediment in the main channel would likely eventually offset the additional capacity created by the by pass. Given these cost factors, accommodating flood waters with by-pass pipes is considered infeasible. Lastly, by-pass pipes could physically impact or burden adjacent property owners related to construction of pipelines and/or easement acquisition.

Widened Channel Alternative

Under this alternative, the configuration of channels would be modified to increase the volume capacity of the channel. The goal of increasing the channel volume would be to enable vegetation to exist in the channel without causing flooding. Channel-specific hydraulic analysis would be undertaken to determine the additional width needed. In most cases, the capacity would likely be increased by widening the cross-section of the channel. Increasing the depth of the channel would also increase capacity but is expected to be difficult to achieve in most cases due to constraints imposed by the slope limitations on the channel banks and maintaining downstream gradients.

Allowing vegetation to remain in the widened channels would reduce the impact of maintenance on water quality and solid waste. The vegetation remaining within the channels would allow the natural process of urban pollutant control to continue. This alternative would also reduce the long-term impact on solid waste disposal. Although the initial widening effort would generate plant material requiring off-site disposal, subsequent clearing and related disposal would be reduced in the long-term.

Although this alternative would allow vegetation to remain over some portion of the widened channels without periodic maintenance, the initial widening would impact the same amount of vegetation as the full maintenance approach. However, since a portion of the vegetation within a widened channel would be allowed to remain during future maintenance, the long-term impact of maintenance on wetland habitat would be reduced. Also, as with the proposed project, the actions within channels would not result in the permanent loss of the channels themselves.

The City considers this to be an infeasible alternative to the proposed Master Program for social and economic reasons. With respect to economic feasibility, the cost of designing and widening existing drainage facilities would be substantial. In addition, the cost would be increased by the need to acquire private property to accommodate widening. As discussed with the Raised Bank

Alternative, pursuant to Council Policy 800-14, this alternative would compete with other CIP projects for funding and implementation. Construction could, therefore, be delayed indefinitely until funding is available, or never occur because the widening would not be approved as a CIP project. With respect to social issues, as with the other alternatives, widening of the channels would impact adjacent homes as businesses through the loss of property and/or the need to complete relocation.

Off-site Runoff Reduction Alternative

The Off-site Runoff Reduction Alternative would involve implementing low impact development (LID) Best Management Practices and Integrated Management Practices (BMPs/IMPs) within the affected watersheds to substantially reduce associated runoff generation and flows into storm water facilities included in the Master Program. The use of LID BMPs/IMPs could involve: (1) reducing impervious surfaces through the use of vegetation or permeable pavement, and reducing impervious surfaces and compaction in landscaped and open space areas; (2) directing runoff into pervious areas (e.g., landscaping); (3) directing runoff into engineered IMP sites (e.g., bio-retention facilities, planter boxes, cisterns or infiltration facilities); and/or (4) creating self-contained/self-treating drainage management areas such as green roofs or basins.

This alternative would, by nature, be implemented in areas outside the storm water facilities. The Off-site Runoff Reduction Alternative would target retrofitting LID BMPs/IMPs in applicable existing developed areas because sites with new development are already subject to storm water standards requiring the use of LID BMPs/IMPs.

To the extent this alternative would be able to minimize or eliminate the need for removing vegetation and sediment to improve floodwater conveyance, this alternative would reduce impacts of the proposed Master Program related to aesthetics/neighborhood character, biological resources, cultural resources and water quality. Cumulative aesthetic/neighborhood character impacts would be lessened by reducing the number of trees that require removal to improve conveyance of flood water. Similarly, the ability to leave wetland vegetation within the storm water facilities, due to reductions in storm runoff, would proportionately reduce impacts to biological resources related to the proposed Master Program. Lastly, the LID BMPs/IMPs would reduce the urban pollutants reaching the storm water facilities, and minimize the impacts of storm water facility maintenance on the ability of the storm water facilities to remove water-born pollutants.

Although the Off-site Runoff Reduction Alternative could potentially result in fewer impacts to aesthetic/neighborhood character and biological resources, it was rejected by the City as financially infeasible and posing a burden on adjacent property owners. The cost of constructing and maintaining adequate LID BMPs/IMPs to generate a meaningful reduction in runoff, while unknown, would likely be high due to the anticipated extensive nature of BMPs/IMPs that would be required. In addition to construction and long-term maintenance costs, the City would incur additional costs related to acquiring private property/easements for the placement of BMPs/IMPs. In addition to cost and acquisition issues, the timing associated with a substantial reduction of off-site surface water generation is problematic. Although future development projects are required to incorporate LID concepts, the rate at which this occurs is likely to be

extremely protracted, given today's economic conditions. Thus, it may take decades for enough new development to incorporate LID concepts to result in a substantial reduction in storm water runoff and the associated maintenance activities. Based on these considerations, the Off-site Runoff Reduction Alternative is considered infeasible as a stand-alone alternative to the proposed Master Program.

ES-5 AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

As described in Secion 3.5, a number of concerns were expressed by the public during the public review period for the original Draft PEIR. These concerns were primarily related to water quality impacts of maintenance, the need for more information regarding hydrologic and hydraulic conditions within individual segments, maintenance proposed within open space, and the need to consider other alternatives to the proposed maintenance. Although this Recirculated Draft PEIR includes additional information related to each of these areas, it is anticipated that members of the public may still have concerns in these areas.

Although the Master Program has been amended to require hydrology and hydraulic studies be completed for each of the individual storm water facilities at the time maintenance is proposed, some of the members of the public are expected to insist that hydrology and hydraulic studies be completed for all of the storm water facilities before adoption of the Master Program. In addition, members of the public are expected to insist that detailed maintenance plans be identified prior to approval of the Master Program and PEIR to assure that the impacts are adequately anticipated.

In response to concerns expressed regarding maintenance in open space, the City's Storm Water Division (SWD) removed many of the storm water facilities within open space where maintenance was not likely to be required. As a result, the number of miles of storm water facilities included in the Master Program was reduced from 50 to 32 miles. In addition, SWD has determined that the estimates of disturbance width in the original PEIR was over conservative. With the reduction in the number of storm water facilities combined with the reduced disturbance width assumptions, the impact to wetlands within the City's jurisdiction would be reduced by approximately 43 percent (30 acres) when compared to the original Master Program. Nevertheless, some members of the public are expected to request further reductions in the number of facilities to be maintained under the Master Program.

Concerns are likely to continue to be expressed regarding alternatives to the proposed maintenance. Although the City's DSD staff believe that a reasonable range of alternatives is presented in this PEIR, members of the public are expected to contend that other alternatives exist to the proposed project.

Water quality is also expected to continue to be a concern of the public. Although the water quality discussion has been expanded in the PEIR, members of the public are expected to take the position that the water quality impacts are understated and that additional mitigation should be proposed.

In addition, the public has expressed a desire to have more involvement in reviewing annual maintenance proposals which are required as part of the Master Program. In meeting with these individuals and groups, the City has cited specific CEQA statues and guidelines and San Diego

Municipal Code regulations to support their determination that annual maintenance activities that are explicitly identified in the Master Program and adequately addressed in the Final PEIR can be approved in reliance upon the certified Final PEIR. As described in Section 1.6 of this PEIR, pursuant to Section 15168(c) of the CEQA Guidelines, the certified Final PEIR would satisfy CEQA requirements for subsequent maintenance activities if no new effects could occur, no new mitigation measures would be required, and all feasible mitigation measures or alternatives identified in the PEIR will be implemented. Despite the legal grounds for maintaining that no new environmental document is required for annual maintenance plans covered within the scope of the Master Program and adequately described by the PEIR, members of the public are expected to push for such review regardless of the provisions of CEQA.

Table ES-1
IMPACTS AND PROPOSED MITIGATION

IMPACT	MITIGATION MEASURES	ANALYSIS OF SIGNIFICANCE AFTER MITIGATION
AESTHETICS/NEIGHBORHOOD CHARACTER (Cumulative)		
Removal of vegetation, including mature trees along natural drainage courses, would diminish aesthetic/neighborhood character.	No mitigation measures are available to overcome the aesthetic/neighborhood character impacts of storm water facility maintenance when combined with other development within the City of San Diego.	Significant (Cumulative)
AIR QUALITY (Cumulative)		
Criteria pollutants released by equipment associated with maintenance would contribute to air pollution already occurring with the San Diego Air Basin.	No project-specific mitigation measures are available to overcome the contribution of criteria pollutants from maintenance on the San Diego Air Basin.	Significant (Cumulative)
BIOLOGICAL RESOURCES (Direct, Indirect and Cumulative)		
Loss of significant vegetation communities consisting of up to 41.62 acres of wetland vegetation ranging from mature southern willow scrub to freshwater marsh; 37.08 acres of unvegetated channel bottom; and 4.9 acres of sensitive upland vegetation communities including Diegan coastal sage scrub, southern mixed chaparral and non-native grassland.	***Mitigation Measure 4.3.1*** requires an IBA be prepared based on the IMP prior to commencing maintenance to quantify the impacts to biological resources and identify required mitigation from the MMRP, prior to commencing maintenance. ***Mitigation Measure 4.3.2*** prohibits initiation of maintenance activities before the City's Assistant Deputy Director (ADD) Environmental Designee and state and federal agencies with jurisdiction over maintenance activities have approved the IMPs and IBAs including required mitigation for each of the proposed activities. ***Mitigation Measure 4.3.3*** prohibits any maintenance activities until the City's ADD Environmental Designee and Mitigation Monitoring Coordinator (MMC) have approved the qualifications of the biologists who will monitor maintenance activities which may impact sensitive biological resources.	Not Significant (Direct), Significant (Cumulative)

Table ES-1 (cont.)
IMPACTS AND PROPOSED MITIGATION

IMPACT	MITIGATION MEASURES	ANALYSIS OF SIGNIFICANCE AFTER MITIGATION
BIOLOGICAL RESOURCES (Direct, Indirect and Cumulative) (cont.)		
	Mitigation Measure 4.3.4 requires creation of a mitigation account to ensure sufficient funds to implement all biological mitigation required for the proposed maintenance activities. ***Mitigation Measure 4.3.5*** requires evidence of compliance with other permitting authorities, if applicable, before maintenance begins. ***Mitigation Measure 4.3.6*** requires a pre-maintenance meeting be held with the maintenance workers and the monitoring biologist to review mitigation measures included in the IBA. ***Mitigation Measure 4.3.7*** requires the monitoring biologist to submit a letter report within three months of the end of maintenance describing the monitoring activities and any remedial measures taken to mitigate biological impacts associated with each maintenance activity. Within 90 days of receiving comments on the draft monitoring report, one copy of the final monitoring report shall be submitted to the MMC. ***Mitigation Measure 4.3.8*** requires the monitoring biologist to submit an annual summary of the monitoring activities and any remedial measures taken to minimize biological impacts within six months of the end of the annual storm water facility maintenance program. ***Mitigation Measure 4.3.9*** requires mitigation for wetland impacts to occur within the same watershed as the impact, unless no suitable location exists within the watershed. Mitigation sites are chosen based on best mitigation value. In addition, mitigation plans must be prepared prior to any	

Table ES-1 (cont.)
IMPACTS AND PROPOSED MITIGATION

IMPACT	MITIGATION MEASURES	ANALYSIS OF SIGNIFICANCE AFTER MITIGATION
BIOLOGICAL RESOURCES (Direct, Indirect and Cumulative) (cont.)		
	maintenance activity that could impact significant biological resources. These plans must identify success criteria and include a maintenance and monitoring program to assure that the success criteria are met. Mitigation will be accomplished through one or a combination of the following methods: enhancement, restoration, creation, or mitigation credit acquisition. Specific mitigation ratios must be in accordance with Table 4.3-10 of PEIR unless different mitigation ratios are required by state or federal agencies with jurisdiction over the impacted wetlands. In this event, the mitigation ratios required by these agencies will supersede, and not be in addition to, the ratios defined in Table 4.3-10. ***Mitigation Measure 4.3.10*** requires a wetland mitigation plan be prepared in accordance with the Conceptual Wetland Restoration Plan contained in Appendix H of the Biological Technical Report, included as Appendix D.3 of the PEIR. ***Mitigation Measure 4.3.11*** requires impacts to upland vegetation be compensated through payment into the City's Habitat Acquisition Fund, habitat preservation, or purchase of suitable mitigation credits. Specific mitigation ratios must be in accordance with Table 4.3-11 of the PEIR. The upland mitigation must occur within six months of the date the related maintenance has been completed.	

Table ES-1 (cont.)
IMPACTS AND PROPOSED MITIGATION

IMPACT	MITIGATION MEASURES	ANALYSIS OF SIGNIFICANCE AFTER MITIGATION
BIOLOGICAL RESOURCES (Direct, Indirect and Cumulative) (cont.)		
	Mitigation Measure 4.3.13 requires the monitoring biologist to confirm that mitigation actions (e.g., sensitive resource fencing, noise attenuation measures and equipment setbacks) have been adequately implemented before maintenance begins and monitor activities, when required. ***Mitigation Measure 4.3.14:*** requires the City to conduct an environmental review of the proposed mitigation plan in accordance with CEQA and implement any mitigation measures needed to reduce impacts on biological resources resulting from off-site mitigation.	
Loss of habitat for sensitive birds including the coastal California gnatcatchers, least Bell's vireo, or raptors.	***Mitigation 4.3.12*** requires impacted, occupied coastal California gnatcatcher habitat be compensated through acquisition of suitable habitat or mitigation credits at a ratio of 1:1. The mitigation must take place within the MHPA and must be accomplished within six months of the date maintenance is completed.	Not Significant (Direct), Significant (Cumulative)
Loss of habitat for sensitive fish species.	***Mitigation Measure 4.3.23*** requires avoidance or minimization measures when maintenance activities occur at known localities for listed fish species or within suitable habitat for other highly sensitive aquatic species (i.e., southwestern pond turtle).	Not Significant (Direct), Significant (Cumulative)
Loss of sensitive plant species with potential to occur.	***Mitigation Measure 4.3.13*** requires delineation and fencing of areas supporting listed and/or narrow endemic plants which can be avoided during maintenance.	Not Significant (Direct), Significant (Cumulative)

Table ES-1 (cont.)
IMPACTS AND PROPOSED MITIGATION

IMPACT	MITIGATION MEASURES	ANALYSIS OF SIGNIFICANCE AFTER MITIGATION
BIOLOGICAL RESOURCES (Direct, Indirect and Cumulative) (cont.)		
	Mitigation Measure 4.3.15 requires impacts to listed or endemic sensitive plant species to be offset through implementation of one or combination of: salvage and relocation; seed collection and replanting off site; and/or preservation of off-site populations. ***Mitigation Measure 4.3.24*** requires the boundaries of listed and/or narrow endemic plants, to be clearly delineated with flagging or temporary fencing that must remain in place for the duration of the activity.	
Loss of vegetation could increase downstream urban pollutants due to the loss of natural removal through root systems of in-channel vegetation.	Implementation of Mitigation Measures 4.8.1 through 4.8.3 would require implementation of mitigation measures, protocols and/or BMPs to reduce the transport of sediment and urban pollutants into downstream habitat areas.	Not Significant(Indirect), Significant (Cumulative)
Disruption of breeding activities of sensitive birds including the coastal California gnatcatchers, least Bell's vireo, or raptors.	***Mitigation Measure 4.3.16*** requires specific distance setbacks for maintenance activities from habitat and/or nests associated with sensitive animals. ***Mitigation Measure 4.3.17*** restricts clearing, grubbing, or grading during the breeding season of sensitive bird species. ***Mitigation Measure 4.3.18*** requires that a qualified biologist submit evidence to the ADD and any applicable resource agency which demonstrates whether or not sensitive breeding birds could be present, triggering the requirement for implementation of mitigation measure 4.3-20. ***Mitigation Measure 4.3.19*** requires the presence of sensitive birds be assumed if suitable habitat may be affected by maintenance noise but specific surveys are not conducted. In this event, the City would comply with Mitigation Measure 4.3-20.	Not Significant (Indirect), Significant (Cumulative)

Table ES-1 (cont.)
IMPACTS AND PROPOSED MITIGATION

IMPACT	MITIGATION MEASURES	ANALYSIS OF SIGNIFICANCE AFTER MITIGATION
BIOLOGICAL RESOURCES (Direct, Indirect and Cumulative) (cont.)		
	Mitigation Measure 4.3.20 specifies that, if no surveys are completed and no sound attenuation devices are installed, maintenance activities that would generate more than 60dB(A) L_{eq} within the habitat requiring protection shall cease for the duration of the breeding season of the appropriate species and a qualified biologist shall establish a limit of work. ***Mitigation Measure 4.3.21*** requires a pre-maintenance survey for raptor nests if maintenance occurs during the raptor breeding season (January 15 to August 31). If active raptor nests are found, maintenance is prohibited within distances which are specific to the affected raptor until any fledglings have left the nest. ***Mitigation Measure 4.3.22*** requires trees and/or grasslands supporting active raptor nests not be removed until after the breeding season or until the young have fledged. ***Mitigation Measure 4.3.25*** precludes maintenance within or adjacent to avian nesting habitat during breeding season (January 15 to August 31) unless postponing maintenance would result in a threat to human life or property. Implementation of Mitigation Measures 4.1-2 through 4.1-8 would also reduce indirect impacts to sensitive birds.	

Table ES-1 (cont.)
IMPACTS AND PROPOSED MITIGATION

IMPACT	MITIGATION MEASURES	ANALYSIS OF SIGNIFICANCE AFTER MITIGATION
GHG Emissions (Cumulative)		
GHG emissions released by equipment in the course of maintenance would combine with GHG emission from other sources in the San Diego Air Basin.	No project-specific mitigation measures are available to overcome the contribution of GHG emissions from maintenance on the San Diego Air Basin and global climate.	Significant (Cumulative)
HISTORICAL RESOURCES (Direct and Cumulative)		
Potential loss of unknown historical resources and previously identified historical resources.	***Mitigation Measure 4.4.1*** requires an Individual Historical Assessment (IHA) prior to any maintenance activity for any maintenance area determined to have a moderate to high potential for the occurrence of important historical resources. If such a potential exists, an IHA would be prepared to determine if significant historic resources could be affected, whether the impacts are covered in the PEIR, and identify required preservation or data recovery pursuant to the MMRP. ***Mitigation Measure 4.4.2*** requires preparation of a phased research design and data recovery program (up to 15 percent sample) for any significant historical resources which may be impacted by maintenance, and summarized in a final results report. ***Mitigation Measure 4.4.3*** requires monitoring and implementation of historical protection or mitigation measures set forth in the IHA for specific maintenance activities.	Not Significant (Direct), Significant (Cumulative)

Table ES-1 (cont.)
IMPACTS AND PROPOSED MITIGATION

IMPACT	MITIGATION MEASURES	ANALYSIS OF SIGNIFICANCE AFTER MITIGATION
LAND USE (Direct)		
Impacts to MSCP-protected species	***Mitigation Measure 4.1.1*** requires verification that all MHPA boundaries and limits of work have been delineated on all maintenance documents. ***Mitigation Measure 4.1.2*** requires a qualified biologist to survey areas suspected to serve as habitat (based on historical records or site conditions) for state- or federally-listed sensitive bird species~~s covered by the MSCP~~. ***Mitigation Measure 4.1.3*** requires, if a listed species is located within 500 feet of a proposed maintenance activity and maintenance would occur during the associated breeding season, an analysis of the noise generated by maintenance activities be made to identify the location of the 60 dB(A) L_{eq} noise contour and identify measures to be undertaken during maintenance to reduce noise levels. ***Mitigation Measure 4.1.4*** requires the Project Biologist to determine if maintenance has the potential to impact breeding activities of listed species. If impacts could occur, maintenance would be restricted during the breeding season unless maintenance is required to protect life and property.	Not Significant (Direct)

Table ES-1 (cont.)
IMPACTS AND PROPOSED MITIGATION

IMPACT	MITIGATION MEASURES	ANALYSIS OF SIGNIFICANCE AFTER MITIGATION
LAND USE (Direct) (cont.)		
	Mitigation Measure 4.1.5 requires, if maintenance cannot be avoided during the breeding season for a listed bird, the nearby breeding bird activities will be monitored by a qualified acoustician and the Project Biologist to determine the effectiveness of noise attenuation measures. If the noise attenuation is determined to be inadequate, the associated maintenance activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season of the subject species. ***Mitigation Measure 4.1.6*** requires a pre-maintenance meeting where the Project Biologist ~~to~~ shall discuss the sensitive nature of the adjacent habitat with the crew and subcontractor. The area of maintenance would be clearly delineated before the meeting. ***Mitigation Measure 4.1.7*** requires maintenance plans be designed to avoid the use of invasive plants, control lighting, ~~and~~ manage trash and comply with policies in the City's Subarea Plan related to maintenance of roads and utilities. ***Mitigation Measure 4.1.8*** requires the MHPA boundaries and measures to protect coastal California gnatcatchers be shown on the maintenance plans.	

Table ES-1 (cont.)
IMPACTS AND PROPOSED MITIGATION

IMPACT	MITIGATION MEASURES	ANALYSIS OF SIGNIFICANCE AFTER MITIGATION
LAND USE (Direct) (cont.)		
Potential loss of significant unknown historical resources and previously identified historical resources.	Implementation of historical mitigation would reduce the regional impact by preserving and/or mitigating significant historical resources impacted by maintenance in accordance with the Historical Resources Guidelines.	Not Significant (Direct)
PALEONTOLOGICAL RESOURCES (Direct and Cumulative)		
Potential impacts to fossil-bearing geologic formations through constructing new or reconstructing existing access roads.	***Mitigation Measure 4.7.1*** requires monitoring during maintenance activities where the potential exists for subsurface paleontological resources. The monitoring paleontologist shall have the authority to redirect maintenance away from any subsurface resources which are encountered to allow recovery of important scientific information associated with those resources. Draft and final reports will be submitted to summarize the results of any recovery programs.	Not Significant (Direct), Significant (Cumulative)
SOLID WASTE DISPOSAL (Cumulative)		
Diminished landfill capacity resulting from disposal of dredge spoil, vegetation and rubbish produced by maintenance activities.	Although the Master Program contains specific maintenance protocols aimed at reducing the amount of material transported to local landfills, the City cannot assure that the majority of this material would be recycled and/or reused.	Significant (Cumulative)

Table ES-1 (cont.)
IMPACTS AND PROPOSED MITIGATION

IMPACT	MITIGATION MEASURES	ANALYSIS OF SIGNIFICANCE AFTER MITIGATION
WATER QUALITY (Direct and Cumulative)		
Clearing vegetation could substantially reduce the removal of urban runoff pollutants that occurs in earthen channels from infiltration, sedimentation and root absorption.	***Mitigation Measure 4.8.1*** requires a qualified water quality specialist to prepare an Individual Water Quality Assessment (IWQA) for the IMP. Mitigation measures would be required to be incorporated into IMPs for specific pollutants when the existing levels of those pollutants exceed, or are within 25 percent of, standards established in the San Diego Basin Plan. ***Mitigation Measure 4.8.2*** prohibits maintenance activities before the ADD Environmental Designee and state and federal agencies with jurisdiction over maintenance activities have approved the IMPs and IWQAs as well as confirming that mitigation measures, BMPs and protocols have been incorporated into the IMP, as appropriate. ***Mitigation Measure 4.8.3*** requires a pre-maintenance meeting whenever the IHHA indicates significant water quality impacts may occur. At this meeting, the water quality specialist will identify and discuss Table 4.8-8 required mitigation measures, protocols and BMPs that must be carried out during maintenance.	Not Significant (Direct), Significant (Cumulative)

Table ES-2
COMPARISON OF ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT WITH PROJECT ALTERNATIVES
(Direct/Cumulative)

Environmental Subject	Environmental Issue	Proposed Project	No Project: No Maintenance	No Project: Maintenance With Separate Permits	Raised Bank	Channel By-pass	Widened Channel	Reduced Off-site Runoff
Aesthetics/ Neighborhood Character	Substantially alter the visual character	NS/SNM	NS/NS	NS/SNM	SNM- /SNM-	NS/NS	SM-/NS	NS/NS
	Substantial loss of mature stand of trees	NS/SNM	NS/NS	NS/SNM	NS- /SNM-	NS/NS	SM-/NS	NS/NS
Air Quality	Substantial increase in criteria pollutants	NS/SNM	NS/NS	NS/SNM	NS/ SNM=	NS/ SNM=	NS/ SNM=	NS/NS
	Substantial increase in greenhouse gas emissions	NS/SNM	NS/NS	NS/SNM	NS/ SNM=	NS/ SNM=	NS/ SNM=	NS/NS

Table ES-2 (cont.)
COMPARISON OF ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT WITH PROJECT ALTERNATIVES
(Direct/Cumulative)

Environmental Subject	Environmental Issue	Proposed Project	No Project: No Maintenance	No Project: Maintenance With Separate Permits	Raised Bank	Channel By-pass	Widened Channel	Reduced Off-site Runoff
Biological Resources	Substantial impact to sensitive habitat	SM/SNM	NS/NS	SM/SNM	SM-/SNM-	SM/ SNM-	SM-/NS	SM-/NS
	Substantial reduction in diversity or number of sensitive plant or animals	SM/SNM	NS/NS	SM/SNM	SM-/SNM-	SM-/SNM-	SM-/NS	SM-/NS
	Substantial interference with wildlife movement	NS/SNM	NS/NS	NS/SNM	NS/ SNM-	NS/ SNM-	NS/NS	SM-/NS
	Substantially conflict with ESL, MSCP or other approved habitat conservation plan	NS/NS	NS/NS	NS/NS	NS/NS	NS/NS	NS/NS	SM/NS

Table ES-2 (cont.)
COMPARISON OF ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT WITH PROJECT ALTERNATIVES
(Direct/Cumulative)

Environmental Subject	Environmental Issue	Proposed Project	No Project: No Maintenance	No Project: Maintenance With Separate Permits	Raised Bank	Channel By-pass	Widened Channel	Reduced Off-site Runoff
Historical Resources	Substantial impact on historical resources	SM/SNM	NS/NS	SM/SNM	SM+/ SNM+	SM+/ SNM+	SM+/ SNM+	NS/NS
	Substantial impact on resources of Native American value	SM/ SNM	NS/NS	SM/SNM	SM+/ SNM+	SM+/ SNM+	SM+/ SNM+	NS/NS
Hydrology	Substantial increase in impervious surfaces or a substantial alteration of on and off-site drainage patterns	NS/NS	NS/NS	NS/NS	NS/NS	NS/NS	NS/NS	NS/NS

Table ES-2 (cont.)
COMPARISON OF ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT WITH PROJECT ALTERNATIVES
(Direct/Cumulative)

Environmental Subject	Environmental Issue	Proposed Project	No Project: No Maintenance	No Project: Maintenance With Separate Permits	Raised Bank	Channel By-pass	Widened Channel	Reduced Off-site Runoff
Land Use	Consistency with Environmental Policy Goals and Objectives	NS/NS	NS/NS	NS/NS	NS/NS	NS/NS	SM/NS	NS/NS
	Consistency with City regional or environmental plans	SM/NS	NS/NS	SM/NS	SM-/NS	NS/NS	SM-/NS	NS/NS
	Consistency with other agency regional or environmental plans	NS/NS	NS/NS	NS/NS	NS/NS	NS/NS	NS/NS	NS/NS
	Compatibility with adjacent land use	NS/NS	NS/NS	NS/NS	NS/NS	NS/NS	SNM/ NS	SM/NS
Noise	Create noise levels that would exceed the City's Municipal Code	NS/NS	NS/NS	NS/NS	NS/NS	NS/NS	NS/NS	NS/NS

Table ES-2 (cont.)
COMPARISON OF ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT WITH PROJECT ALTERNATIVES
(Direct/Cumulative)

Environmental Subject	Environmental Issue	Proposed Project	No Project: No Maintenance	No Project: Maintenance With Separate Permits	Raised Bank	Channel By-pass	Widened Channel	Reduced Off-site Runoff
Paleontological Resources	Substantial impact on paleontological resources	SM/ SNM	NS/NS	SM/SNM	SM+/ SNM+	SM+/ SNM+	SM+/ SNM+	NS/NS
Solid Waste Disposal	Substantial impact to landfill capacity	NS/SNM	NS/NS	NS/SNM	NS/ SNM-	NS/ SNM-	NS/ SNM-	NS/NS
Water Quality	Substantial increase in pollutant discharges, during or following maintenance, to receiving waters	SM/SNM	NS/NS	SM/SNM	NS/NS	NS/NS	SM- /SNM-	NS/NS

NS: Not significant
SM: Significant but mitigable
SNM: Significant and not mitigable
-:Impact severity reduced relative to the proposed project
+: Impact severity increased relative to the proposed project
=: Impact severity the same as the proposed project

CHAPTER 1.0

INTRODUCTION

CHAPTER 1.0 – INTRODUCTION

This Recirculated Program Environmental Impact Report (PEIR) addresses the potential environmental effects of maintenance activities associated with the proposed Master Storm Water System Maintenance Program (Master Program). This document addresses modifications to the Master Program which were made subsequent to preparation of the Final PEIR (referred to as the "original" PEIR) for this project, dated March 17, 2010. This Recirculated PEIR also includes additional information that has become available since the public review of the original PEIR. Most notably, this Recirculated PEIR includes additional information on water quality effects which are derived from an analysis commissioned by the City after public review of the original PEIR. A more detailed discussion of these changes is contained in Subchapter 3.5, History of the Project.

Section 15088.5(a) of the CEQA Guidelines requires an EIR be recirculated for an additional public review when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review, but before certification. Information, resulting in the need to recirculate an EIR can include changes in the project or environmental setting as well as additional data or other information.

Subsequent to the completion of the public review for the original PEIR, the City modified the Master Program in response to comments received during public review of the original PEIR. As discussed in Subchapter 3.5, History of the Project, the City has eliminated many of the storm water facilities located in open space that were included in the original Master Program. As a result, the number of miles of storm water facilities in the current Master Program has been reduced from approximately 50 to 32 miles. The revised Master Program is included in Appendix B of this PEIR. In addition, the City directed a specialist in the field of water quality (Weston Solutions) to conduct a more detailed analysis of the potential effects of storm water maintenance on water quality to respond to concerns expressed during the public review period for the original PEIR. This water quality analysis is included in Appendix F of this PEIR.

In light of the changes to the Master Program and the additional water quality analysis, the City has modified the original PEIR and is recirculating it for an additional 45 days. Although not required by CEQA, the City has included the responses to the comments received during the public review of the original PEIR to make this information readily available during the review of the PEIR. These comments and corresponding responses are located in Appendix A.2 of the PEIR.

In accordance with Section 15088.5(f)(1), the City is requiring reviewers to submit new comments on the Recirculated PEIR. As the comments and associated responses to the original PEIR are included in Appendix A.2, the Final Recirculated PEIR will only include responses to comments submitted during the public review period for the Recirculated PEIR.

As the City would be responsible for approving the Master Program, the City is acting as the Lead Agency in accordance with Section 15050(a) of the California Environmental Quality Act (CEQA) Guidelines. The City's Storm Water Division (SWD) would be responsible for carrying out subsequent maintenance activities pursuant to the Master Program.

1.1 THE PROPOSED PROJECT

The primary objectives of the Master Program include:

- Fulfill the mandate of Section 26.1 of the San Diego City Charter to provide essential public works and public health services by maintaining the storm water conveyance system for the purpose of reducing flood risk;
- Develop a comprehensive program that will govern the future maintenance of the City's storm water system in an efficient, economic, environmentally and aesthetically acceptable manner for the protection of property and life in accordance with Council Policy 800-04;
- Ensure implementation of Best Management Practices (BMPs) and maintenance protocols during maintenance activities to avoid and/or minimize effects to environmental resources, and incorporate the analysis of the operational and pollution prevention benefits of each proposed project; and
- Create an integrated comprehensive review process for annual maintenance activities that will facilitate authorizations from local, state and federal regulatory agencies.

The Master Program is limited to those storm water facilities that are maintained by the City's SWD of the Transportation and Storm Water Department (T&SWD). The storm water facilities to be maintained pursuant to the Master Program include open flood control channels (concrete and/or earthen) created specifically for the conveyance of storm water. Natural creeks and streams are also included in the storm water system when pro-active maintenance would be necessary to restore storm water conveyance capacities to prevent property damage and protect life during periods of high storm water runoff.

The nature of maintenance would be determined by the individual characteristics associated with each component of the storm water system. Activities would be limited to that determined to be necessary by facility-specific hydrology and hydraulic studies, and would involve removal of accumulated plants and/or sediment to restore as-built or natural conveyance capacities. Occasionally, maintenance would be done by hand but, in most cases, it would include various types of excavation equipment and transport trucks. Each maintenance activity would follow maintenance protocols identified in the Master Program designed to minimize and reduce effects to environmental resources.

The frequency of maintenance under the proposed Master Program would vary for each facility due to site characteristics (e.g. structure type and size, topography) as well as seasonal considerations (wet versus dry winters). It is anticipated that most facilities would not be maintained more frequently than once every three years on average. However, some facilities may need to be maintained on an annual basis. Individual maintenance activities would generally be completed within a matter of days.

1.2 PURPOSE OF EIR

This document has been prepared as a PEIR in accordance with Section 15168 (a)(3) of the State CEQA Guidelines. Under this section, a PEIR "may be prepared on a series of actions that can be

characterized as one large project and are related…in connection with the issuance of rules, regulations, plans or other general criteria to govern the continuing program." This PEIR has been prepared to achieve the following objectives:

- Inform decision-makers and the general public of the potential environmental consequences of the approval and implementation of the proposed Master Program;
- Identify project alternatives or mitigation measures that are available to avoid or reduce potential significant environmental impacts;
- Serve as a basis for environmental review of subsequent maintenance activities associated with maintaining the City's storm water system;
- Provide environmental review for responsible agencies with jurisdiction over maintenance activities within the City's storm water system; and
- Streamline the environmental review for subsequent maintenance activities to occur.

In order to meet the first objective, this PEIR establishes a series of baseline conditions for resources which may be impacted by maintenance activities. This effort included extensive biological and historical resource surveys of the storm water system. In addition, the City identified the probable extent and nature of activities which would be conducted under the Master Program. Based on this foundation, the PEIR identifies physical changes in the environment that may result from future maintenance activities (refer to Chapter 4.0). In addition, the PEIR identifies mitigation measures that are available to avoid or minimize effects that would result in significant environmental impacts. These mitigation measures are identified in Chapter 4.0 of the PEIR as well as the MMRP included in Chapter 11.0. These measures will be included in individual maintenance documents and permits to ensure implementation.

1.3 SCOPE OF PEIR

The scope of this PEIR was determined by an Initial Study completed by the City as well as comments received during a scoping meeting held on July 20, 2005 and in response to a Notice of Preparation (NOP) that was distributed on July 25, 2005. The Initial Study, NOP and the comment letters that were received are contained in Appendix A.1.

Based on this information, it was determined that implementation activities under the proposed Master Program might result in potentially significant adverse environmental impacts in the following areas:

- Aesthetics/Neighborhood Character;
- Air Quality;
- Biological Resources;
- GHG Emissions;
- Historical Resources;
- Hydrology;
- Land Use;
- Noise;

- Paleontological Resources;
- Solid Waste: and
- Water Quality.

1.4 ORGANIZATION OF EIR

The PEIR is comprised of a series of volumes. Volume 1 is commonly referred to as the PEIR because it contains all of the basic elements mandated by CEQA. As such, Volume 1 contains a complete description of the proposed Master Program, a comprehensive discussion of impacts and mitigations associated with implementation of the Master Program and a discussion of alternatives and cumulative impacts. Volume 1 also contains Appendix A.1, which documents comments and public involvement on the project. Volume 2 contains all of the technical reports and other documents that are referenced in the Draft PEIR. Volume 3 contains a full copy of the Master Program. Volume 4 contains a series of 11 x 17-inch maps illustrating the vegetation associated with each channel. Volume 5 contains the public comments received during the public review period for the original PEIR as well as itemized responses to each of the comments. Subsequent volumes in the Final EIR may be required to contain responses to those comments received on the Draft Recirculated PEIR

1.4.1 Volume 1 (PEIR)

This volume is organized into the following chapters:

- **Executive Summary,** provides a summary of the proposed Master Program along with a table identifying significant impacts, proposed mitigation measures, and impact rating after mitigation. This chapter also contains a summary of the project alternatives that have been considered and compares the potential impacts of the alternatives with those of the proposed Master Program.

- **Chapter 1.0, Introduction,** contains an overview of the proposed Master Program and the environmental review process.

- **Chapter 2.0, Environmental Setting,** contains a description of the physical environmental conditions in the vicinity of the project area from both a local and regional perspective. The environmental setting is intended, in part, to constitute the baseline physical conditions against which the PEIR determines whether an impact is significant.

- **Chapter 3.0, Project Description,** provides a detailed discussion of the proposed Master Program. It also includes a list of discretionary actions that may be required to implement the Master Program.

- **Chapter 4.0, Environmental Analysis,** provides a detailed evaluation of specific issue areas that may be associated with significant environmental impacts. The discussion of each issue begins with a discussion of the existing conditions related to the issue to serve as a basis of analysis. An evaluation of potential impacts follows. The discussion of impacts is preceded by a statement of specific thresholds that are used to determine if the

impacts would be significant. Once the impacts have been evaluated, specific mitigation measures are identified to avoid or reduce significant impacts.

- **Chapter 5.0, Growth Inducement,** evaluates the potential influence the proposed Master Program may have on growth within the region.

- **Chapter 6.0, Cumulative Effects,** identifies the impact of the proposed Master Program in combination with other planned and future development in the region.

- **Chapter 7.0, Alternatives,** provides a description of alternatives to the proposed Master Program.

- **Chapter 8.0, Effects Found Not to be Significant,** lists all of the issues determined in the Initial Study to be not significant, including a brief summary of the basis for this determination.

- **Chapter 9.0, Significant Irreversible Environmental Changes that Would Be Involved in the Proposed Action, Should It Be Implemented,** identifies all of the significant impacts related to the implementation of the proposed Master Program.

- **Chapter 10.0, Significant Unavoidable Adverse Impacts,** identifies environmental impacts which cannot be avoided.

- **Chapter 11.0, Mitigation Monitoring and Reporting Program,** identifies the mitigation measures from Chapter 4.0 which would reduce environmental impacts associated with implementation of the Master Program.

- **Chapter 12.0, References,** lists all of the documents which are cited in the PEIR but not included in the appendix volumes.

- **Chapter 13.0, Individuals and Agencies Consulted,** lists all of the individuals who are cited in the PEIR.

- **Chapter 14.0, Certification Page,** identifies all of the persons who were directly involved in the preparation of the PEIR.

- **Appendix A.1** includes the scoping letter, NOP, comments, and the scoping meeting minutes.

1.4.2 Volume 2 (Technical Reports)

Volume 2 contains the technical studies which were prepared in association with the PEIR including issues related to biology and historical resources. These reports are referenced throughout the PEIR. In an effort to reduce paper consumption, Volume 2 has been placed on the compact disk (CD) attached to the back cover of Volume 1.

1.4.3 Volume 3 (Master Program)

Volume 3 contains a complete copy of the proposed Master Program. In an effort to reduce paper consumption, Volume 3 has been placed on the CD attached to the back cover of Volume 1.

1.4.4 Volume 4 (Vegetation Maps)

Volume 4 contains the complete set of vegetation and wetland delineation maps for the facilities to be maintained under the proposed Master Program. In an effort to reduce paper consumption, Volume 4 has been placed on the CD attached to the back cover of Volume 1.

1.4.5 Volume 5 (Comments and Responses on Original PEIR)

Volume 5 contains the public comments received during the public review period for the original PEIR as well as itemized responses to each of the comments. In an effort to reduce paper consumption, Volume 5 has been placed on the CD attached to the back cover of Volume 1.

1.5 EIR REVIEW PROCESS

The EIR process occurs in two basic stages. The first stage is the Draft PEIR, which offers the public the opportunity to comment on the document, while the second stage is the Final PEIR, which provides the basis for approving the proposed Master Program. The Final PEIR process will include preparation of detailed responses to comments received during the public review period and modifications to the Draft PEIR which are warranted based on public comment. The culmination of this process is the public hearing where the City Council will determine whether to certify the Final PEIR as being complete in accordance with CEQA.

1.6 SUBSEQUENT ENVIRONMENTAL REVIEW

1.6.1 Master Program Maintenance

Environmental review for subsequent maintenance activities would be accomplished in accordance with CEQA Guidelines Sections 15168. In accordance with CEQA Guidelines Section 15168, the City will prepare an Initial Study. The results of the Initial Study will determine whether the PEIR adequately addresses the potential impacts associated with subsequent maintenance. The information contained in the Initial Study will be complemented by the SCR Checklist contained in Appendix J of the Master Program. This checklist is principally designed to confirm that all applicable mitigation measures have been included in subsequent maintenance activities.

Pursuant to Section 15168(c), and based on the results of the Initial Study and SCR Checklist, the certified PEIR would satisfy CEQA requirements for subsequent maintenance activities if, the following findings can be made:

- Pursuant to Section 15162, no new effects could occur or no new mitigation measures would be required (Section 15168(c)(2)); and
- All feasible mitigation measures or alternatives identified in the PEIR will be implemented (Section 15168(c)(3)).

Section 15162(a) of the CEQA Guidelines allows a previous EIR to be used in approving a subsequent activity addressed in the previous EIR as long as none of the following conditions apply:

- Substantial changes are proposed to the project which will require major revisions to the EIR due to the involvement of new significant impacts or a substantial increase in the severity of previously identified significant impacts (Section 15162(a)(1));
- Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions to the previous EIR due to the involvement of new significant impacts or a substantial increase in the severity of previously identified significant impacts (Section 15162(a)(2)); or
- New information of substantial importance is identified, which was not known and could not have been known at the time the original EIR was certified, <u>and</u> that information shows any of the following (Section 15162(a)(3)):
    - Project will have one or more significant effects not discussed in the original EIR (Section 15162(a)(3)(A));
    - Significant effects previously identified will be substantially more severe than identified in the previous EIR (Section 15162(a)(3)(B));
    - Mitigation measures or alternatives determined to be infeasible in the previous EIR would now be feasible, and the applicant declines to implement them (Section 15162(a)(3)(C)); or
    - Mitigation measures or alternatives, which are considerably different from those identified in the previous EIR, would substantially reduce one or more significant effects, and the applicant declines to implement them (Section 15162(a)(3)(D)).

In addition to the Initial Study and SCR Checklist, individual studies required to be completed prior to implementing any maintenance activity would be used to determine whether such activity is within the scope of the PEIR and whether the PEIR adequately describes the activity for CEQA purposes. The Master Program requires an IMP be prepared for each maintenance activity to define the specific maintenance to be carried out and provide a basis for quantifying impacts. An IHHA and an IWQA are required to be completed prior to finalizing each IMP to determine the amount of vegetation and sediment removal needed to improve the capacity of each storm water facility to transport flood waters and design measures needed to reduce water quality effects. In addition, an IBA would be conducted to quantify the maintenance-specific impacts to biological resources to determine if the biological assessment prepared for this PEIR adequately analyzed the impacts, and to verify the amount of mitigation required based on the ratios within the final MMRP. If sensitive species may be adversely affected by maintenance noise, an INA would be conducted to determine appropriate actions to avoid significant impacts to sensitive species. Lastly, an IHA would also be conducted to compare impacts analyzed in this PEIR and ensure mitigation measures from the MMRP are implemented for any historic resources that may be affected by maintenance.

Based on consideration of the Initial Study, the SCR Checklist and information contained in individual studies required by the Master Program, the City will determine which of the following CEQA process options would be appropriate for subsequent maintenance activities.

CEQA Option 1: If the documentation shows that the impacts associated with the proposed maintenance activity have been adequately addressed in the PEIR and mitigation will be carried out, as defined in the PEIR and MMRP, no further environmental review will be required, and the PEIR will be used to satisfy CEQA review requirements for the subsequent maintenance activity.

CEQA Option2: If the documentation shows that the individual maintenance activities are outside the scope of the Master Program and impacts are not adequately addressed and/or adequate mitigation is not proposed, the City will prepare a tiered or new Negative Declaration, Mitigated Negative Declaration, or EIR, pursuant to the CEQA Guidelines Section 15168(c)(1) and CEQA Section 21094.

CEQA Option 3: If the documentation shows that individual maintenance activities are not explicitly included in the PEIR and would require modifications to the Master Program, the City will prepare a Subsequent EIR or a Supplement or Addendum to the certified PEIR, pursuant to the CEQA Guidelines Sections 15168(c)(2) and 15162.

1.6.2 Emergency Maintenance

In the event of an emergency, the City may need to conduct maintenance activities which are not included in an annual maintenance plan. Under CEQA, "emergency" means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services.

When a significant storm event is considered imminent and conditions within a part of a storm water conveyance system present a clear and imminent danger requiring immediate action to avoid or minimize a threat of loss or damage to life, property or essential public services, the SWD may undertake maintenance on an emergency basis. If the emergency maintenance occurs in a storm water facility included in the Master Program and Final PEIR and cannot rely on the Statutory Exemption (CEQA Section 15269, Section 21080(b)(2),(3),(4) Public Resources Code) prepared for the initial emergency activities, then the Final PEIR may be used to process "after-the-fact" permits which may be required by the City, state or federal agencies for emergency maintenance. In this case, the mitigation measures identified in the PEIR will be applicable to the emergency maintenance activities.

CHAPTER 2.0

ENVIRONMENTAL SETTING

CHAPTER 2.0 – ENVIRONMENTAL SETTING

2.1 LOCATION

The proposed Master Program would include the maintenance of storm water facilities that are maintained by the SWD. The specific types of facilities that are maintained include natural and man-made channels. Figure 2-1, Regional Location Map, provides an overview of the total study area, indicating the general location of the major storm water channels and basins that would be included in the Master Program. Chapter 3.0, Project Description, provides a more detailed delineation of the location of each major storm water facility.

2.2 PHYSICAL CHARACTERISTICS

The City's storm water system is distributed over the 342.4 square-mile metropolitan area. As a result, the physical characteristics vary with the individual components of the storm water system. However, the general characteristics of the metropolitan area are described below.

The landform features are typical of the coastal plain area. The coastal plain slopes gently upwards to the eastern foothills and has eroded into separate mesas. The coastal plain has been incised by numerous side canyons flowing into major storm water facilities that generally flow westward towards the coast. These major facilities include Alvarado Creek, Chollas Creek, Rose Creek, Nestor Creek, San Diego River, Peñasquitos Creek, Otay River, and Tijuana River.

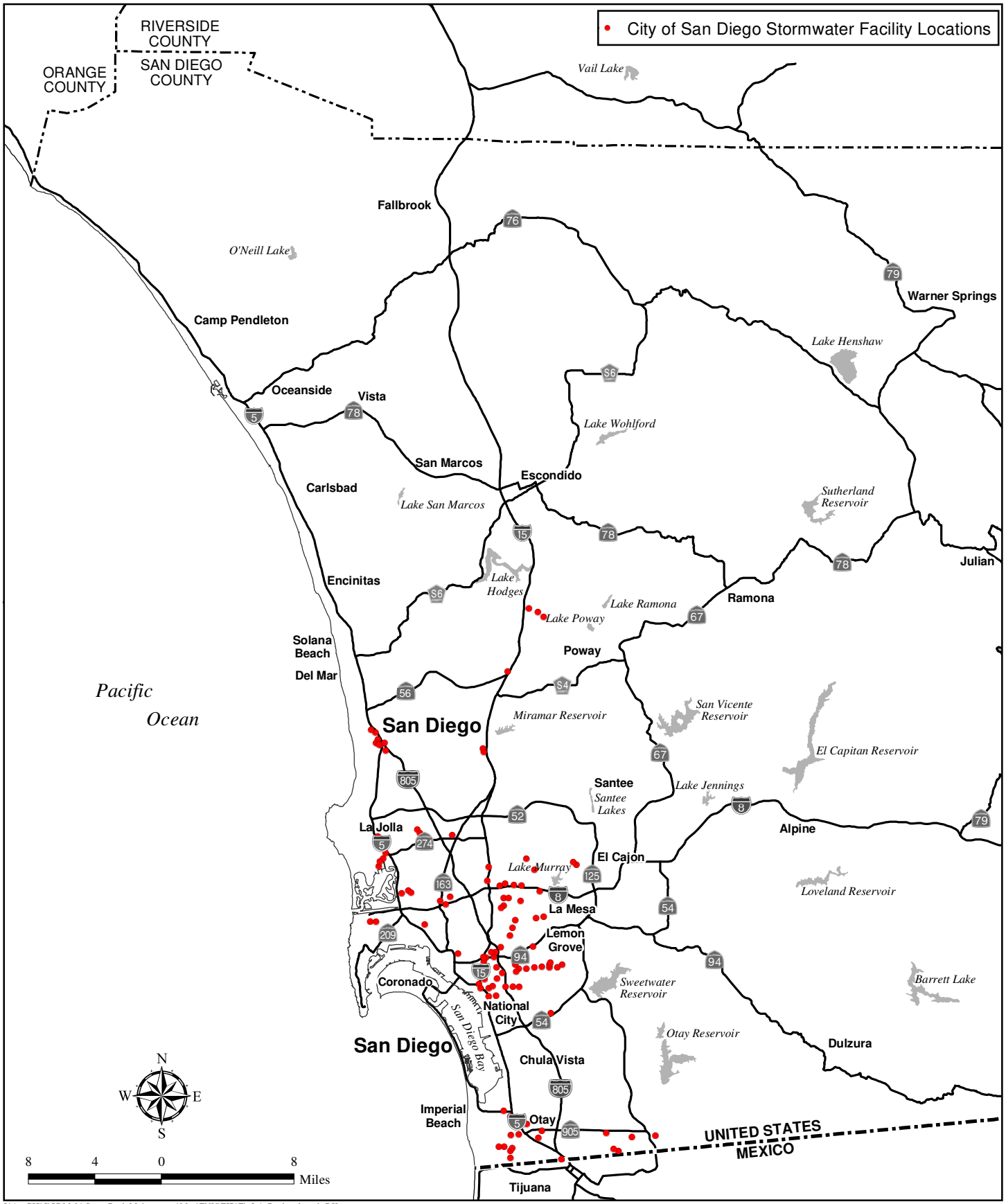
While east-west canyons and valleys divide the coastal plain into north-south components, three marine terraces separate the coastal plain into three platform mesas. Each terrace steps up in elevation towards the inland foothills. The La Jolla Terrace is closest to the coast at elevations of 50 to 70 feet above mean sea level (AMSL). Further east at elevations of 300 to 500 feet AMSL is the Linda Vista Terrace, which is the largest terrace and contains such "mesa" communities as Mira Mesa, Kearny Mesa, and Clairemont Mesa. The majority of the third terrace, the Poway Terrace, has been eroded away and is no longer a distinct landform.

The study area has a large diversity of vegetation and wildlife. Eleven wetland/riparian and seven upland vegetation communities occur within the study area. Wetland/riparian vegetation communities include southern riparian forest, southern sycamore riparian woodland, southern willow scrub, mule fat scrub, riparian scrub, freshwater marsh, cismontane alkali marsh, southern coastal salt marsh, coastal brackish marsh, disturbed wetland, and natural flood channel/open water/streambed. Upland vegetation communities include Diegan coastal sage scrub, southern mixed chaparral, non-native grassland, eucalyptus woodland, non-native vegetation/ornamental, disturbed habitat/ruderal, and developed land. A total of 96 animal species were observed/detected within the study area, including 12 butterflies (among other invertebrates), 1 amphibian, 3 reptiles, 72 birds, and 8 mammals.

2.3 APPLICABLE LAND USE PLANS

The following planning documents are applicable to the Master Program and are further discussed in Section 4.1, Land Use:

- City of San Diego General Plan (General Plan);
- City of San Diego Local Coastal Programs;
- Community, Land Use, Park/Preserve, and Other City Area Plans;
- City of San Diego Environmentally Sensitive Lands (ESL) Regulations;
- City of San Diego Historical Resources Regulations; and
- City of San Diego Multiple Species Conservation Program (MSCP) Subarea Plan.



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Regional Location Map

CITY OF SAN DIEGO MASTER STORMWATER SYSTEM MAINTENANCE PROGRAM

Figure 2-1

CHAPTER 3.0

PROJECT DESCRIPTION

CHAPTER 3.0 – PROJECT DESCRIPTION

3.1 BACKGROUND INFORMATION

3.1.1 History

During the early 20th century, prior to the establishment of major communities and development, the City relied on natural hydrology to provide conveyance of runoff. Proactive maintenance of storm water facilities began in 1933 under the Depression-era federal Works Project Administration. Facilities were manually cleaned using shovels and buckets. During World War II, the City witnessed exponential growth, including the construction of new streets and housing, and vast changes to its landscape to accommodate war-related facilities. These activities increased the amount of impervious surface, changed drainage flow patterns, and altered the natural balance between runoff and natural absorption. This, in turn, substantially increased the volume, frequency, and velocity of storm water flows. Although the City constructed storm water facilities, the pace of growth still dictated the need for improved capacity and preventative maintenance.

Mechanized maintenance was first introduced after World War II. The City acquired surplus military equipment, power shovels, and farm tractors. Maintenance consisted of grading channels and pushing the waste material to the sides in a practice called sidecasting. By the mid-1950s, the City implemented annual inspections, completed the first mapping of its storm water infrastructure, and adopted requirements for private construction of storm water infrastructure associated with new commercial and residential developments. In subsequent decades, the number of storm water structures increased, generally coinciding with population and economic growth trends. Likewise, the City modernized its equipment to include bulldozers, excavators, backhoes, and skid-steers, thus providing more efficient and flexible maintenance methods. The practice of sidecasting was also replaced with disposal of waste in landfills.

In the mid-1990s, after a statewide initiative to educate local governments about the environmental regulations associated with the maintenance of urban storm water infrastructure, the SWD embarked on its first application for a master storm water system maintenance permit. In 2002, this effort was postponed after the City and state and federal Resource Agencies recognized that a programmatic approach to storm water facilities maintenance would provide a more thorough and comprehensive analysis of the environmental impacts of storm water maintenance.

In 2008, the City of San Diego's storm drain system operations and maintenance functions were aligned with storm water pollution prevention functions (creating SWD) to realize efficiencies from integrating planning and implementation efforts. To facilitate this integration, SWD initiated the development of a strategic planning framework and asset management program in 2009. An objective in the asset management program is to establish a system and procedures to manage storm water infrastructure (including prioritization of maintenance work) that considers economic, social and environmental factors, including SWD's water quality-related goals. Specifically, SWD will use an evaluation process under the Master Program to identify and prioritize its channel maintenance work that considers both flood control and water quality costs and benefits.

3.1.2 Existing Storm Water System

The City's storm water system is composed of a variety of facilities which transport surface runoff to the Pacific Ocean or other receiving waters (e.g., lakes). The City's storm water system is described in City Council Policy 800-04. The City's Storm Water Standards Manual defines the Stormwater Conveyance System as "private and public drainage facilities by which storm water may be conveyed to Receiving Waters, such as: natural drainages, ditches, roads, streets, constructed channels, aqueducts, storm drains, pipes, street gutters, or catch basins."

Storm water runoff is typically related to high-flow rain events that are conveyed quickly through the system in a relatively short period of time. Urban runoff is typically related to urban sources, such as landscape irrigation, that is slowly, but constantly, conveyed through the storm water conveyance system during dry weather conditions. Both storm water and urban runoff primarily originate from impervious surfaces on private property and public roadways.

Storm water and urban runoff is collected by a series of storm water facilities which begin with street gutters which connect with storm drains which, in turn, connect with natural and constructed drainage channels which convey runoff to receiving waters. Typically, storm water and urban runoff are first collected by gutters located in the public-right-of way. Major development projects may tie directly into a public storm drain system via private drains and pipes on-site but the majority of land within the City simply drains to an adjacent gutter. Flows from gutters are carried downstream until runoff volumes warrant a curb inlet and undergrounding. At this point, runoff is collected by an inlet and enters a storm drain pipe (typically made of reinforced concrete pipe).

As the runoff moves down the storm water basin, more and more pipes connect and the system gradually gets larger to handle the additional water. Eventually, storm drain pipes and certain surface flows from the public right-of-way discharge directly into public or private open storm water channels. The discharge points within these facilities are commonly referred to as outfalls. Outfalls consist of a variety of structures designed to reduce the discharge velocities to minimize erosion. Typical erosion control features associated with outfalls include: revetments; rip rap or armored sides; headwalls and endwalls; flow/grade control and drop structures; and dissipation piles. Channels that have been modified to run underground or under roadways (via pipes or concrete structure), known as culverts eventually connect to an open channel downstream.

Most of the larger storm water channels are public while the smaller channels tend to be on private property. Many of the public storm water channels are improved, "as-built" or engineered, armored (trapezoidal concrete-lined bottom and sides). These facilities are specifically designed to convey flood water. However, other storm water facilities are natural drainage channels that carry runoff.

The SWD is responsible for maintaining a number of the larger storm water facilities located throughout the City of San Diego. Other facilities are the responsibility of other City departments. In accordance with Council Policy 800-04, SWD generally accepts responsibility for maintenance of public drainage facilities which are designed and constructed to City standards and located within a public street or drainage easement dedicated to the City.

3.2 OBJECTIVES OF PROGRAM

The objectives of the Master Program can be summarized as follows:

- Fulfill the mandate of Section 26.1 of the San Diego City Charter to provide essential public works and public health services by maintaining the storm water conveyance system for the purpose of reducing flood risk;
- Develop a comprehensive program that will govern the future maintenance of the City's storm water system in an efficient, economic, environmentally and aesthetically acceptable manner for the protection of property and life, in accordance with Council Policy 800-04;
- Ensure implementation of Best Management Practices (BMPs) and maintenance protocols during maintenance activities to avoid and/or minimize effects to environmental resources, and incorporate the analysis of the operational and pollution prevention benefits of each proposed project; and
- Create an integrated comprehensive review process for annual maintenance activities that will facilitate authorizations from local, state and federal regulatory agencies.

3.3 CHARACTERISTICS OF PROGRAM

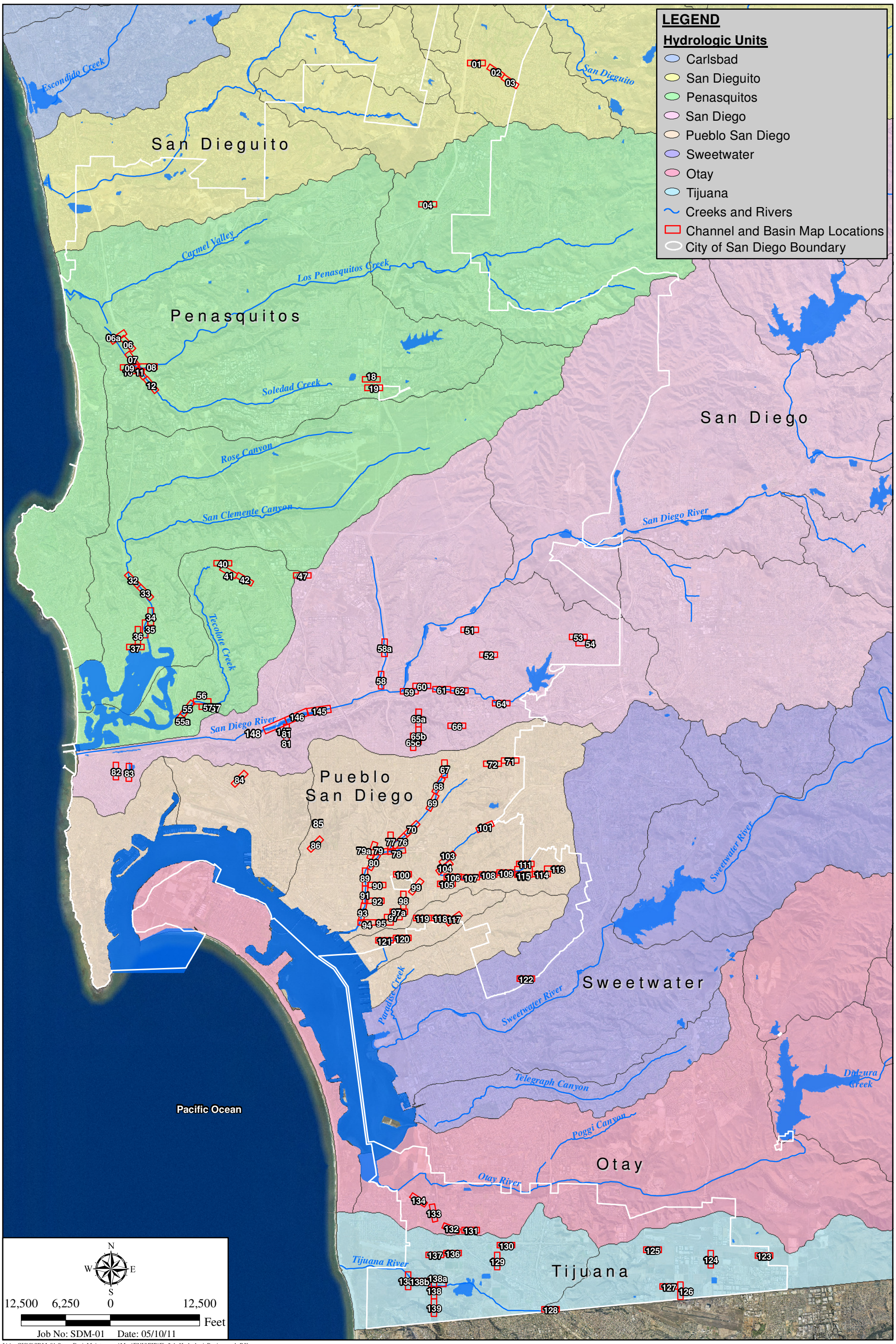
The Master Program includes approximately ~~115~~ 113 individual segments within approximately 32 miles of storm water facilities to be included in this Master Program. For tracking purposes, SWD has assigned a number to each of major storm water facility segments under its responsibility. Table 3-1 identifies each of these segments included in the Master Program. These segments are considered likely to require periodic maintenance to effectively convey flood water. As not all of the storm water facilities within the purview of SWD are expected to require periodic maintenance and are not included in the Master Program, the map numbering identified in Table 3-1 is not always consecutive. Table 3-1 contains a variety of pertinent information including a general description and location of the facility, construction type, applicable planning policies, and the estimated width of disturbance caused by anticipated maintenance. As illustrated in Table 3-1, approximately half of the segments (16 miles) have concrete bottoms while the other half (16 miles) have earthen bottoms.

Figure 3-1 illustrates the general location of the storm water facilities included in the Master Program within the respective Hydrologic Units (HUs), as established by the Regional Water Quality Control Board (RWQCB). Figures 3-2a through 3-2e illustrate the location of these storm water facilities on large-scale aerial photographs. Detailed maps illustrating the location of each facility including access, staging and stockpiling locations are contained in Appendix A of the Master Program as well as the vegetation maps contained in Appendix D.2 of this PEIR.

The City prepared the Master Program to guide future maintenance activities. The Master Program has also been prepared in response to requests from state and federal agencies to consolidate storm water maintenance into a single permit process to facilitate review. The Master Program describes the maintenance techniques as well as the protocols to address the impact of maintenance activities with respect to environmental resources. It also identifies a process whereby maintenance activities would be defined and reviewed by state and federal agencies with jurisdiction over biological and aquatic resources. The following discussion

addresses these aspects of the Master Program in more detail. A complete copy of the Master Program is included in Appendix B, which is included as Volume 3 of the EIR.

Many of the open storm water facilities in the urbanized areas were not designed to support vegetation. Vegetation tends to slow flows and increase the volume of runoff within these facilities. When the increase in volume exceeds the capacity, water spills out and causes flooding to adjacent areas. The accumulation of sediment in these facilities compounds the diminished capacity to transport flood water related to vegetation. Accumulated sediment reduces the volume of runoff that a storm water facility can convey without overflowing. To maximize the ability of storm water facilities to transport flood water, maintenance removes vegetation and accumulated sediment to maximize the capacity of the storm water facilities.

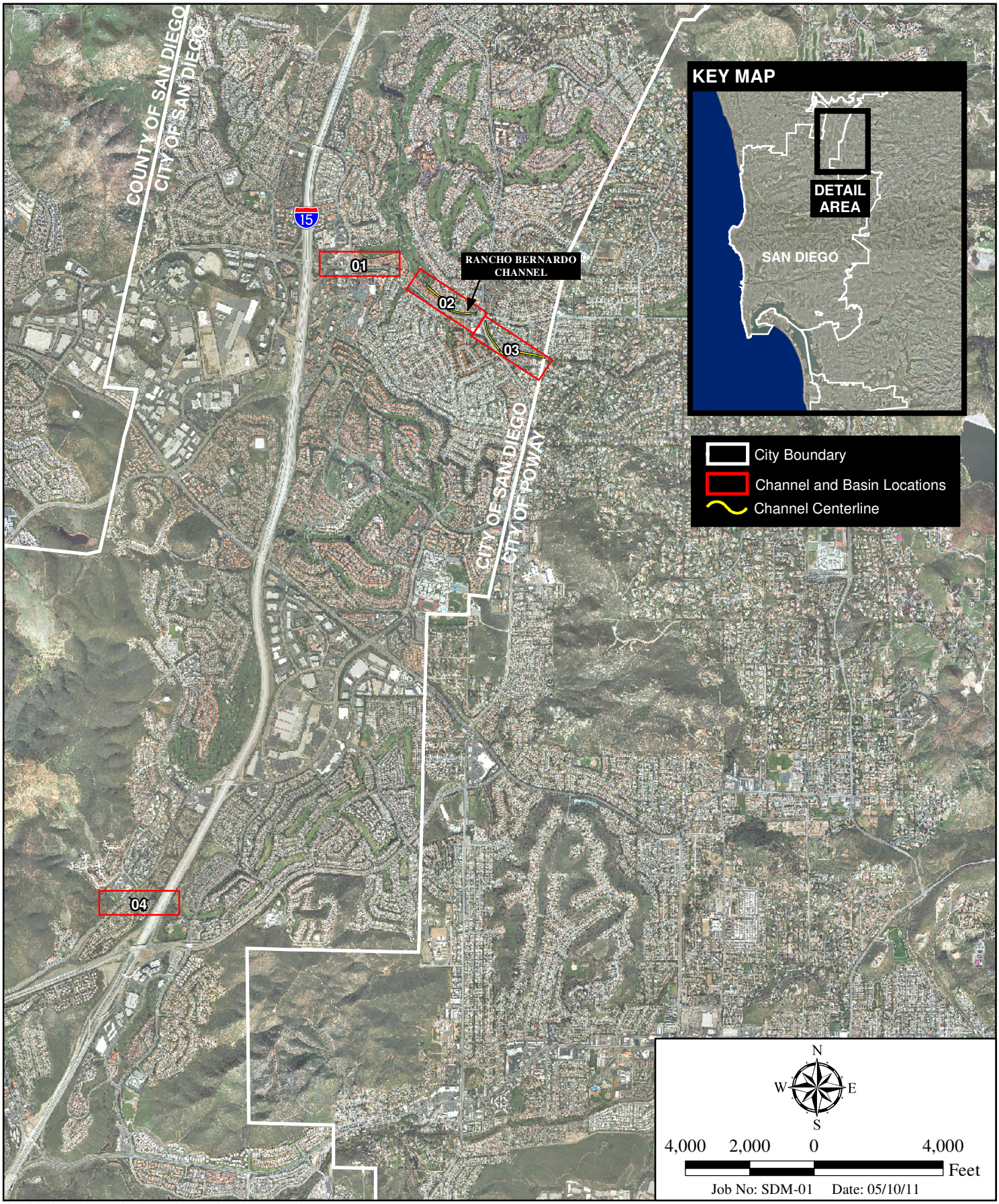


I:\ArcGIS\S\SDM-01 StormDrainMaintenance\Map\ENV\EIR\Fig3-1_HydrologicBasins.mxd -RK

Storm Water System Relationship to Hydrologic Basins

CITY OF SAN DIEGO MASTER STORMWATER SYSTEM MAINTENANCE PROGRAM

Figure 3-1



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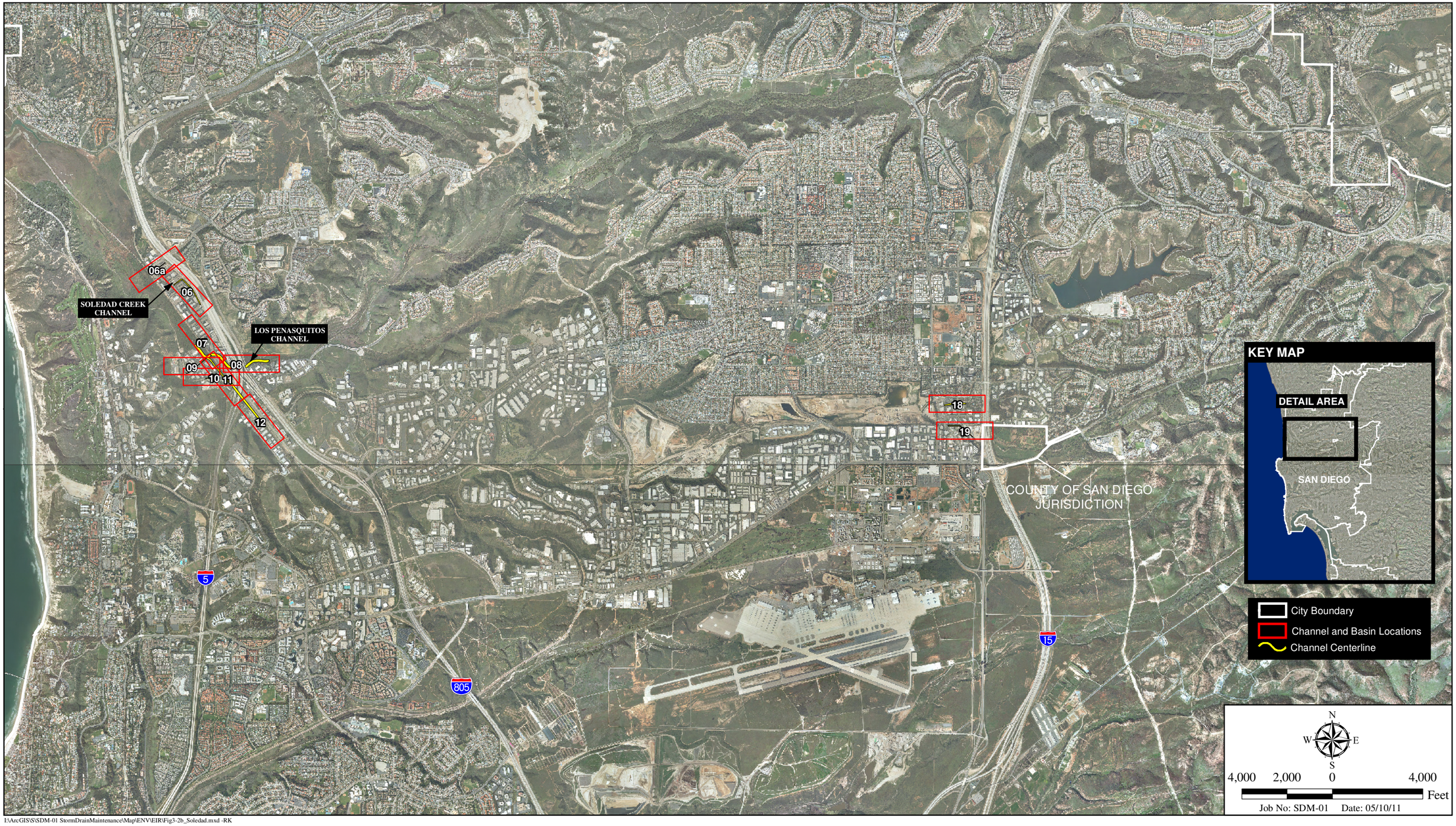
Storm Water Facilities - Rancho Bernardo Area

CITY OF SAN DIEGO MASTER STORMWATER SYSTEM MAINTENANCE PROGRAM

Figure 3-2a



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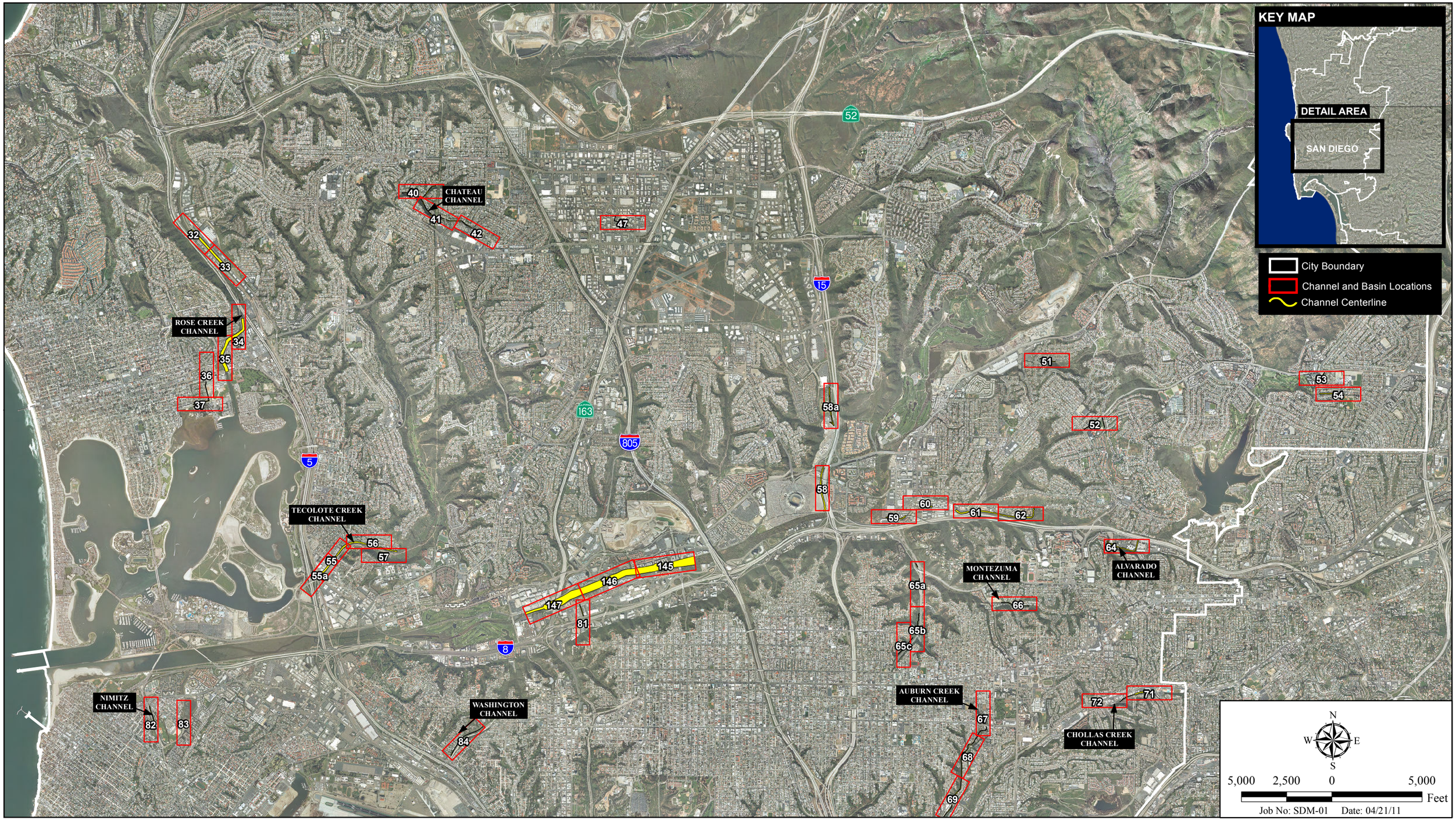
Storm Water Facilities - Soledad Area

CITY OF SAN DIEGO MASTER STORMWATER SYSTEM MAINTENANCE PROGRAM

Figure 3-2b



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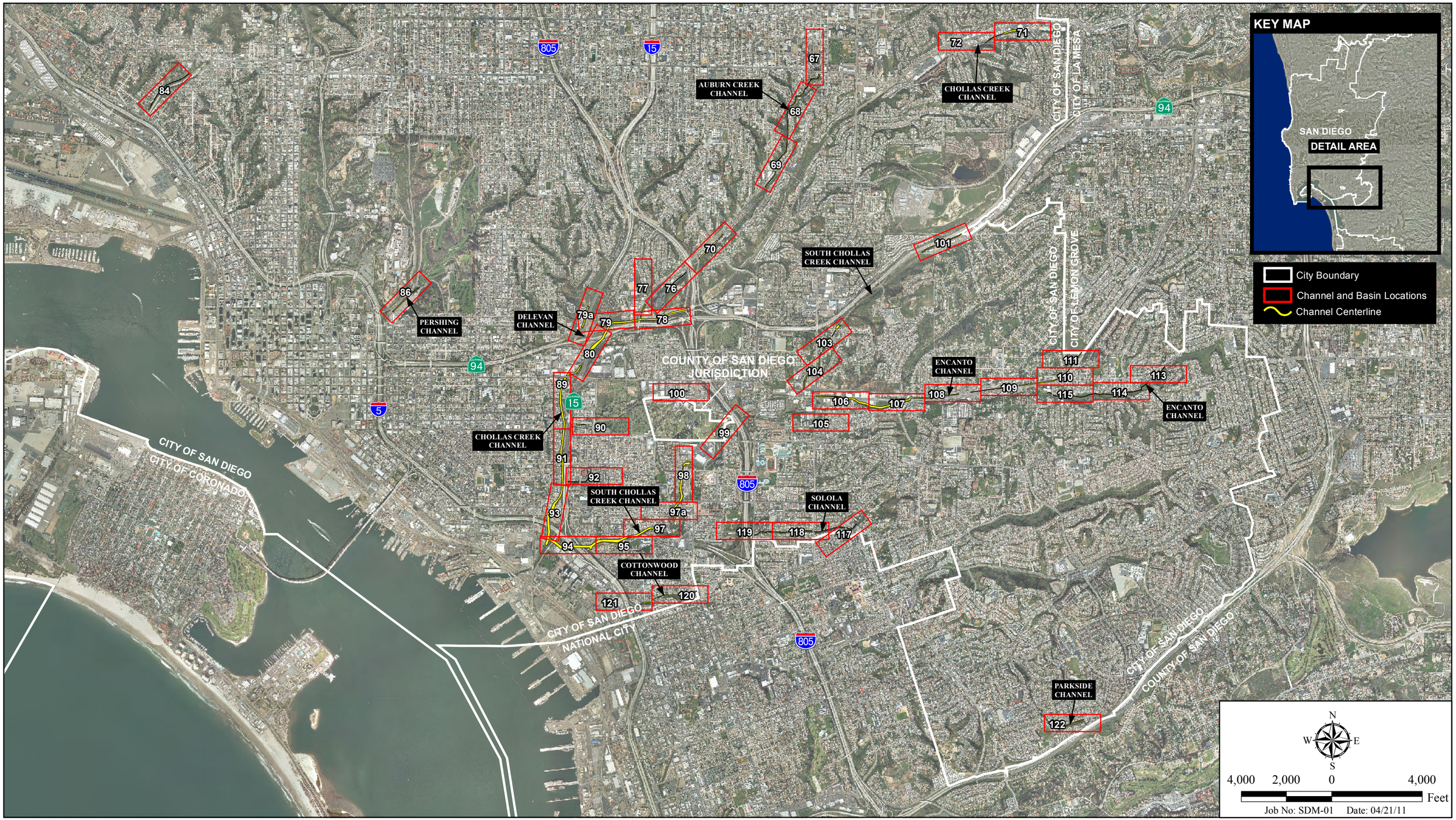
Storm Water Facilities - I-8 Corridor

CITY OF SAN DIEGO MASTER STORMWATER SYSTEM MAINTENANCE PROGRAM

Figure 3-2c



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Storm Water Facilities - Central San Diego Area

CITY OF SAN DIEGO MASTER STORMWATER SYSTEM MAINTENANCE PROGRAM

Figure 3-2d

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Storm Water Facilities - Otay Mesa Area

CITY OF SAN DIEGO MASTER STORMWATER SYSTEM MAINTENANCE PROGRAM

Figure 3-2e

Table 3-1
MASTER PROGRAM STORM WATER FACILITIES

Map No.[1]	Hydrologic Unit	Facility Description	Total Length (feet)	Facility Type (length in feet)		Coastal Zone?	Multiple Habitat Designation?	Estimated Disturbance Width[2] (feet)
				Concrete Bottom	Earthen Bottom			
1	San Dieguito	Rancho Bernardo Rd & Bernardo Center Dr	116	--	116	N	N	15
2	San Dieguito	Rancho Bernardo	1,811	1,811	0	N	N	14
3	San Dieguito	Rancho Bernardo	2,487	2,439	48	N	N	14
4	Penasquitos	11044 Via San Marco	711	73	638	N	N	5
6	Peñasquitos	11689 Sorrento Valley Rd	1,847	1,470	378	Y	N	20
6a	Peñasquitos	3000 Industrial Court	682	417	265	Y	N	12
7	Peñasquitos	Los Peñasquitos Creek Channel	1,609	--	1,609	Y	Y	104
8	Peñasquitos	Los Peñasquitos Creek Channel	1,600	--	1,600	Y	Y	104
9	Peñasquitos	11000 Roselle St / 11100 Flinkote Ave	1,030	1,016	14	Y	N	15
10	Peñasquitos	Dunhill St & Roselle St	405	--	405	Y	N	16
11	Peñasquitos	Soledad Creek Channel	2,539	891	1,648	Y	Y	26
12	Peñasquitos	Soledad Creek Channel	1,397	1,397	--	Y	Y	59
18	Peñasquitos	Maya Linda & Via Pasar	964	--	964	N	N	22
19	Peñasquitos	Candida & Via Pasar	1,178	1,178	--	N	N	12
32	Peñasquitos	Rose Creek Channel	1,349	1,337	12	N	Y	57
33	Peñasquitos	Rose Creek Channel	1,329	1,329	--	N	N	57
34	Peñasquitos	Rose Creek Channel	1,416	376	1,040	Y	N	124
35	Peñasquitos	Rose Creek Channel	2,270	--	2,270	Y	N	104
36	Peñasquitos	Mission Bay High School	900	900	1	Y	N	10
37	Peñasquitos	Pacific Beach Dr & Olney St	1,078	178	900	Y	N	17
40	Peñasquitos	Chateau Creek Channel	2,242	1,387	856	N	N	18

Table 3-1 (cont.)
MASTER PROGRAM STORM WATER FACILITIES

Map No.[1]	Hydrologic Unit	Facility Description	Total Length (feet)	Facility Type (length in feet)		Coastal Zone?	Multiple Habitat Designation?	Estimated Disturbance Width[2] (feet)
				Concrete Bottom	Earthen Bottom			
41	Peñasquitos	Chateau Creek Channel	2,471	1,681	790	N	N	20
42	Peñasquitos	Chateau Creek Channel	874	834	41	N	N	20
47	San Diego	7969 & 7971 Engineer Rd	1,230	--	1,230	N	N	8
51	San Diego	Red River Dr & Conestoga Dr	876	876	--	N	N	10
52	San Diego	Camino del Arroyo	1,039	--	1,039	N	N	9
53	San Diego	Cowles Mtn Channel	711	378	333	N	N	8
54	San Diego	San Carlos Creek Channel	957	433	524	N	N	10
55a	Peñasquitos	West Morena Blvd	270	--	270	N	N	12
55	Peñasquitos	Tecolote Creek Channel	2,584	2,443	142	N	N	25
56	Peñasquitos	Tecolote Creek Channel	2,018	1,606	412	N	N	29
57	Peñasquitos	Tecolote Creek Channel	768	120	648	N	N	29
58	San Diego	Murphy Canyon Creek Channel	2,523	772	1,752	N	N	57
58a	San Diego	Murphy Canyon Creek Channel	2,371	633	1,738	N	N	15
59	San Diego	Alvarado Creek Channel	1,072	869	203	N	Y	46
60	San Diego	Alvarado Creek Channel	582	570	12	N	Y	29
61	San Diego	Alvarado Creek Channel	2,130	2,104	26	N	N	46
62	San Diego	Alvarado Creek Channel	2,392	2,348	45	N	N	32
64	San Diego	Alvarado Creek Channel	2,600	1,335	1,265	N	Y	40
65a	San Diego	Fairmont Creek Channel	813	749	64	N	Y	19
65b	San Diego	Fairmont Channel	848	38	811	N	Y	12
65c	San Diego	Fairmont Channel	1.235	1,233	2	N	Y	15
66	San Diego	Montezuma Channel	1,420	1,420	--	N	N	19

Table 3-1 (cont.)
MASTER PROGRAM STORM WATER FACILITIES

Map No.[1]	Hydrologic Unit	Facility Description	Total Length (feet)	Facility Type (length in feet)		Coastal Zone?	Multiple Habitat Designation?	Estimated Disturbance Width[2] (feet)
				Concrete Bottom	Earthen Bottom			
67	Pueblo San Diego	Auburn Creek Channel	635	--	635	N	N	16
68	Pueblo San Diego	Auburn Creek Channel	2,693	1,566	1,127	N	N	20
69	Pueblo San Diego	Auburn Creek Channel	2,356	2,355	1	N	N	12
70	Pueblo San Diego	Auburn Creek Channel	1,418	413	1,006	N	N	39
71	Pueblo San Diego	Chollas Creek Channel	1,199	376	823	N	N	26
72	Pueblo San Diego	Chollas Creek Channel	435	433	2	N	N	26
76	Pueblo San Diego	Auburn Creek Channel	964	--	964	N	N	27
77	Pueblo San Diego	Auburn Creek Channel	422	--	422	N	N	33
78	Pueblo San Diego	Chollas Creek Channel	2,633	2,633	--	N	N	54
79	Pueblo San Diego	Chollas Creek Channel	1,410	1,410	--	N	N	54
79a	Pueblo San Diego	Delevan Dr	991	--	991	N	N	30
80	Pueblo San Diego	Chollas Creek Channel	1,899	539	1,360	N	N	54
81	San Diego	Camino de la Reina & Camino del Arroyo	648	648	--	N	N	9
82	San Diego	Nimitz Channel	865	234	631	Y	N	12
83	San Diego	Famosa Blvd & Valeta St	185	66	119	Y	N	20
84	Pueblo San Diego	Washington Channel	2,515	1,026	1,489	N	N	20
86	Pueblo San Diego	Pershing Channel	2,047	1,698	349	N	N	20
89	Pueblo San Diego	Chollas Creek Channel	2,442	2,318	124	N	N	25
90	Pueblo San Diego	Imperial and Gillette Street	385	--	385	N	N	15
91	Pueblo San Diego	Chollas Creek Channel	2,498	2,498	--	N	N	32
92	Pueblo San Diego	35th St & Martin Ave	1,097	--	1,097	N	N	12 (t) 5 (b)

Table 3-1 (cont.)
MASTER PROGRAM STORM WATER FACILITIES

Map No.[1]	Hydrologic Unit	Facility Description	Total Length (feet)	Facility Type (length in feet)		Coastal Zone?	Multiple Habitat Designation?	Estimated Disturbance Width[2] (feet)
				Concrete Bottom	Earthen Bottom			
93	Pueblo San Diego	Chollas Creek Channel	2,590	1,267	1,323	Y	N	54
94	Pueblo San Diego	South Chollas Creek Channel	2,595	40	2,555	Y	N	59
95	Pueblo San Diego	South Chollas Creek Channel	1,604	--	1,604	Y	N	50
97	Pueblo San Diego	South Chollas Creek Channel	1,098	--	1,098	N	N	45
97a	Pueblo San Diego	South Chollas Creek Channel	854	292	562	N	N	55
98	Pueblo San Diego	South Chollas Creek Channel	2,800	661	2,139	N	N	49
99	Pueblo San Diego	South Chollas Creek Channel	278	--	278	N	N	34
100	Pueblo San Diego	42nd & J St	257	--	257	N	N	12
101	Pueblo San Diego	South Chollas Creek Channel	1,911	1,122	789	N	Y	34
103	Pueblo San Diego	South Chollas Creek Channel	1,237	1,046	191	N	Y	34
104	Pueblo San Diego	South Chollas Creek Channel	1,969	1,071	898	N	Y	34
105	Pueblo San Diego	Euclid & Castana	277	--	277	N	N	20
106	Pueblo San Diego	Encanto Channel	2,436	405	2,031	N	N	44
107	Pueblo San Diego	Encanto Channel	2,607	644	1,963	N	N	44
108	Pueblo San Diego	Encanto Channel	1,900	1,900	--	N	N	29
109	Pueblo San Diego	Encanto Channel	2,390	1,793	597	N	N	29
110	Pueblo San Diego	Encanto Channel	1,606	1,418	188	N	N	29
111	Pueblo San Diego	Encanto Channel	842	719	123	N	N	29
113	Pueblo San Diego	Jamacha Channel	815	--	815	N	N	15
114	Pueblo San Diego	Jamacha Channel	2,683	--	2,683	N	N	15
115	Pueblo San Diego	Jamacha Channel	1,886	--	1,886	N	N	20
117	Pueblo San Diego	Solola Channel	1,244	1,176	68	N	N	20

Table 3-1 (cont.)
MASTER PROGRAM STORM WATER FACILITIES

Map No.[1]	Hydrologic Unit	Facility Description	Total Length (feet)	Facility Type (length in feet)		Coastal Zone?	Multiple Habitat Designation?	Estimated Disturbance Width[2] (feet)
				Concrete Bottom	Earthen Bottom			
118	Pueblo San Diego	Solola Channel	2,416	2,084	332	N	N	18
119	Pueblo San Diego	Solola Channel	846	728	118	N	N	8
120	Pueblo San Diego	Cottonwood Channel	1,904	1,885	19	Y	N	23
121	Pueblo San Diego	Cottonwood Channel	530	522	8	Y	N	19
122	Sweetwater	Parkside Channel	1,202	1,163	40	N	N	14
123	Tijuana	Sanyo Channel	1,255	1,225	30	N	N	15
124	Tijuana	La Media & Airway	628	--	628	N	N	20
125	Tijuana	Camino Maquiladora & Cactus	1,073	822	251	N	N	10
126	Tijuana	Siempre Viva & Bristow	2,321	140	2,181	N	N	19
127	Tijuana	Britannia & Bristow	597	--	597	N	N	20
128	Tijuana	Virginia Channel	503	--	503	N	N	20
129	Tijuana	Smythe Channel	1,956	1,635	321	N	N	12
130	Tijuana	Smythe Channel	1,365	--	1,365	N	N	24
131	Otay	Nestor Creek Channel	1,201	978	223	N	N	10
132	Otay	Nestor Creek Channel	968	--	968	N	N	29
133	Otay	Nestor Creek Channel	2,982	--	2,982	N	N	54
134	Otay	Nestor Creek Channel	1,309	990	320	Y	N	30
136	Tijuana	Tocayo Channel	2,637	2,485	152	Y	N	8
137	Tijuana	Tocayo Channel	1,076	1,043	33	Y	N	8
138a	Tijuana	Tijuana River Pilot Channel	2,476	--	2,476	Y	Y	25
138b	Tijuana	Tijuana River Pilot Channel	2,653	--	2,653	Y	Y	25
138c	Tijuana	Tijuana River Pilot Channel	719	--	719	Y	Y	25

Table 3-1 (cont.)
MASTER PROGRAM STORM WATER FACILITIES

Map No.[1]	Hydrologic Unit	Facility Description	Total Length (feet)	Facility Type (length in feet)		Coastal Zone?	Multiple Habitat Designation?	Estimated Disturbance Width[2] (feet)
				Concrete Bottom	Earthen Bottom			
138	Tijuana	Smugglers Gulch Channel	1,837	--	1,837	Y	Y	35
139	Tijuana	Smugglers Gulch Channel	1,031	--	1,031	Y	Y	35
145	San Diego	First San Diego River Improvement Project	3,325	--	3,325	N	N	250
146	San Diego	First San Diego River Improvement Project	3,231	--	3,231	N	N	250
147	San Diego	First San Diego River Improvement Project	3,370	--	3,370	N	N	250

[1] The Storm Water Division assigns a map number to each of the facilities which are within its jurisdiction. However, not all of these facilities are included in the Master Program. Thus, the map numbers in this table are not all sequential.

[2] Disturbance width for channels wider than 20 feet (top of bank to top of bank) is assumed to be the width of the bottom of the channel plus two feet up each side slope. Disturbance width for channels less than 20 feet includes bottom and all of the side slopes.

3.3.1 Storm Water Facility Maintenance

Determination of Need

SWD would use an evaluation process defined in the Master Program to identify and prioritize its channel maintenance work for the coming year that considers each segment's ability to meet SWD's flood control and water quality levels of service. Initially, SWD would prepare a Priority Needs List based on routine inspections and public complaints. Based on hydrology studies and other considerations such as relevant water quality regulations and pollutant priorities in each watershed, an annual maintenance plan would be prepared. The evaluation of the need for maintenance would include quantitative and qualitative metrics regarding primarily flood risk to life and property, but also would consider other factors such as, water quality priorities in the watershed, aesthetics, natural resources and community needs.

Routine inspection and assessment activities are conducted by the SWD to identify storm water system facilities that need maintenance. Information obtained from the inspection and assessment activities would be used in the annual evaluation process described above. These inspections include Storm Patrol Inspection (SPI), Routine Storm Water Facility Inspection (RSWFI), and Service Notification Inspection (SNI).

The SPIs occur on an infrequent basis, typically during rain events. An SPI is triggered when rainfall prevents crews from performing their regularly assigned duties. The SPIs are focused on inspecting storm water facilities that have been deemed critical and/or adversely affected as a result of recent rain events.

The RSWFIs typically are scheduled on an annual basis. These inspections note drainage conditions, including external conditions that may lead to system failures, and/or equipment access problems. The frequency of routine inspections is normally increased if site conditions, drainage conditions, or maintenance history show that it is warranted.

The SNIs are based upon notification from the public that a specific facility may need maintenance. The primary source of public complaints is illegally dumped materials such as trash, appliances, furniture, shopping carts, and tires.

Frequency of Maintenance

The frequency of storm water facility maintenance would be based upon several factors including, but not limited to, routine inspections, risk management claims, and/or past maintenance history. Maintenance frequencies typically would occur at three-year intervals.

Mechanical Maintenance

Mechanical maintenance would utilize equipment often used in excavation (e.g. skid-steers, backhoes, Gradalls, excavators, loaders, dump trucks, and bulldozers) to remove sediment and vegetation from storm water facilities. When removal of sediment or vegetation must occur in inundated areas, maintenance will involve barges and associated dewatering equipment.

Depending on the conditions associated with each facility, different types of mechanized equipment would be utilized. The decision as to which mechanized equipment would be used would be based upon the density and volume of accumulated material; vegetation growth; the size (width and depth) of the facility; access; the flow characteristics of the facility; and the need to complete maintenance activities in a timely and efficient manner. Equipment would range in size from four feet wide for the smallest skid-steer to 14.5 feet wide for a large bulldozer. Smaller equipment such as skid-steers would typically be used for narrow, shorter channels, while larger equipment would be used for wider, longer channel segments. Small channels are typically only five feet in width and are less than 1,000 feet in length. For all equipment clearing activities, the depth of material to be removed would be based upon the design capacity of the facility.

Maintenance equipment would utilize access routes which have been specifically identified and illustrated in Appendices A and B of the Master Program included as Appendix C of this PEIR.

In most cases, maintenance is expected to occur along the bottom of the facilities and approximately two feet up the adjacent banks. Removal of vegetation on the slopes, beyond the lower two feet is not expected to occur except when the overall channel width is less than 20 feet. In these narrower channels, removal of vegetation on the sides may be necessary to maximize the ability to transport floodwaters. However, for wider channels, the minimal increase in flood water transport capacity resulting from removing vegetation on the side slopes would be outweighed by the additional cost of maintenance and associated biological mitigation (as discussed in Section 5.2).

The amount of vegetation and sediment removed from the bottom of the storm water facilities would be determined by hydrology and hydraulic studies before any maintenance occurs within a storm water facility. These studies would specify maintenance that would range from clearing a pilot channel to removing all the vegetation covering the bottom of a facility. Whenever possible, vegetation would be cleared in a manner that allows some vegetation to remain in the facility to provide wildlife habitat and aesthetic value.

Non-mechanical Maintenance

Where equipment access is limited and trucks cannot access the maintenance area, maintenance would be performed without the use of earthmoving equipment using chain saws, mowers, weed whips and other hand tools). As a result, maintenance would be limited to removal of above-ground vegetation. If the cut vegetation would not interfere with flood capacity, it would be left within the channel unless it is determined that the cut vegetation is invasive (e.g., arundo). In this case, the invasive vegetation would be collected, hauled out by hand, and disposed in a suitable, pre-approved off-site location. With non-mechanical maintenance, the root systems would remain in place. Above-ground removal would not be used when leaving the roots of invasive plants in place could promote their regrowth and downstream colonization. Determination as to the invasiveness of a plant species would be based on the most current California Invasive Plant Council's Invasive Plant Inventory.

Maintenance Protocols

To minimize the impact of storm water maintenance on the environment, the maintenance activities would be performed in accordance with local, state and federal laws governing such activities. In addition, the activities would incorporate, as appropriate, a series of protocols included in the Master Program. These protocols are as follows:

Water Quality (WQ)

WQ-1 Stabilize designated access roads (or other graded areas) with permeable protective surfacing (e.g., grasscrete), storm water diversion structures (e.g., brow ditches or berms), or crossing structures (e.g., culverts) to control erosion and prevent off-site sediment transport.

WQ-2 Prevent off-site sediment transport during maintenance through the use erosion and sediment controls within storm water facilities, along access routes and around stockpile/staging areas. Install BMPs such as silt fences, fiber rolls; gravel bags; temporary sediment basins; stabilized maintenance access points (e.g., shaker plates); containment barriers (e.g., silt fence, fiber rolls and/or berms) for material stockpiles; and properly fitted covers for material transport vehicles. Remove temporary erosion or sediment control measures upon completion of maintenance unless their removal would result in greater environmental impact than leaving them in place.

WQ-3 Store BMP materials on-site to provide complete protection of exposed areas and prevent off-site sediment transport.

WQ-4 Provide training for personnel responsible for the proper installation, inspection, and maintenance of on-site BMPs.

WQ-5 Revegetate spoil and staging areas within 30 days of completion of maintenance activities. Monitor and maintain revegetated areas for a period of not less than 25 months following planting.

WQ-6 Implement sampling and analysis; monitoring and reporting; and post-maintenance management programs per National Pollutant Discharge Elimination System (NPDES) and/or City requirements.

WQ-7 Avoid storing hazardous materials used during maintenance within 50 feet from storm water facilities. Hazardous materials shall be managed and stored in accordance with applicable local, state and federal regulations.

WQ-8 Store maintenance-related trash in areas at least 50 feet from storm water facilities, and remove any trash receptacles regularly (at least weekly).

WQ-9 Install a check dam or other comparable mechanism whenever the velocity of storm water during a "bank-full" storm event would be expected to exceed the velocities identified

for unlined channels per Table 1-104.108 of the City's Design Manual. ~~to slow runoff velocities at the downstream end of a maintenance area when hydrology and hydraulic studies indicate that maintenance could adversely impact downstream areas.~~ These structures may be removed when vegetation growth has reached a point where the structure is no longer required.

WQ-10 Inspect earthen-bottom storm water facilities within 30 days of the first 2-year storm following maintenance. Implement erosion control measures recommended by the field engineer, such as fiber blankets, to remediate substantial erosion which has occurred and to minimize future erosion.

Biological Resource Protection (BIO)

BIO-1 Restrict vehicles to access designated in the Master Program.

BIO-2 Flag and delineate all sensitive biological resources to remain within or adjacent to the maintenance area prior to initiation of maintenance activities in accordance with the site-specific Individual Biology Assessment (IBA), Individual Hydrology and Hydraulic Assessment (IHHA) and/or Individual Maintenance Plan (IMP).

BIO-3 Conduct a pre-maintenance meeting on-site prior to the start of any maintenance activity that occurs within or adjacent to sensitive biological resources. The pre-maintenance meeting shall include the qualified biologist, field engineer/planner, equipment operators/superintendent and any other key personnel conducting or involved with the channel maintenance activities. The qualified biologist shall point out or identify sensitive biological resources to be avoided during maintenance, flag/delineate sensitive resources to be avoided, review specific measures to be implemented to minimize direct/indirect impacts, and direct crews or other personnel to protect sensitive biological resources as necessary. The biologist shall also review the proposed erosion control methods to confirm that they would not pose a risk to wildlife (e.g., non-biodegradable blankets which may entangle wildlife).

BIO-4 Avoid introduction of invasive plant species with physical erosion control measures (e.g., fiber mulch, rice straw, etc.).

BIO-5 Conduct appropriate pre-maintenance protocol surveys if maintenance is proposed during the breeding season of a sensitive animal species. If sensitive animal species covered by the PEIR are identified, then applicable measures from the MMRP shall be implemented under the direction of a qualified biologist to avoid significant direct and/or indirect impacts to identified sensitive animal species. If sensitive animal species are identified during pre-maintenance surveys that are not covered by the PEIR, SWD shall contact the appropriate wildlife agencies and additional environmental review under CEQA will be required.

BIO-6 Remove arundo through one, or a combination of, the following methods: (1) foliar spray (spraying herbicide on leaves and stems without cutting first) when arundo

occurs in monotypic stands, or (2) cut and paint (cutting stems close to the ground and spraying or painting herbicide on cut stem surface) when arundo is intermixed with native plants. When sediment supporting arundo must be removed, the sediment shall be excavated to a depth sufficient to remove the rhizomes, wherever feasible. Following removal of sediment containing rhizomes, loose rhizome material shall be removed from the channel and disposed off-site. After the initial treatment, the area of removal shall be inspected on a quarterly basis for up two years, or until no resprouting is observed during an inspection. If resprouting is observed, the cut and paint method shall be applied to all resprouts.

BIO-7 Avoid mechanized maintenance within 300 feet of a Cooper's hawk nest, 900 feet of a northern harrier's nest, or 500 feet of any other raptor's nest until any fledglings have left the nest.

Historical Resource Protection (HIST)

HIST-1 Flag, cap or fence all historical resource areas prior to initiation of maintenance activities.

HIST-2 Conduct a pre-maintenance meeting on-site prior to any activity that may occur within or adjacent to sensitive historical resources. The qualified archaeologist shall point out sensitive historical resources to be avoided during maintenance, identify any specific measures which should be implemented to minimize impacts, and direct crews or other personnel to protect sensitive historical resources as necessary.

Waste Management (WM)

WM-1 Dispose and transport compostable green waste material to an approved composting facility, if available.

WM-2 Reuse excavated material, whenever possible, as fill material, aggregate, sand replenishment or other raw material uses. Re-used material (aggregates, soil, sand, or silt) shall be documented in accordance with applicable local, state and federal regulations.

WM-3 Separate waste tires from excavated material and transport them to an appropriate disposal facility. If more than nine tires are in a vehicle or waste bin at any one time, they shall be transported under a completed Comprehensive Trip Log (CTL) to document that the tires were taken to an appropriate disposal facility.

WM-4 Log and transport any hazardous materials encountered during maintenance under a hazardous materials manifest to an approved hazardous waste storage, recycling, treatment or disposal facility. Personnel handling hazardous materials shall have the appropriate training to handle, store, transport and/or dispose. Hazardous materials (e.g., machine oil, mercury switches and refrigerant gases) shall be removed from appliances and disposed in accordance with this protocol.

Access

The Master Program designates specific access for each of the storm water facilities included in the proposed Master Program (Refer to Appendix A of the Master Program). Access was determined by utilizing previous access routes, limiting the area of impact to the adjacent properties, and providing a safe and secure point for equipment and crews to enter and exit the facility. In most cases, access would occur directly from existing ramps, adjacent streets or paved areas due to the urban location of the facilities. In other cases, access will be taken from short, dirt- or- paved driveways from nearby public streets.

Access into a facility for maintenance may occur in several ways depending on the maintenance methodology and type of equipment used. In many cases, concrete or temporary earthen ramps would be used by equipment and foot-traffic to gain access into the facility. In other cases, equipment would operate outside the facility along its banks. All access routes would incorporate BMPs during and after maintenance activities. Impacts to upland and wetland habitat would be mitigated in accordance with the MMRP from the PEIR.

Staging and Stockpiling

Maintenance operations that remove a large volume of soils may utilize the stockpile sites depicted on the maps in Appendix A of the Master Program. When necessary, stockpile sites would be used for dewatering and processing of spoils prior to transport. Processing would include removal of tires, large rocks, trash, and other debris. BMPs identified in Chapter 4.0 of the Master Program would be installed, inspected and maintained around the perimeter of stockpile sites. Appropriate permits from the RWQCB would be acquired for stockpile areas.

Staging areas, illustrated on the maps in Appendix A of the Master Program, would be used to store equipment and materials during maintenance operations. Typically, staging areas are located in secured, paved or developed areas such as existing parking lots or the street right-of-way.

Runoff Control

Although maintenance activities within the channel facilities will typically occur in relatively dry conditions, a few storm water facilities, such as Sorrento Creek, carry sufficient amounts of urban runoff during the dry months to preclude or limit maintenance activities. In those few cases, temporary runoff control may be necessary to isolate a segment from upstream water flows. If storm water flows in the area of maintenance cannot be contained by simple best management practices (BMPs) temporary coffer-dams or diversion in a by-pass pipeline may be required. Coffer-dams may consist of a combination of water bladders, sand bags, straw bales, and other materials**.** Depending upon the flow within the storm water facility, water may be pumped around the work area in a pipe. Unless removal would result in more environmental impact than leaving them in place, temporary runoff control features implemented during maintenance will be removed upon completion of the maintenance.

3.3.2 Annual Maintenance Process

Maintenance pursuant to the Master Program would be conducted on an annual basis. As a result of biological and weather constraints, it is anticipated that maintenance would primarily occur during the summer and early fall. The overall maintenance process is summarized below and then described in more detail.

As indicated earlier, the SWD would place specific storm water facilities on an annual Priority List. The facilities on this list would be subject to a number of individual assessments (e.g. biology, cultural, hydrology and water quality). Based on the results of these studies, SWD would develop an IMP for each maintenance activity.

Once the IMPs have been prepared, they would be submitted along with the supporting technical studies to the City of San Diego Development Services Department (DSD) for a Substantial Conformance Review (SCR). In the course of the SCR process, DSD would review the PEIR for the Master Program to determine whether the activities were included in the Master Program and whether the impacts of the proposed maintenance were assumed in the PEIR impact and mitigation analysis. The DSD would also confirm that mitigation is included pursuant to the requirements of the MMRP associated with the PEIR.

If the SCR process concludes that the maintenance activity and associated impacts were adequately analyzed in the PEIR, City staff would make the decision whether or not the proposed maintenance could proceed in accordance with the Site Development Permit and Coastal Development Permit (SDP/CDP) issued for the Master Program. If the SCR process determines that the maintenance was not adequately addressed in the PEIR and/or SDP/CDP, the Planning Commission would be the decision-maker through the City's Process Four.

Once the maintenance activities have been approved by the City as well as the state and federal agencies with jurisdiction over wetlands occurring within maintenance facilities, SWD would commence maintenance. At least 72 hours before starting any maintenance, the SWD will notify the managing City department and land owner. Where sensitive biological or cultural resources are present in the vicinity of the maintenance, a pre-maintenance meeting would be held with technical specialists to review measures required to protect these resources.

Post-maintenance biological and cultural surveys would be conducted, as necessary, to confirm that the actual impacts from maintenance reflected the impact assumptions made based on the IMPs. Based on the impacts from maintenance, SWD would undertake the appropriate mitigation measures in accordance with the MMRP and applicable protocols identified in the Master Program.

On an annual basis, SWD will prepare an annual maintenance monitoring report to document the maintenance activities and mitigation measures which took place in the preceding year.

Individual Assessments

Once the priority storm water facilities have been identified, the SWD would conduct the following individual technical assessments for each of the facilities:

- Individual Hydrology and Hydraulic Assessment (IHHA)
- Individual Biological Assessment (IBA)
- Individual Historical Assessment (IHA)
- Individual Water Quality Assessment (IWQA)
- Individual Noise Assessment (INA)

The biology and historical studies would start with the identification of sensitive resources for consideration during the preparation of the maintenance plan for each facility. The noise studies would identify the potential for heavy equipment noise to disrupt the breeding behavior of nearby sensitive bird species. However, the hydrology/hydraulic study would be the most critical of all of the studies. The focus of this analysis would be on identifying the minimum amount of sediment and vegetation removal necessary to allow a storm water facility to effectively convey flood water. Through this process, the impact on biological and cultural resources as well as the overall amount of maintenance would be minimized.

Individual Hydrologic and Hydraulic Assessment

A qualified hydrologist would assess the ability of the affected storm water facility to convey storm water in its present state using Hydrologic Engineering Center (HEC) or comparable computer modeling software. Based on this analysis, the hydrologist would identify the minimum amount of sediment and/or vegetation that must be removed to provide effective flood conveyance. Wherever possible, the hydrologist would identify areas of native vegetation that may remain within the affected storm water facility.

An IHHA, using the form in Appendix F of the Master Program included as Appendix B to this EIR, would be prepared for each facility. The IHHA would specifically determine whether vegetation within the storm water facility can be retained without substantially interfering with the conveyance of flood waters. It would also determine if any structures or actions are required to maintain water quality or control erosion during or after maintenance.

The IHHA would include the following components:

- Description of the existing conditions within the storm water facility;
- Hydrologic information including summary of flow rates and return frequencies;
- Description of hydraulic models created for analysis of the storm water facility;
- Capacity of the facility to convey varying flood events in both the current state and fully vegetated state;
- Capacity of the facility based on two maintenance scenarios (vegetation removal only and vegetation and sediment removal); ~~and~~
- Recommendations to be utilized in the maintenance to maximize flood control while, whenever possible, minimizing vegetation removal; and~~.~~
- Discussion of alternatives in combination with, or in place of, removal of vegetation and/or sediment which could provide comparable reductions in flooding.

Individual Biological Assessment

The site of each proposed maintenance activity, including access routes, temporary spoils storage and staging areas would be inspected by a qualified biologist to determine whether sensitive biological resources could be affected by the proposed maintenance. Upon completion of this inspection, the biologist would identify significant biological resources and discuss potential ways to avoid impacts in accordance with the measures identified in the MMRP and Master Program protocols. Once a maintenance plan has been completed, the biologist would determine the potential impact of the proposed maintenance on significant biological resources and define mitigation in accordance with the approved MMRP needed to adequately mitigate for those impacts.

An IBA, using the form in Appendix G of the Master Program included as Appendix B to this EIR, would be prepared for each storm water facility where the biologist determines that the proposed maintenance could affect sensitive biological resources. The IBA would include: a summary of the biological resources associated with the storm water facility, quantification of impacts to sensitive biological resources, and the nature of mitigation measures required to mitigate for those impacts. The IBA would also identify which Master Program maintenance protocols and PEIR mitigation measures from the adopted MMRP would be incorporated into the proposed maintenance activity.

The IBA would include the following components:

- Description of maintenance to be performed including length, width and depth;
- Protocol surveys, as needed;
- Scaled map of the affected storm water facility illustrating MHPA boundaries and pre-maintenance vegetation including wetland boundaries based on evaluation of above-ground indicators of the resources; excavation of soil pits, and completion of Corps jurisdictional wetland delineation data forms;
- Location of sensitive species;
- Quantification of impacts to all sensitive biological resources;
- Two, digital, date-stamped photos of the affected area;
- Specific maintenance protocols from the Master Program to be implemented as part of the IMP;
- Identification of any biological monitoring required during maintenance; and
- Specific mitigation from the adopted MMRP that would be required to mitigate impacts to biological resources (e.g., wetland creation/enhancement/restoration or off-site upland habitat acquisition).

Individual Historical Assessment

Before preparation of an IMP, each proposed maintenance activity, including access routes and staging areas, would be evaluated by a qualified archaeologist to determine the potential for historical resources to be impacted by maintenance. If the archaeologist concludes that there is a moderate to high potential for significant historical resources to be impacted, the archaeologist would conduct a foot survey of the maintenance area to determine whether historic or prehistoric

resources could be impacted by the proposed maintenance. Upon completion of this inspection, the archaeologist would identify significant historical resources and discuss potential ways to reduce impacts to those resources with SWD staff responsible for preparing the maintenance. Once a maintenance plan has been completed, the archaeologist would determine the potential impact of the proposed maintenance on significant historical resources and identify mitigation needed to adequately mitigate for those impacts from the adopted MMRP.

An IHA, using the form in Appendix E of the Master Program included as Appendix B to this EIR, would be prepared for each storm water facility that the archaeologist determines to have a moderate to high potential for significant historical resources. The IHA would include: a description of the potential historical resources and the mitigation measures needed to reduce adverse impacts. If a moderate to high potential for significant historical resources is determined to exist, additional assessments would be done which includes the following:

- Records search;
- Field reconnaissance (survey) with Native American participation;
- Description of historic resources present within the maintenance area;
- Description of potential impacts to significant historic resources from maintenance; and
- Identification of protection and/or mitigation of affected resources from the MMRP.

Individual Water Quality Assessment

An IWQA would be completed prior to finalizing the IMP for each proposed maintenance activity. The report would be completed under the direct supervision of a professional civil engineer, with current California registration.

The primary function of the IWQA is to identify the level of pollutants within the segment proposed for maintenance. This baseline information would be used to compare the water quality benefits resulting from removal of sediments and plants, which have sequestered pollutants, against the potential loss of the potential for removed sediment and/or vegetation to retain pollutants. This information would also be used to develop any specific plans needed to protect workers from exposure to unsafe levels of hazardous materials. A description of the methodology developed to compare maintenance impacts and benefits is included in Section 4.8, Water Quality.

A template for the IWQA is located in Appendix G of the Master Program, included as Appendix B to this PEIR. In general, the IWQA would include the following components:

- Identification of the existing geometry of the storm water facility including length, width and depth as well as surface flow and volume characteristics;
- Identification of vegetation and sediment characteristics;
- Sediment sampling;
- Water sampling;
- Benefit/impact calculations; and
- Mitigation, as warranted.

One sediment sample would be taken for every 1,000 cubic yards to be removed. The samples would be hand-dug and include a minimum of two cubic feet of material. Each sample would be tested for the constituents identified in Table A-3 of Standard Operating Procedure included as Appendix G of Appendix B of this PEIR. Physical and inorganic non-metals which would be tested include total dissolved solids, phosphorus, nitrate, nitrite and nitrogen. Organics testing would include diazinon, chlorpyrifos, and malathion. Total metal testing would include antimony, arsenic, cadmium, chromium, copper, lead, manganese, nickel, selenium and zinc.

Water samples would be collected from the horizontal and vertical center of the channel, whenever possible. One sampling location would be located at the upstream edge of the storm water facility proposed to be maintained. A second location would be located at the downstream edge of the storm water facility to be maintained. This second sample location would provide a means to compare the upstream and downstream water quality, or the actual pollutant removal capacity under the conditions (flow, vegetation, etc.) present during sampling. The list of constituents to be tested would be the same as for the sediment samples. However, the list may be modified depending on the reported water quality issues, results of the sediment samples and State §303d listings for the subject receiving water segment.

Individual Noise Assessment

A baseline noise survey would be conducted by a qualified acoustician for any maintenance that could impact a sensitive bird species, as determined by a qualified biologist. This survey would determine the ambient noise levels and the 60 A-weighted decibel (dBA) time-averaged, one-hour equivalent level (L_{eq}) noise contour from equipment operations in relation to sensitive bird habitat. Based on the results, the acoustician would identify the extent that noise could impact sensitive species, and identify measures from the MMRP to reduce noise impacts during the designated breeding seasons for potentially affected species. These measures would include noise attenuation barriers, equipment noise reducers and/or restrictions on the timing of maintenance.

An INA, using the form in Appendix H of the Master Program included as Appendix B to this EIR, would be prepared for each storm water facility where noise could impact sensitive species.

The INA would include the following components:

- Baseline noise survey to determine the ambient noise levels;
- Location of 60 dBA L_{eq} noise contour in relationship to bird habitat; and
- Mitigation measures from the MMRP for maintenance during a sensitive bird's breeding season.

Individual Maintenance Plan

Once the individual assessments have been completed, an IMP would be prepared for each maintenance activity. The IMP would be based on the findings and recommendations disclosed in the site-specific technical assessments. The IMP would be signed by the hydrology engineer responsible for the preparation of the IHHA to confirm that the IMP is an accurate reflection of the IHHA.

The IMP would also identify the maintenance BMPs required to reduce impacts to water quality during and after maintenance, and applicable protocols defined in the Master Program. The goal of the IMP would be to visually illustrate the findings and recommendations of the individual assessments. Maintenance crews and technical staff would use the IMPs to direct and limit maintenance activities within the appropriate work areas.

Maintenance Authorization

The SCR process would be used to authorize maintenance activities which are proposed in SWD's annual maintenance plan. The annual plan would identify each storm water facility that SWD intends to maintain in the coming year. An SCR may also be completed for individual maintenance activities not included in an annual plan.

To initiate the SCR process, SWD would submit a general application (Form DS-3032) along with the SCR checklist included in Appendix B to DSD. In addition to the general application and a copy of each IMP, SWD would provide copies of the following individual assessments: IHHA, IBA, IHA, IWQA and INA.

During the SCR process, DSD would review the application, technical studies, the SDP/CDP, and the PEIR. Based on this review, DSD would determine if the proposed maintenance would occur in a facility explicitly included in the Master Program and SDP/CDP. In addition, DSD would determine whether the impacts of the maintenance were sufficiently analyzed in the PEIR.

<u>Maintenance Activities Included in the Master Program Where Impacts Are Adequately Addressed in the PEIR</u>

If DSD determines that the proposed maintenance activities were included in the Master Program, and adequately addressed in the PEIR, DSD would review maintenance activities for substantial conformation through Process One or Two, in accordance with LDC Sections 112.0502 or 112.0503, respectively. Whether Process One or Two applies would be based on whether the maintenance would occur within the Coastal Zone. If the maintenance would not occur within the Coastal Zone, the City would use Process One. If the maintenance would be in the Coastal Zone, Process Two would be used.

Process One

Process One would be used to authorize maintenance when the SCR review identifies that the proposed maintenance activities would occur in one of the storm water facilities explicitly identified in the Master Program, SDP/CDP and PEIR, and the following conditions apply:

1. The maintenance activity is located outside the Coastal Zone;
2. The biological resources which would be impacted by the proposed maintenance would not exceed the impacts assumed in the PEIR; and
3. The applicable mitigation measures identified in the MMRP contained in the PEIR as well as the applicable protocols identified in this Master Program have been incorporated into the IMP.

Process Two

Process Two would be used to authorize maintenance when the SCR review identifies that all the conditions associated with Process One are met but the maintenance would occur within the Coastal Zone.

Maintenance Activities Not Included in the Master Program or Adequately Addressed in the PEIR

If a maintenance activity is proposed for a storm water facility not included in the Master Program, SDP/CDP, or is not adequately addressed in the PEIR, the authorization would require a new or amended permit in accordance with Section 126.0113 of the LDC.

State and Federal Agency Review

Concurrent with the City's SCR process, the SWD would also submit appropriate applications and supporting documentation to the California Department of Fish and Game (CDFG), California Regional Water Quality Control Board (RWQCB), and U.S. Army Corps of Engineers (Corps) for approval under the terms of their respective wetland permits. The agencies would review the application and supporting documentation to determine whether the proposed maintenance activities would be consistent with the terms and conditions of their permits. The City would not conduct any proposed maintenance without prior approval from the state or federal agency with jurisdiction over the affected resources.

Maintenance Implementation

After securing the necessary SCR determination or new or amended permits, the maintenance activities would occur in the following manner.

Storm Water Facility and Access Route Field Delineation

Designated access routes would be field marked per the IMP. When mandated by the IBA or IHA, a qualified biologist or archaeologist would delineate with orange fencing, or the

equivalent, sensitive resource areas to be avoided. The qualified biologist/archaeologist would check for any substantial change in site conditions from those shown on the IMP and have the authority to refine the access routes and maintenance methods, whenever possible, to avoid or reduce impacts to sensitive resources.

Sensitive Biological Resource Protection

At least 72 hours prior to initiating any clearing or grubbing activities which may adversely affect a sensitive biological resource, a qualified biologist would conduct any necessary pre-maintenance surveys, including bird nest surveys to provide for compliance with the Migratory Bird Treaty Act (16 U.S.C.§§703 *et seq*. [MBTA]) and Biological Resources Mitigation Measure 4.3.16.

Historical Resource Mitigation

If historical resources were identified during the IHA, a qualified archaeologist would undertake any monitoring and/or mitigation measures identified in the MMRP in consultation with DSD.

Weed/Erosion Control

Weeds would be removed from access areas to prevent introduction of invasive species. Areas would be monitored by the SWD staff during routine inspections.

Waste Management

All debris accumulated during the maintenance process would be removed from the site within one week of the end of maintenance using the appropriate waste removal procedure (e.g., vacuum/pressure truck, dump truck, etc.), and disposed of at an appropriate off-site location.

Site Close-out

Following completion of the maintenance activities and removal of all spoils and equipment, site close-out activities would, as appropriate, include: installation of erosion control devices such as straw wattles, geotextile blankets/nets, and/or hydroseed; implementation of on-site wetland/streambed restoration measures required by the PEIR; and/or securing site from public access.

Maintenance Reporting

On an annual basis, SWD will document the maintenance activities and mitigation measures which took place in the preceding year. During review of the original PEIR, the Community Planners Committee (CPC) made a recommendation that the SWD make a presentation of the previous year maintenance activities to the City Council Land Use and Housing Committee (LU&H). However, the appropriate council committee for review and oversight of this public program is the Natural Resources and Culture Committee (NR&C), which is responsible for providing policy direction to City departments on public projects that may affect clean water,

endangered species, the MSCP, or open space (Permanent Rule 6.11.3 for the NR&C). Therefore, to meet the intent of the CPC recommendation, a presentation regarding the previous year of maintenance would be made on an annual basis to the NR&C and the CPC. In this presentation, SWD would also outline the maintenance planned to be carried out in the coming year. This same information will be provided to the appropriate state and federal agencies and included as an attachment to the City's MSCP Annual Report.

With respect to the past year of maintenance, the annual report would include the following:

- Tabular summary of the acreage of sensitive vegetation impacted at each facility that was maintained and the mitigation provided;
- Scaled map of each affected storm water facility illustrating pre- and post-maintenance vegetation;
- Updated master storm water facility list to reflect the facilities for which impacts have been mitigated and, for which, no additional mitigation would be required;
- Summary of the status of mitigation which has been carried out during the current and previous years to mitigate for impacts to upland and wetland vegetation, as well as sensitive species;
- Two digital, date-stamped photographs of each of the areas that were maintained in the current year; and
- Description of any remedial actions and the outcome of their implementation for each affected storm water facility.

With respect to the coming year of maintenance, the annual report would include the following:

- A list of all of the storm water facilities anticipated to be maintained; and
- A preliminary estimate of sensitive biological and/or cultural resources to be impacted with each maintenance activity and mitigation, pursuant to the MMRP, required to mitigate for anticipated impacts.

3.4 DISCRETIONARY ACTIONS

3.4.1 City Permits

A SDP/CDP would be required to carry out maintenance activities identified in the Master Program.

3.4.2 Non-City Permits

Under the state and federal regulations, maintenance activities that could impact wetland habitat and/or species protected by state and federal endangered species acts would require one or more of the following permits or approvals.

404 Permit

Under Section 404 (33 U.S.C. § 1344) of the federal Clean Water Act (33 U.S.C. §§ 1251 *et seq*. [CWA]), a permit issued by the Corps would be required for maintenance proposals that would affect "waters of the United States". The City is proposing to obtain an Individual 404 Permit under which it would conduct future maintenance activities pursuant to the proposed Master Program.

401 Certification

A Section 401 Water Quality Certification issued by the RWQCB would be required for all maintenance proposals within waters of the U.S. The City is proposing to obtain a series of four-year 401 Certifications under which it would conduct future maintenance activities pursuant to the proposed Master Program.

1605 Streambed Alteration Agreement

A 1605 Streambed Alteration Agreement issued by CDFG would be required for maintenance proposals that would impact streambeds. The City is proposing to obtain a Master 1605 Streambed Alteration Agreement under which it would conduct future maintenance activities pursuant to the proposed Master Maintenance Program.

National Pollutant Discharge Elimination System Permit

A Section 402 (33 U.S.C. § 1342) NPDES Permit issued by the RWQCB, and/or compliance with the state General Permit for Construction Activities may be required to conduct maintenance when water quality impacts could occur during maintenance.

Wastewater Discharge Regulations

Wastewater Discharge Regulations (WDRs) could be required from the RWQCB whenever dewatering would occur as part of a maintenance activity. Dewatering is necessary when water within the storm water facility must be removed so that maintenance may be accomplished

Coastal Development Permit

A CDP issued by the California Coastal Commission would be required for maintenance within the Coastal Commission Permit jurisdiction and the Deferred Certification Areas of the Coastal Zone.

3.5 HISTORY OF PROJECT CHANGES

This section is intended to chronicle changes that have occurred in the proposed storm water system maintenance program since the original NOP was circulated in 2005. In the NOP, the project was focused on obtaining master permits from the various state and federal agencies with jurisdiction over natural resources associated with the storm water facilities included in the

maintenance program. At that time, the maintenance was expected to occur within 350 different storm water facilities. While the primary objective has not changed from that envisioned in the 2005 NOP, the number of facilities to be included in permits have been reduced to ~~115~~113, and more specific documentation has been developed to govern the maintenance process.

Subsequent to the circulation of the NOP, SWD defined additional storm water facilities that were within its responsibility and included them in the proposed maintenance. In addition, SWD prepared a Master Program document that provided more detailed information on the proposed maintenance activities. The original Master Program document included a detailed description of the various forms of maintenance activities traditionally carried out by the SWD, and the type of equipment normally associated with each. To provide more proactive guidance to maintenance activities, the original Master Program included a series of maintenance protocols to reduce the effects of maintenance on the storm water facilities (e.g. erosion/sedimentation and disruption of biological resources). In response to suggestions made by the resource agencies and conservation groups, the original Master Program required detailed hydrology and hydraulic assessments of each storm water facility prior to commencing maintenance. The hydrology/hydraulic assessment was required to provide specific recommendations with respect to the amount of vegetation and sediment required to be removed to achieve desired flood protection. In addition, the hydrology/hydraulic assessment was required to identify the minimum amount of vegetation required to be removed to maximize a facility's ability to convey floodwater.

Based on the modified Master Program, a Draft PEIR was prepared and circulated for public review between July 9 and August 24, 2009. During this review period, a total of 29 comment letters were received from a variety of sources including state and federal agencies, conservation groups and interested citizens.

Subsequent to the original public review period for the PEIR, SWD met with conservation groups including Coastkeeper, Audubon Society, and San Diego Canyonlands. A series of meetings were held, including a field trip put together by these groups to illustrate their concerns and suggestions.

At the request of these groups, SWD incorporated a number of modifications to the original Master Program. Most notably, SWD reduced the number of storm water facilities included in the Master Program to eliminate drainages in natural open space that are not expected to require maintenance. The modified Master Program covers approximately 32 rather than 50 miles of facilities. The Master Program was also modified to require individual water quality assessments be conducted prior to maintenance to identify any potential for water quality impacts and the measures to be taken to minimize the potential for downstream impacts.

The comments received during the original public review period raised a number of concerns about the proposed maintenance activities and requested additional information regarding potential impacts and proposed mitigation measures. A brief summary of some of the major issues, and the modifications in the Master Program and/or the Recirculated PEIR follows. The entire comment letters and City responses from the public review period for the original PEIR are included in Appendix A.2.

A number of comments expressed the belief that the City should conduct hydrology/hydraulic studies as part of the Master Program preparation to better determine which facilities require maintenance and to what degree. The City continues to believe that doing hydrology studies in advance for all of the storm water facilities included in the Master Program is infeasible because the studies would have a short shelf-life as a result of constantly changing conditions within each storm water facility. However, the City has included a requirement to the Master Program that mandates an IHHA be prepared by a registered hydrologist before conducting any maintenance activity. The IHHA must be based on recognized engineering methods, and be designed to determine the minimum amount of vegetation and sediment removal needed to maximize the ability of the storm water facility to convey floodwater. The hydrologist must coordinate with a biologist to identify wetland vegetation (e.g. trees) that may be left in the facility without jeopardizing efficient floodwater conveyance. The hydrologist is also required to determine if maintenance could affect downstream areas by increased risk of sedimentation or transport of water pollutants. When a potential risk is identified, the IHHA must specify a downstream structure to minimize this risk.

A number of concerns were also expressed regarding the water quality analysis in the original PEIR. The City retained the services of Weston Solutions to conduct an extensive literature review and prepare a technical paper addressing the potential effects that maintenance may have on water quality in local drainages. Weston Solutions was also asked to find a methodology to evaluate potential impacts of storm water maintenance on water quality and identify measures available to reduce potential water quality impacts. The technical paper is included in the appendices of this EIR and summarized in Section 4.8. As a review of this study indicates, storm water facility maintenance has both negative and positive effects with respect to water quality.

In response to public concern that the access routes weren't adequately defined in the original Master Program, the City has identified specific access routes, stockpiling, and staging areas for each of the storm water facilities included in the revised Master Program to allow the PEIR to assess potential impacts associated with access, stockpiling, and staging areas.

Several comments were received expressing concern that the conservative approach to estimating wetland impacts would mean that all subsequent maintenance would fall within the assumptions of the PEIR and provide no incentive for minimizing the amount of vegetation removed. Based on the prototype IHHAs prepared for some of the more problematic storm water facilities included in the Master Program, it was determined that in most cases, vegetation removal could be limited to the bottom areas of the facilities. Unless channels were narrow (e.g. less than 20 feet), the IHHAs concluded that there would only be a minimal increase in floodwater conveyance capacity achieved by removing vegetation on the banks. In light of the minimal benefit, combined with the additional cost of removing vegetation on the banks and the resulting additional mitigation cost, the impact area assumed in this EIR is based on the channel bottom plus two feet unless the channel is less than 20 feet wide.

A new alternative (see Subchapter 7.6) has been added to the EIR to discuss the potential benefits of applying Low Impact Development (LID) techniques within the watersheds of the storm water facilities in an effort to reduce the need for maintenance.

The project objectives stated in this EIR have also been modified to remove the contradictory statements related to balancing storm water maintenance with biological resources. The objectives now clearly state that the primary objective of the Master Program is to facilitate maintenance of storm water facilities and fulfill the mandate of City's Charter to provide essential public works and public health services by maintaining the storm water conveyance system for the purpose of reducing flood risk. The Master Program protocols have been revised to ensure that measures incorporated into each individual maintenance activity would protect and minimize potential effects to environmental resources such as water quality and biological resources.

The discussion of cumulative impacts has been modified to be consistent with the conclusions of the City's General Plan PEIR which was certified in 2008. The City continues to believe that a cumulative analysis based on the PEIR is appropriate in lieu of a specific list of projects.

The Master Program has been revised to rely on the Substantial Conformance Review (SCR) process in the LDC used by the City to authorize development maintenance activities to proceed when minor changes have occurred in a development project that has received prior approval. the proposed maintenance activities are in conformance with the SDP/CDP, PEIR and MMRP.

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CHAPTER 4.0

ENVIRONMENTAL ANALYSIS

CHAPTER 4.0 – ENVIRONMENTAL ANALYSIS

4.1 LAND USE

4.1.1 Existing Conditions

Existing Land Use Setting

The storm water facilities included in the Master Program occur in various land use contexts. The affected storm water facilities are generally surrounded by residential or commercial uses. However, in some cases, the facilities are located in urban canyons which provide a greater degree of separation between the facilities and the adjacent development. Configuration types in both urban and canyon areas varies from all concrete channels; concrete-sided channels with earthen bottoms; or earthen channel with rock revetment slopes, to natural drainage channels.

Relevant Planning Documents

City of San Diego General, Community, Park/Preserve and Other Plans

Land use regulations are guided by the City's General Plan. The General Plan provides overall land use goals, objectives and recommendations for the entire City. The City's General Plan contains a Strategic Framework section and ten elements: Land Use and Community Planning; Mobility; Urban Design; Economic Prosperity; Public Facilities, Services and Safety Element; Recreation; Conservation; Historic Preservation; Noise; and Housing. The applicable goals and recommendations within relevant elements pertaining to the Master Program are summarized below.

Land Use and Community Planning Element

The purpose of the Land Use and Community Planning Element (Land Use Element) is "to guide future growth and development into a sustainable citywide development pattern, while maintaining or enhancing quality of life in our communities." The Land Use Element addresses land use issues that apply to the City, as a whole, and identifies the community planning program as the mechanism to designate land uses, identify site-specific recommendations, and refine city-wide policies as needed. The Land Use Element establishes a structure that respects the diversity of each community and includes policies that govern the preparation of community plans. The Land Use Element addresses zoning and policy consistency, the plan amendment process, airport-land use planning, annexation policies, balanced communities, equitable development, and environmental justice.

Urban Design Element

The purpose of the Urban Design Element is "to guide physical development toward a desired image that is consistent with the social, economic and aesthetic values of the City." The Element's policies capitalize on San Diego's natural beauty and unique neighborhoods by calling for development that respects the natural setting, enhances the distinctiveness of its

neighborhoods, strengthens the natural and built linkages, and creates mixed-use, walkable villages throughout the City. Urban Design Element policies help support and implement land use and transportation decisions, encourage economic revitalization, and improve the quality of life in San Diego. Ultimately, the Urban Design Element influences the implementation of all of the General Plan's Elements and Community Plans as it sets goals and policies for the pattern and scale of development and the character of the built environment.

Public Facilities, Services, and Safety Element

The purpose of the Public Facilities, Services, and Safety Element (Public Facilities Element) is "to provide the public facilities and services needed to serve the existing population and new growth." This Element contains policies that address public financing strategies, public and developer financing responsibilities, prioritization, and the provision of specific facilities and services that must accompany growth. The policies within the Public Facilities Element also apply to transportation, and park and recreation facilities and services. This Element also provides policies to guide the provision of a wide range of public facilities and services, including fire-rescue, police, wastewater, storm water infrastructure, water infrastructure, waste management, libraries, schools, information infrastructure, public utilities, regional facilities, healthcare services and facilities, disaster preparedness, and seismic safety.

Recreation Element

The purpose of the Recreation Element is "to preserve, protect, acquire, develop, operate, maintain, and enhance public recreation opportunities and facilities throughout the City for all users." The goals and policies of the Recreation Element have been developed to take advantage of the City's natural environment and resources, to build upon existing recreation facilities and services, to help achieve an equitable balance of recreational resources, and to adapt to future recreation needs. The Recreation Element provides policies to guide the City's vision and goals for park and recreation facilities citywide and within individual communities. Recreation Element policies also support joint use and cooperative agreements; protection and enjoyment of the City's canyon-lands; creative methods of providing "equivalent" recreation facilities and infrastructure in constrained areas; and implementation of a financing strategy to better fund park facility development and maintenance.

The City provides three categories of parks and recreation for residents and visitors: population-based, resource-based, and open space. These categories, including land, facilities and programming, constitute San Diego's municipal park and recreation system. Population-based parks are to be provided at a minimum ratio of 2.8 usable acres per 1,000 residents. In recognition of the City's land constraints, it is proposed that some of the 2.8 acres could be satisfied through "equivalencies," which are alternative ways to meet population-based park standards.

Conservation Element

The purpose of the Conservation Element is "to become an international model of sustainable development and conservation. To provide for the long-term conservation and sustainable

management of the rich and natural resources that help define the City's identity, contribute to its economy, and improve its quality of life." The Conservation Element contains policies to guide the conservation of resources that are fundamental components of San Diego's environment, that help define the City's identity, and that are relied upon for continued economic prosperity. San Diego's resources include, but are not limited to: water, land, air, biodiversity, minerals, natural materials, recyclables, topography, viewsheds, and energy. The Element contains policies for sustainable development, preservation of open space and wildlife, management of resources, and other initiatives to protect the public health, safety, and welfare.

Historic Preservation Element

The purpose of the Historic Preservation Element is "to guide the preservation, protection, restoration and rehabilitation of historical and cultural resources and maintain a sense of the City. To improve the quality of the built environment, encourage appreciation for the City's history and culture, maintain the character and identity of communities, and contribute to the City's economic vitality through historic preservation." This Element contains goals and policies designed to integrate effective historic preservation into the larger planning process to achieve greater preservation of historical and cultural resources. The Historic Preservation Element recommends the continuation of existing programs and the development of new approaches as needed. As future growth in San Diego shifts attention from building on open land to a focus on reinvestment in existing communities, there will need to be a continued effort to protect historical and cultural resources.

Community Plans and Park/Preservation Plans

In addition to the General Plan, the City has a number of Community Plans that govern land use within the City as well as Park/Preservation Plans. The goals and objectives of the Community Plans which are related to the proposed Master Program are those associated with conservation and visual quality. These goals would be applicable to those storm water facilities which are located within open space and/or park land use designations and need to be balanced with the goals relating to storm water facilities. The goals and objectives of Park/Preservation Plans are primarily associated with preserving natural resources. A review of the storm water facilities included in the Master Program indicates that storm water facilities would be located within open space and/or park land use designations for the following Community Plans:

- Clairemont Mesa Community Plan;
- College Area Community Plan;
- Encanto Neighborhoods Community Plan;
- Linda Vista Community Plan;
- Mid-City Communities Plan;
- Mira Mesa Community Plan;
- Mission Valley Community Plan;
- Navajo Community Plan;
- Otay Mesa-Nestor Community Plan;
- Pacific Beach Community Plan;
- Peninsula Community Plan;

- Skyline-Paradise Hills Community Plan;
- Southeastern San Diego Community Plan;
- Tijuana River Valley Community Plan; and
- Torrey Pines Community Plan.

Storm water facilities occur in the following Park/Preserve Plans:

- Balboa Park;
- Chollas Creek Enhancement Plan;
- Famosa Slough Enhancement Plan;
- Otay Valley Regional Park Concept Plan; and
- Western Otay Valley Regional Park Natural Resource Management Plan (Draft).

City of San Diego Local Coastal Plan

The City's LCP governs the decisions that determine the short- and long-term conservation and use of the City's coastal resources. The LCP consists of two components: the Land Use Plan (LUP) and the implementing ordinances found in the zoning and land development sections of the Land Development Code. The City of San Diego has elected to divide their coastal zone jurisdictions into twelve segments. Thus, there are 12 LCPs that make up the City's overall LCP. Policies and recommendations that make up the various LCPs are included and incorporated into the community plans and/or other planning documents for the segment areas, as appropriate. The following LCPs and associated community and other planning documents may be affected by, or relevant to, the implementation of the Master Program:

- North City LCP;
- La Jolla/La Jolla Shores LCP;
- Pacific Beach LCP;
- Peninsula LCP;
- Otay Mesa/Nestor LCP; and
- Tijuana River Valley LCP.

All of these LCPs have been certified by the California Coastal Commission (CCC); thus, the City is the governing agency for issuance of CDPs. However, there are some "areas of suspended certification" within various coastal zone segments that await resolution by the Commission. Within these suspended certification areas, the CCC is the governing agency for the issuance of CDPs.

City of San Diego Environmentally Sensitive Lands (ESL) Regulations

The purpose of the ESL Regulations (San Diego Land Development Code, Section 143.0130) is to "protect, preserve and, where damaged, restore the environmentally sensitive lands of San Diego and the viability of the species supported by those lands." The ESL Regulations serve to implement the Multiple Species Conservation Program (MSCP) by placing priority on the preservation of biological resources within the Multi-Habitat Planning Area (MHPA).

Unless specifically exempted, ESL Regulations apply to all proposed development when any of the following environmentally sensitive lands are present on the project area: sensitive biological resources; steep hillsides (defined in part as all lands that have a slope with a natural gradient of 25 percent or greater and a minimum elevation differential of 50 feet); coastal beaches; sensitive coastal bluffs; and 100-year floodplains.

All proposed developments subject to ESL Regulations that encroach into environmentally sensitive lands must obtain either a Neighborhood Development Permit (NDP) or a SDP. If development is proposed in the Coastal Overlay Zone, a CDP is also required. Limited exceptions to ESL Regulations apply in certain circumstances.

The ESL Regulations govern development for each type of sensitive land (sensitive biological resources, steep hillsides, coastal beaches, etc.). Outside the Coastal Overlay Zone, City linear utility projects, such as the proposed Master Program, are exempt from the development area regulations for steep hillsides and sensitive biological resources. In addition, Section 143.0111(i) of the ESL Regulations specifically exempts public maintenance access associated with the proposed project from limits on encroachment into steep hillsides and sensitive biological resources. Within the Coastal Overlay Zone, the ESL Regulations generally establish a 25 percent allowable development area in steep hillside areas, although development of up to 40 percent is permitted under certain circumstances for certain types of development, including public utility systems.

The ESL Regulations require impacts to wetlands be avoided unless the activities meet specific exemption criteria established in the ordinance. Impacts to City-defined wetlands require approval of deviation findings. For projects occurring within wetlands in the Coastal Overlay Zone, uses are limited to those uses identified in Section 143.0130(d). These uses are limited to aquaculture, nature study projects or similar resource dependent uses, wetland restoration projects, and incidental public service projects. Impacts to wetlands should only occur if they are unavoidable, have been minimized to the greatest degree possible, and have adequate mitigation. Wetlands must be mitigated in accordance with Section III(B)(1)(a) of the City's Land Development Manual Biology Guidelines. Additionally, the ESL Regulations for projects occurring within the Coastal Overlay Zone require a 100-foot buffer to be maintained around all wetlands, as appropriate, to protect the functions and values of the wetland. A lesser or greater buffer may be warranted based on consultation with the resources agencies (i.e., Corps, and the CDFG). The exemption for public maintenance access impacts to steep slopes and biological resources applies in the Coastal Overly Zone.

Plans submitted in accordance with the ESL Regulations shall, to the maximum extent feasible, comply with the various ESL Regulations. If a proposed development does not comply with all applicable development regulations of the ESL, the decision-maker may approve, conditionally approve, or deny the proposed SDP, subject to the decision-maker making findings in accordance with Section 126.0504 of the Land Development Code for deviations from the ESL regulations.

City of San Diego Historical Resources Regulations

The purpose of the Historical Resources Regulations (LDC Section 143.0200) is to "protect, preserve, and, where damaged, restore the historical resources of San Diego, which include historical buildings, historical structures or historical objects, important archaeological sites, historical districts, historical landscapes, and traditional cultural properties."

Minor alteration of a designated historic resource may be permitted if it would not adversely affect the special character or special historical, architectural, archaeological or cultural value of the resource and would be consistent with the Secretary of the Interior's Standards for Rehabilitation (Rehabilitation Standards) and Illustrated Guidelines for Rehabilitating Historic Buildings (Guidelines). A Construction Permit is required for any development on a premise that has historical resources on a site that would not adversely affect the historical resources and is consistent with one or more of the exemption criteria outlined in the regulations. A SDP is required for certain development proposals that do not qualify for an exemption in accordance with the regulations.

Important archaeological sites generally are to be conserved, except in cases when impacts are necessary to achieve a reasonable development area, with up to 25 percent encroachment into any important archaeological site allowed. Any encroachment into important archaeological sites is required to include measures to mitigate for the partial loss of the resource as a condition of approval. The mitigation is required to include preservation through avoidance of the remaining portion of the important archaeological site, and implementation of a research design and data recovery program that recovers the scientific value of the portion of the site that would be impacted. If a proposed development cannot, to the maximum extent feasible, comply with the Historical Resources Regulations (HRG), a deviation may be granted subject to the decision-maker making findings in accordance with Section 126.0504 of the Land Development Code.

City of San Diego Multiple Species Conservation Program Subarea Plan

The MSCP is a comprehensive habitat conservation planning program for southwestern San Diego County. A goal of the MSCP is to preserve a network of habitat and open space, and protecting biodiversity by conserving covered species. The MSCP also is intended to provide an economic benefit by providing certainty for future development, and decreasing the costs of compliance with federal and state laws protecting biological resources by streamlining permit procedures for development projects which impact habitat. Local jurisdictions, including the City, implement their portions of the MSCP Plan through subarea plans.

The City's MSCP Subarea Plan is a plan and process for the issuance of permits under the federal and state Endangered Species Act and the California NCCP Act of 1991. The primary goal of the MSCP Subarea Plan is to conserve viable populations of sensitive species and to conserve regional biodiversity. In July 1997, the City signed an Implementing Agreement with USFWS and CDFG. The Implementing Agreement serves as a binding contract between the City, USFWS and CDFG that identifies the roles and responsibilities of the parties to implement the MSCP and Subarea Plan. The Agreement became effective on July 17, 1997, and allows the City to issue Incidental Take Authorizations under the provisions of the MSCP. Applicable state

and federal permits would still be required for wetlands and listed species that are not covered by the MSCP. In addition, because the Corps was not a signatory agency to the MSCP, any projects requiring a Section 404 Clean Water Act permit from the Corps also require a USFWS Section 7 Consultation, if listed species may be impacted, regardless of whether they are considered covered species under the MSCP.

Under the Federal Endangered Species Act (FESA), an incidental take permit is required when non-Federal activities would result in "take" of the threatened or endangered specifies. A Habitat Conservation Plan (HCP) must accompany an application for Federal Incidental Take Permit (ITP). Take authorization for federally listed wildlife species covered in the HCP shall generally be effective upon approval of the HCP.

As of the date of surrender, April 20, 2010, the City has relinquished coverage and does not rely on the City's Federal ITP to authorize an incidental take of the two vernal pool animal species and five vernal pool plant species. Upon completion of a Habitat Conservation Plan (HCP) for vernal pools, the City would enter into an Implementing Agreement in order to obtain species coverage and a Federal ITP for the seven vernal pool species

The MSCP identifies a 56,831-acre MHPA in the City for preservation of core biological resource areas and corridors targeted for preservation. Portions of the storm water facilities to be maintained occur within the MHPA.

Water Quality Regulatory Framework

The regulatory framework for water quality includes the CWA, which established the NPDES permit program to regulate the discharge of pollutants from industrial, commercial and institutional processes, and point sources to waters of the United States, and the Porter-Cologne Water Quality Act and the Federal Water Pollution Control Act Amendments of 1972, which require that Water Quality Control Plans (Basin Plans) be prepared for the nine state-designated hydrologic basins in California, including the San Diego Region basin. The water quality regulatory framework is more fully described in Subchapter 4.8, Water Quality. As indicated in Subchapter 4.8, the City has prepared a Jurisdictional Urban Runoff Management Plan (JURMP), and the Standard Urban Stormwater Mitigation Plan (SUSMP), in accordance with requirements of the State Water Resources Control Board NPDES permit procedure. These documents address the process that the City would undertake to improve water quality. In addition to the JURMP and SUSMP, protection of surface water quality is also provided through the NPDES General Construction Permit and General Industrial Permit for the State of California.

4.1.2 Impacts

Significance Criteria

The City of San Diego's Significance Determination Thresholds (2011) state that a project may significantly impact land use if it would:

- Conflict or be inconsistent with the environmental goals, objectives or guidelines of a community or general plan; or
- Be inconsistent or conflict with adopted environmental plans for an area.

Analysis of Impacts

Issue 1: Would the Project be inconsistent or conflict with the environmental goals, objectives or guidelines of the General Plan or applicable Community or Park Plan?

The environmental goals, objectives and guidelines from the General Plan which are applicable to the proposed Master Program are associated with the following elements: Public Facilities, Services and Safety Element, Recreation Element and Conservation Element. Although the Community Plans assign different names for these elements and use a wide variety of narrative to express them, the applicable environmental goals, objectives and guidelines identified in the General Plan and various Community Plans can be characterized as follows:

- Maintain natural drainages;
- Minimize disturbance to natural habitat and the wildlife it supports;
- Protect water quality; and
- Create and maintain recreation opportunities associated with natural drainages.

In order to assess the relationship of storm water maintenance to the environmental goals, objectives and guidelines, the following discussion is based on these four over-arching goals and objectives. As indicated earlier, the storm water facilities included in the Master Program are those which generally occur within urban areas where flood control is necessary. As a result, many of the storm water facilities thread their way through highly urbanized areas. However, some of the facilities are located in areas which are located in open space and/or park land use designations of the City's Community Plans. When this occurs, storm water maintenance may relate to the environmental goals, objectives or guidelines of the affected Community Plan. An analysis of the specific applicable General and Community Plan policies is provided in Table 4.1-1 which is contained in Appendix C. Table 4.1-2 identifies those storm water facilities that lie within open space and/or park land use designations by community plan areas.

Table 4.1-2
MASTER PROGRAM STORM WATER FACILITIES WITHIN OPEN SPACE AND/OR PARK LAND USE DESIGNATIONS BY COMMUNITY PLAN AREA

Map No.	Community Plan Area	Facility Description	Total Length (linear feet)	Channels in Open Space and Park Land Use Designation (linear feet)			
				Open Space	Park	Total Open Space and Park	Percent of Total Facility (%)
7	Torrey Pines	Los Peñasquitos Channel	1,609	1,609		1,09	100
8		Los Peñasquitos Channel	1,600	1,542		1,548	97
11		Soledad Creek	2,539	2,057		2,057	81
12		Soledad Creek	1,397	1,397		2,487	100
34	Peñasquitos	Rose Creek	1,416	1,346		1,346	95
35		Rose Creek	2,270	1,817		1,817	80
51	Navajo	Red River Dr & Conestoga Dr	875	860		860	98
54	Navajo	San Carlos Channel	957	500		500	52
55	Linda Vista	Tecolote Creek Channel	2,584	286		286	11
56		Tecolote Creek Channel	2,018	1,964	48	2,012	99
57		Tecolote Creek Channel	768	768		768	100
64	College	Alvarado Channel	2,301	1,429		1,429	54
65a	Mid-City	Fairmont Channel	813	577		577	71
65b		Fairmont Channel	848	194		194	23
69		Auburn Creek Channel	2,356	1,263		1,263	54
70		Auburn Creek Channel	1,418	1,167		1,167	82
77		Chollas Creek Channel	422	408		408	97

Table 4.1-2 (cont.)
MASTER PROGRAM STORM WATER FACILITIES WITHIN OPEN SPACE AND/OR PARK LAND USE DESIGNATIONS BY COMMUNITY PLAN AREA

Map No.	Community Plan Area	Facility Description	Total Length (linear feet)	Channels in Open Space and Park Land Use Designation (linear feet)			
				Open Space	Park	Total Open Space and Park	Percent of Total Facility (%)
86	Balboa Park	Pershing Channel	2,047	0	2,023	2,023	99
94		South Chollas Creek Channel	2,595	594		594	23
95	Southeastern San Diego	South Chollas Creek Channel	1,604	1,395		1,395	87
97		South Chollas Creek Channel	1,098	771		771	70
98		South Chollas Creek Channel	2,800		162	162	6
103	Encanto	South Chollas Creek Channel	1,237	118		118	10
109		Jamacha Channel	2,390		392	392	16
113	Skyline-Paradise Hills	Jamacha Channel	815	815		815	100
114		Jamacha Channel	2,683	2,614		2,614	97
115		Jamacha Channel	1,886	1,865		1,865	99
131		Nestor Creek Channel	1,201	1,201		1,201	100
132	Otay Mesa-Nestor	Nestor Creek Channel	2,982	436	705	1,141	38
134		Nestor Creek Channel	1,309	1,088		1,088	83
138	Tijuana River	Tijuana River	1,837	1,387		1,387	76
139		Smugglers Gulch Channel	1,031	1,016		1,016	99
145		First San Diego River Improvement Project	3,325	3,209		3,209	97
146		First San Diego River Improvement Project	3,321	3,303		3,303	99
147		First San Diego River Improvement Project	3,369	3,350		3,350	99

Maintain Natural Drainages

Maintenance activities would not alter the configuration of the natural drainage courses included in the Master Program. While the Master Program does provide for removal of accumulated sediment and overgrown vegetation that interfere with conveyance of floodwater, it would not allow any physical modifications of the underlying drainage. Furthermore, the removal of riparian vegetation would not significantly impact the character of the natural drainages. In general, mature trees spaced at least 50 feet apart would be allowed to remain in place during maintenance. Given the fact that typical riparian tree canopy widths have a radius of 10-20 feet, this would allow the appearance of a continuous tree canopy following maintenance which would retain the visual character of these drainages. In addition, as stated in Subchapter 4.3, Biological Resources, the dominant understory vegetation would be expected to re-establish within six to 12 months of maintenance. Thus, the land use policy affect of removing this understory vegetation would be temporary in nature.

Minimize Disturbance To Natural Habitat And The Wildlife It Supports

As discussed in Subchapter 4.3, Biological Resources, maintenance activities would disturb wetland vegetation found within the storm water facilities and the wildlife it supports. Due to the impedance to flood water associated with wetland habitat, achieving the primary goal of the Master Program to control flooding, maintenance is expected to remove portions of wetland vegetation located within storm water facilities included in the Master Program. However, protocols in the Master Program, combined with biological mitigation outlined in Subchapter 4.3, would minimize impacts to natural habitat and wildlife in several ways. First, as discussed in Chapter 3.0, IHHAs would be completed prior to maintenance. A stated objective of these assessments is to minimize the amount of vegetation removal required to improve the ability of a storm water facility to convey flood water. In most cases, it is anticipated that removal of vegetation on the banks of storm water facilities would not be necessary to maximize flood water conveyance. As indicated earlier, trees spaced a minimum of 50 feet apart on the bottom of storm water facilities would remain after maintenance. The retention of mature trees and the ability of understory vegetation to naturally re-establish within a short period of time will help achieve the goal of minimizing impacts to natural habitat and wildlife. Lastly, as discussed in Subchapter 4.3, Biological Resources, impacts to wetland habitat would be mitigated by enhancing, restoring or creating new wetland habitat. Whenever feasible, this mitigation would occur within the same watershed as the impact. This mitigation would further minimize the net impact of maintenance on natural habitat and associated wildlife. Thus, the proposed Master Program would achieve the goal of minimizing disturbance to natural habitat.

Protect Water Quality

As discussed in Subchapter 4.8, Water Quality, maintenance of storm water facilities could adversely affect water quality by reducing the ability of sediment and vegetation within those facilities to remove and retain urban pollutants from surface water. Vegetation and sediment have the ability to remove urban pollutants through absorption and/or adsorption. Absorption refers to the ability of plants to remove pollutants by internalizing the pollutants in the plant tissue. Adsorption refers to the process where pollutants are removed by attaching to the outside

of materials. For example, pollutants attach to the outside surface of sediments through ionic bonding. The removal of sediment and/or vegetation in the course of maintenance would diminish the pollutant removal function of these components until they naturally re-establish between maintenance events. On the other hand, maintenance can improve water quality by eliminating the pollutants that have accumulated in a channel. Removal of the pollutants retained in sediment and plants would avoid the potential for them to be transported downstream during high runoff flows. Maintenance would also improve water quality by removing illegally dumped materials such as trash, appliances, furniture, shopping carts, and tires.

The potential benefits from maintenance combined with the mitigation measures and BMPs required to be applied to maintenance activities which may significantly reduce the natural roles of sediment and vegetation to remove pollutants would avoid any significant conflicts with the planning goals and objectives to protect water quality.

Create And Maintain Recreation Opportunities Associated With Natural Drainages

The Master Program would not interfere with the scenic, natural or cultural resources within resource-based parks. Drainages within resource-based parks are not bordered by development which requires flood control. Thus, these areas are not included in the Master Program.

The Master Program would not alter the natural landforms and would not result in the loss of open space. The configuration and continuity of the drainage system would be unchanged by maintenance activities. No filling or reconfiguration of the storm water facilities would occur as part of the Master Program. Thus, the Master Program would comply with the goal of maintaining natural drainage systems.

The Master Program would not preclude the linkage of canyons and hillsides as part of an overall regional natural open space system. Although biological resource impacts would be mitigated, the compensation would generally occur in the same watershed. Thus, the Master Program would be consistent with this goal related to preserving native vegetation.

Competing interests within a General Plan or Community Plan are not uncommon since these documents address a broad variety of conditions and objectives. Therefore, the following consistency analysis weighs and balances the policies in light of their purpose. Competing interests do not constitute a significant land use policy impact because the Master Program has been designed to conform to the objectives, policies, general land uses, and programs in the General Plan and applicable Community Plans . It is also important to note that the majority of the natural drainages included in the Master Program have been subject to maintenance activities in the past. Furthermore, as discussed in Subchapter 4.3, Biological Resources, wetland vegetation begins to re-establish within six to eight months of a maintenance event which results in restoration of its value to wildlife and its aesthetic value to the surrounding community.

Significance of Impacts

While maintenance would result in the temporary loss of vegetation associated with channels and natural drainages, maintenance would not impact the underlying drainages. Biological

mitigation would be carried out, generally within the same watershed as the maintenance, to mitigate for impacts to wildlife. As necessary, measures would be taken during and after maintenance to protect water quality. Thus, the proposed maintenance would be consistent with the environmental goals and policies of the General and Community Plans.

Mitigation Measures, Monitoring and Reporting

No mitigation measures would be required.

Issue 2: Would the Project conflict with any adopted regional plans or with environmental plans, including applicable habitat conservation plans?

City of San Diego Environmentally Sensitive Lands Regulations

The City's maintenance of storm water facilities under the Master Program would result in encroachment into the resources protected by the regulations including biological resources and special flood hazard areas resulting from maintenance activities. No impacts to steep slopes would occur with proposed maintenance because the slopes are not natural and/or would not exceed a height greater than 50 feet. The exemption granted to public maintenance access would preclude any conflicts with ESL Regulations in relationship to steep slopes or biological resources.

Encroachment into biological resources would result from removal of sensitive vegetation related to maintenance activities within or adjacent to the channels. As discussed in Subchapter 4.3, Biological Resources, channel maintenance is anticipated to impact a variety of upland as well as wetland vegetation types that are protected under the ESL Regulations.

Equipment noise would have an indirect impact on sensitive bird species due to interference with breeding behavior. The effects of sound are subjective insofar as the receptor determines the level of nuisance, and there is a wide range of tolerance. Unwanted sound can cause disruption in communication (e.g., avian nestlings calling to their parents) and disruption of sleep or rest patterns (e.g., daytime sounds as they affect primarily nocturnal animals). For the least Bell's vireo, southwestern willow flycatcher, and the coastal California gnatcatcher, a level of 60 dBA L_{eq} is used as the sensitive bird breeding noise impact threshold in the San Diego region. In practice, this threshold has been modified to address the common occurrence where ambient pre-project noise levels in the nesting habitat exceed 60 dBA L_{eq}. As discussed in Subchapter 4.6, Noise, the 60 dBA L_{eq} contour could extend from 243 to 739 feet from the maintenance activity; the lowest distance represents hand clearing while the highest distance is associated with mechanized equipment.

Indirect noise impacts to nesting/breeding coastal California gnatcatchers, least Bell's vireo, or raptors could occur if maintenance activities create noise in excess of 60 dB(A) L_{eq} in occupied habitat during the gnatcatcher breeding season (March 1 to August 15), vireo breeding season (March 15 to September 15), or raptor breeding season (February 1 to August 1). Thus, significant impacts to ESL-protected biological resources could occur from maintenance.

Construction activities could also impact raptors protected under the ESL Regulations, which have potential to occur in trees within riparian woodlands and eucalyptus woodlands, or in adjacent grasslands. Construction impacts to these birds may occur when maintenance would take place within 300 feet of an active Cooper's hawk nest, 900 feet of an active northern harrier nest, or 500 feet of any other raptor nest. Such activity may cause temporary or permanent abandonment of a nest, which would expose eggs or nestlings to predation or exposure to the elements.

By definition, maintenance would occur in areas that are identified as special flood areas. Maintenance would impact these areas through removal of accumulated sediment and/or vegetation protected under ESL Regulations.

City of San Diego Historical Resources Regulations

Although a small chance exists that maintenance could impact historical resources, implementation of mitigation measures identified in Subchapter 4.4, Historical Resources, would reduce potential impacts to historical resources to below a level of significance.

City of San Diego Multiple Species Conservation Program Subarea Plan

As illustrated in Table 4.1-3, MSCP Consistency Evaluation, maintenance activities would be consistent with relevant policies and guidelines of the City's MSCP.

Table 4.1-3
MSCP CONSISTENCY EVALUATION

MSCP Policy/Guideline	Evaluation	Consistent?
General Planning Policies and Guidelines		
Flood control should generally be limited to existing agreements with Resource Agencies unless demonstrated to be needed based on a cost-benefit analysis and pursuant to the restoration plan. Floodplains within the MHPA, and upstream from the MHPA, if feasible, should remain in a natural condition and configuration in order to allow for the ecological, geological, hydrological, and other natural processes to remain or be restored.	While implementation of the Master Program would periodically remove natural vegetation associated with earthen storm water facilities to assure proper flood control function, the natural configuration of the storm water facilities would not be modified other than to remove accumulated sediment and vegetation would be expected to reestablish between maintenance intervals.	Yes
No berming, channelization, or man-made constraints or barriers to creek, tributary, or river flows should be allowed in any floodplain within the MHPA unless reviewed by all appropriate agencies, and adequately mitigated. Review must include impacts to upstream and downstream habitats, flood flow volumes, velocities and configurations, water availability, and changes to the water table level.	The Master Program is focused on maintaining existing storm water facilities. In some cases, check dams or other devices may be installed to maintain water quality. However, the location and design of these facilities would be reviewed by the appropriate agencies and City MSCP staff, as part of the annual storm water maintenance plan approval process.	Yes
No riprap, concrete, or other unnatural material shall be used to stabilize river, creek, tributary, and channel banks within the MHPA. River, stream, and channel banks shall be natural, and stabilized where necessary with willows and other appropriate native plantings. Rock gabions may be used where necessary to dissipate flows and should incorporate design features to ensure wildlife movement.	The Master Program is focused on maintaining existing storm water facilities which would include replacing existing riprap, concrete or unnatural material. While installation of new riprap, concrete or other materials may be necessary, it would not be expected to be a common occurrence. Furthermore, mitigation for the additional impacts would be required.	Yes
Temporary construction areas and roads, staging areas, or permanent access roads must not disturb existing habitats unless determined to be unavoidable. All such activities must occur on existing agricultural lands or other disturbed areas rather than in habitat. If temporary habitat disturbance is unavoidable, then restoration of, and/or mitigation for the disturbed areas after project completion will be required.	Access, staging and stock pile areas have been reviewed and approved as part of the Master Program. No additional access, staging or stock piles would be created without prior approval from the appropriate agencies and City MSCP staff.	Yes

Table 4.1-3 (cont.)
MSCP CONSISTENCY EVALUATION

MSCP Policy/Guideline	Evaluation	Consistent?
General Planning Policies and Guidelines (cont.)		
Construction and maintenance activities in wildlife corridors must avoid significant disruption of corridor usage. Environmental documents and Mitigation Monitoring and Reporting Programs covering such development must clearly specify how this will be achieved, and construction plans must contain all the pertinent information and be readily available to crews in the field. Training of construction crews and field workers must be conducted to ensure that all conditions are met. A responsible party must be specified.	Maintenance activities would be of limited durations and would occur during daylight hours when wildlife movement is limited.	Yes
Roads in the MHPA will be limited to those identified in Community Plan Circulation Elements, collector streets essential for area circulation, and necessary maintenance/emergency access roads.	Access would be limited to those routes included in the Master Program and analyzed in the certified PEIR without approval of appropriate agencies and City MSCP staff.	Yes
Development of roads in canyon bottoms should be avoided whenever feasible. If an alternative location outside the MHPA is not feasible, then the road must be designed to cross the shortest length possible of the MHPA in order to minimize impacts and fragmentation of sensitive species and habitat. If roads cross the MHPA, they should provide for fully functional wildlife movement capability. Bridges are the preferred method of providing for movement, although culverts in selected locations may be acceptable. Fencing, grading, and plant cover should be provided where needed to protect and shield animals, and guide them away from roads to appropriate crossings.	Access would be limited to those routes included in the Master Program and analyzed in the certified PEIR without approval of appropriate agencies and City MSCP staff.	Yes
Where possible, roads within the MHPA should be narrowed from existing design standards to minimize habitat fragmentation and disruption of wildlife movement and breeding areas. Roads must be located in lower quality habitat or disturbed areas to the extent possible.	Access would limited to those routes included in the Master Program and analyzed in the certified PEIR without approval of appropriate agencies and City MSCP staff.	Yes
For the most part, existing roads and utility lines are considered a compatible use within the MHPA and therefore will be maintained. Exceptions may occur where underutilized or duplicative road systems are determined not to be necessary.	Access would limited to those routes included in the Master Program and analyzed in the certified PEIR without approval of appropriate agencies and City MSCP staff.	Yes

Table 4.1-3 (cont.)
MSCP CONSISTENCY EVALUATION

MSCP Policy/Guideline	Evaluation	Consistent?
MHPA Adjacency Guidelines		
Lighting of all developed adjacent areas should be directed away from the MHPA. Where necessary, development should provide adequate shielding with non-invasive plant materials (preferably native), berms, and/or other methods to protect MHPA and sensitive species from night lighting.	Maintenance activities would be of limited durations and would occur during daylight hours.	Yes
Uses in or adjacent to the MHPA should be designed to minimize noise impacts. Excessively noisy uses or activities adjacent to breeding areas must incorporate noise reduction measures and be curtailed during the breeding season of sensitive species.	Wherever possible, maintenance activities would avoid breeding seasons for sensitive bird species. Where avoidance during the breeding season is not possible, noise reductions measures would be incorporated into the maintenance activities.	Yes
No invasive non-native plant species shall be introduced into areas adjacent to the MHPA.	The Master Program contains maintenance protocols which prohibit the use of invasive plants in revegetation efforts as well as measures to limit the spread of existing invasive species into downstream areas during maintenance.	Yes
General Management Directives		
Mitigation, when required as part of project approvals, shall be performed in accordance with the City of San Diego ESL Regulations and Biology Guidelines.	Mitigation measures would be carried out in compliance with the ESL Regulations and Biology Guidelines.	Yes
Restoration or revegetation undertaken within the MHPA shall be performed in a manner acceptable to the City. Wetland restoration/revegetation proposals are subject to permit authorization by federal and state agencies.	Restoration or revegetation would be subject to approval by the City as well as state and federal agencies.	Yes
Remove giant reed, tamarisk, pampas grass, castor bean, artichoke thistle, and other exotic invasive species from creek and river systems, canyons and slopes, and elsewhere within the MHPA as funding or other assistance becomes available. Avoid removal activities during the reproductive seasons of sensitive species and avoid/minimize impacts to sensitive species or native habitats.	By their nature, maintenance activities would promote this guideline because they would remove these species due to their adverse impact on the flood control function of storm water facilities. In addition, the Master Program includes maintenance protocols to minimize the downstream spread of invasive species during removal.	Yes
Perform standard maintenance, such as clearing and dredging of existing flood channels, during the non-breeding or nesting season of sensitive bird or wildlife species utilizing the riparian habitat. For the least Bell's vireo, the non-breeding season generally includes mid-September through mid-March.	The Master Program contains specific maintenance protocols that would preclude clearing of suitable habitat during the designated breeding seasons for potentially occurring sensitive birds (e.g., coastal California gnatcatcher and least Bell's vireo). In addition, noise attenuation barriers would be required when maintenance noise levels could interfere with breeding activities.	Yes
Review existing flood control channels within the MHPA periodically (every 5 to 10 years) to determine the need for their retention and	The Master Program would provide for the routine inspections and maintenance identified in this guideline.	Yes

Table 4.1-3 (cont.)
MSCP CONSISTENCY EVALUATION

MSCP Policy/Guideline	Evaluation	Consistent?
maintenance, and to assess alternatives, such as restoration of natural rivers and floodplains.		
Special Conditions for Covered Species		
Area-specific management directives for the coastal California gnatcatcher must include measures to reduce edge effects and minimize disturbance during the nesting period, fire protection measures to reduce the potential for habitat degradation due to unplanned fire, and management measures to improve habitat quality including vegetation structure. No clearing of occupied habitat within the City's MHPA may occur between March 1 and August 15.	The MMRP included in the PEIR contains mitigation measures that would preclude clearing of suitable habitat during the designated breeding season for the coastal California gnatcatcher. In addition, noise attenuation barriers would be required when maintenance noise levels could interfere with breeding activities within the MHPA.	Yes
Area-specific management directives for least Bell's vireo and southwestern willow flycatcher must include measures to provide appropriate successional habitat, upland buffers for all known populations, cowbird control, and specific measures to protect against detrimental edge effects to this species. Any clearing of occupied habitat must occur between September 15 and March 15 for the vireo and between September 1 and May 1 for the willow flycatcher (i.e., outside of the nesting season).	The MMRP included in the PEIR contains specific mitigation measures that would preclude clearing of suitable habitat during the designated breeding seasons for the southwestern willow flycatcher and least Bell's vireo. In addition, noise attenuation barriers would be required when maintenance noise levels could interfere with breeding activities within the MHPA.	Yes
Area-specific management directives for the Cooper's hawk must include 300-foot impact avoidance areas around active nests, and minimization of disturbance in oak woodlands and oak riparian forests.	The MMRP included in the PEIR includes a mitigation measure which would require maintenance activities to maintain a setback of 300 feet from active nests.	Yes
Area-specific management directives for the Northern Harrier must: manage agricultural and disturbed lands within 4 miles of nesting habitat to provide foraging habitat; include an impact avoidance area (900 feet) around active nests; and include measures for maintaining winter foraging habitat in preserve areas in Proctor Valley, around Sweetwater Reservoir, San Miguel Ranch, Otay Ranch east of Wueste Road, Lake Hodges, and San Pasqual Valley.	The MMRP included in the PEIR includes a mitigation measure which would require maintenance activities to maintain a setback of 900 feet from active nests.	Yes
Area-specific management directives for San Diego barrel cactus must include measures to protect this species from edge effects, unauthorized collection, and include appropriate fire management/control practices to protect against a too-frequent fire cycle.	The MMRP included in the PEIR includes a mitigation measure which requires relocation or replanting of this species in the event a substantial number of sensitive plants would be lost in the course of maintenance.	Yes
Area specific management directives for Nuttall's lotus must include specific measures to protect against detrimental edge effects.	The MMRP included in the PEIR includes protocol mitigation measure which requires relocation or replanting of this species in the event a substantial number of sensitive plants would be lost in the course of maintenance.	Yes

Water Quality Regulatory Framework

As discussed in Subchapter 4.8, Water Quality, implementation of the Master Program would in many cases result in an improvement with respect to water quality by removing polluted sediments. When maintenance is determined to have a net adverse impact on water quality, the mitigation measures identified in Subchapter 4.8, Water Quality, would serve to reduce the water quality impacts of maintenance to below a level of significance. Thus, maintenance performed in accordance with the Master Program would not result in a substantial affect on water quality.

Significance of Impacts

Removal of vegetation within these facilities would result in a significant land use impact due to the loss of sensitive vegetation and the associated wildlife protected by the City's ESL Regulations as well as regional conservation plans. Indirect, significant land use impacts could arise from noise impacts to nesting/breeding coastal California gnatcatchers, least Bell's vireo, or raptors if maintenance activities create noise in excess of 60 dB(A) L_{eq} in occupied habitat during the breeding season of each species. The potential also exists that maintenance could impact historical resources, as discussed in Subchapter 4.4, Historical Resources.

Mitigation Measures, Monitoring and Reporting

The requirement that IHAs be conducted prior to conducting maintenance in areas which could possess important historical resources (Mitigation Measure 4.4.1 coupled with maintenance monitoring provisions when historical resources are determined to be present or potentially present (Mitigation Measure 4.4.2) would reduce potential impacts to historical resources to below a level of significance.

Implementation of water quality protection measures (Mitigation Measures 4.8.1 through 4.8.3), would reduce potential water quality impacts to below a level of significance.

Implementation of the following mitigation measures would reduce the potential impacts to sensitive species targeted for protection by the MSCP to below a level of significance.

Mitigation Measure 4.1.1: Prior to commencing maintenance on any storm water facility within, or immediately adjacent to, a MHPA, the ADD Environmental Designee shall verify that all MHPA boundaries and limits of work have been delineated on all maintenance documents.

Mitigation Measure 4.1.2: A qualified biologist (possessing a valid Endangered Species Act Section 10(a)(1)(a) recovery permit) shall survey those habitat areas inside and outside the MHPA suspected to serve as habitat (based on historical records or site conditions) for the coastal California gnatcatcher, least Bell's vireo and/or other listed species. Surveys for the appropriate species shall be conducted pursuant to the protocol survey guidelines established by the U.S. Fish and Wildlife Service. When other sensitive species, including, but not limited to, the arroyo toad, burrowing owl, or Quino checkerspot butterfly are known or suspected to be present all appropriate protocol surveys and mitigation measures identified in Subchapter 4.3, Biological Resources, required shall be implemented.

Mitigation Measure 4.1.3: If a listed species is located within 500 feet of a proposed maintenance activity and maintenance would occur during the associated breeding season, an analysis of the noise generated by maintenance activities shall be completed by a qualified acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the ADD Environmental Designee. The analysis shall identify the location of the 60 dB(A) L_{eq} noise contour on the maintenance plan. The report shall also identify measures to be undertaken during maintenance to reduce noise levels.

Mitigation Measure 4.1.4: Based on the location of the 60 dB(A) L_{eq} noise contour and the results of the protocol surveys, the Project Biologist shall determine if maintenance has the potential to impact breeding activities of listed species. If one or more of the following species are determined to be significantly impacted by maintenance, then maintenance (inside and outside the MHPA) shall avoid the following breeding seasons unless it is determined that maintenance is needed to protect life or property.

- Coastal California gnatcatcher (between March 1 and August 15 inside the MHPA only; no restrictions outside MHPA);
- Least Bell's vireo (between March 15 and September 15); and
- Southwestern willow flycatcher (between May 1 and September 1).

Mitigation Measure 4.1.5: If maintenance is required during the breeding season for a listed bird to protect life or property, then the following conditions must be met:

- At least two weeks prior to the commencement of maintenance activities, under the direction of a qualified acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from maintenance activities shall not exceed 60 dB(A) hourly average at the edge of occupied habitat. Concurrent with the commencement of maintenance activities and the maintenance of necessary noise attenuation facilities, noise monitoring shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician or biologist, then the associated maintenance activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season of the subject species, as noted above.
- Maintenance noise shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the maintenance activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the ADD, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of maintenance equipment and the simultaneous use of equipment.

- Prior to the commencement of maintenance activities that would disturb sensitive resources during the breeding season, the biologist shall ensure that all fencing, staking and flagging identified as necessary on the ground have been installed properly in the areas restricted from such activities.

- If noise attenuation walls or other devices are required to assure protection to identified wildlife, then the biologist shall make sure such devices have been properly constructed, located and installed.

Mitigation Measure 4.1.6: A pre-maintenance meeting shall be held with the Maintenance Contractor, City representative and the Project Biologist. The Project Biologist shall discuss the sensitive nature of the adjacent habitat with the crew and subcontractor. Prior to the pre-maintenance meeting, the following shall be completed:

- The Storm Water Division (SWD) shall provide a letter of verification to the Mitigation Monitoring Coordination Section stating that a qualified biologist, as defined in the City of San Diego Biological Resources Guidelines, has been retained to implement the projects MSCP monitoring Program. The letter shall include the names and contact information of all persons involved in the Biological Monitoring of the project. At least thirty days prior to the pre-maintenance meeting, the qualified biologist shall submit all required documentation to MMC, verifying that any special reports, maps, plans and time lines, such as but not limited to, revegetation plans, plant relocation requirements and timing, MSCP requirements, avian or other wildlife protocol surveys, impact avoidance areas or other such information has been completed and updated.

- The limits of work shall be clearly delineated. The limits of work, as shown on the approved maintenance plan, shall be defined with orange maintenance fencing and checked by the biological monitor before initiation of maintenance. All native plants or species of special concern, as identified in the biological assessment, shall be staked, flagged and avoided within Brush Management Zone 2, if applicable.

Mitigation Measure 4.1.7: Maintenance plans shall be designed to accomplish the following.

- Invasive non-native plant species shall not be introduced into areas adjacent to the MHPA. Landscape plans shall contain non-invasive native species adjacent to sensitive biological areas, as shown on the approved maintenance plan.

- All lighting adjacent to, or within, the MHPA shall be shielded, unidirectional, low pressure sodium illumination (or similar) and directed away from sensitive areas using appropriate placement and shields. If lighting is required for nighttime maintenance, it shall be directed away from the preserve and the tops of adjacent trees with potentially nesting raptors, using appropriate placement and shielding.

- All maintenance activities (including staging areas and/or storage areas) shall be restricted to the disturbance areas shown on the approved maintenance plan. The project biologist shall monitor maintenance activities, as needed, to ensure that maintenance

activities do not encroach into biologically sensitive areas beyond the limits of work as shown on the approved maintenance plan.

- No trash, oil, parking or other maintenance-related activities shall be allowed outside the established maintenance areas including staging areas and/or storage areas, as shown on the approved maintenance plan. All maintenance related debris shall be removed off-site to an approved disposal facility.

- Access roads through MHPA-designated areas shall comply with the applicable policies contained in the "Roads and Utilities Construction and Maintenance Policies" identified in Section 1.4.2 of the City's Subarea Plan.

Mitigation Measure 4.1.8: Prior to commencing any maintenance in, or within 500 feet of any area determined to support coastal California gnatcatchers, the ADD Environmental Designee shall verify that the MHPA boundaries and the following project requirements regarding the coastal California gnatcatcher are shown on the maintenance plans:

NO MAINTENANCE ACTIVITIES SHALL OCCUR BETWEEN MARCH 1 AND AUGUST 15, THE BREEDING SEASON OF THE COASTAL CALIFORNIA GNATCATCHER, UNTIL THE FOLLOWING REQUIREMENTS HAVE BEEN MET TO THE SATISFACTION OF THE ADD ENVIRONMENTAL DESIGNEE:

a. A QUALIFIED BIOLOGIST (POSSESSING A VALID ENDANGERED SPECIES ACT SECTION 10(a)(1)(A) RECOVERY PERMIT) SHALL SURVEY THOSE HABITAT AREAS WITHIN THE MHPA THAT WOULD BE SUBJECT TO MAINTENANCE NOISE LEVELS EXCEEDING 60 DECIBELS [dB(A)] HOURLY AVERAGE FOR THE PRESENCE OF THE COASTAL CALIFORNIA GNATCATCHER. SURVEYS FOR THE COASTAL CALIFORNIA GNATCATCHER SHALL BE CONDUCTED PURSUANT TO THE PROTOCOL SURVEY GUIDELINES ESTABLISHED BY THE U.S. FISH AND WILDLIFE SERVICE WITHIN THE BREEDING SEASON PRIOR TO THE COMMENCEMENT OF ANY MAINTENANCE. IF GNATCATCHERS ARE PRESENT, THEN THE FOLLOWING CONDITIONS MUST BE MET:

    1. BETWEEN MARCH 1 AND AUGUST 15, MAINTENANCE OF OCCUPIED GNATCATCHER HABITAT SHALL BE PERMITTED. AREAS RESTRICTED FROM SUCH ACTIVITIES SHALL BE STAKED OR FENCED UNDER THE SUPERVISION OF A QUALIFIED BIOLOGIST; AND

    2. BETWEEN MARCH 1 AND AUGUST 15, NO MAINTENANCE ACTIVITIES SHALL OCCUR WITHIN ANY PORTION OF THE SITE WHERE MAINTENANCE ACTIVITIES WOULD RESULT IN NOISE LEVELS EXCEEDING 60 dB(A) HOURLY AVERAGE AT THE EDGE

OF OCCUPIED GNATCATCHER HABITAT. AN ANALYSIS SHOWING THAT NOISE GENERATED BY MAINTENANCE ACTIVITIES WOULD NOT EXCEED 60 dB(A) HOURLY AVERAGE AT THE EDGE OF OCCUPIED HABITAT MUST BE COMPLETED BY A QUALIFIED ACOUSTICIAN (POSSESSING CURRENT NOISE ENGINEER LICENSE OR REGISTRATION WITH MONITORING NOISE LEVEL EXPERIENCE WITH LISTED ANIMAL SPECIES) AND APPROVED BY THE CITY MANAGER AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT OF MAINTENANCE ACTIVITIES. PRIOR TO THE COMMENCEMENT OF MAINTENANCE ACTIVITIES DURING THE BREEDING SEASON, AREAS RESTRICTED FROM SUCH ACTIVITIES SHALL BE STAKED OR FENCED UNDER THE SUPERVISION OF A QUALIFIED BIOLOGIST; OR

3. AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT OF MAINTENANCE ACTIVITIES, UNDER THE DIRECTION OF A QUALIFIED ACOUSTICIAN, NOISE ATTENUATION MEASURES (e.g., BERMS, WALLS) SHALL BE IMPLEMENTED TO ENSURE THAT NOISE LEVELS RESULTING FROM MAINTENANCE ACTIVITIES WILL NOT EXCEED 60 dB(A) HOURLY AVERAGE AT THE EDGE OF HABITAT OCCUPIED BY THE COASTAL CALIFORNIA GNATCATCHER. CONCURRENT WITH THE COMMENCEMENT OF MAINTENANCE ACTIVITIES AND THE CONSTRUCTION OF NECESSARY NOISE ATTENUATION FACILITIES, NOISE MONITORING* SHALL BE CONDUCTED AT THE EDGE OF THE OCCUPIED HABITAT AREA TO ENSURE THAT NOISE LEVELS DO NOT EXCEED 60 dB(A) HOURLY AVERAGE. IF THE NOISE ATTENUATION TECHNIQUES IMPLEMENTED ARE DETERMINED TO BE INADEQUATE BY THE QUALIFIED ACOUSTICIAN OR BIOLOGIST, THEN THE ASSOCIATED MAINTENANCE ACTIVITIES SHALL CEASE UNTIL SUCH TIME THAT ADEQUATE NOISE ATTENUATION IS ACHIEVED OR UNTIL THE END OF THE BREEDING SEASON (AUGUST 16).

* Maintenance noise shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the maintenance activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the ADD Environmental Designee, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of maintenance equipment and the simultaneous use of equipment.

b. IF COASTAL CALIFORNIA GNATCATCHERS ARE NOT DETECTED DURING THE PROTOCOL SURVEY, THE QUALIFIED BIOLOGIST SHALL SUBMIT SUBSTANTIAL EVIDENCE TO THE CITY MANAGER AND APPLICABLE RESOURCE AGENCIES WHICH DEMONSTRATES

WHETHER OR NOT MITIGATION MEASURES SUCH AS NOISE WALLS ARE NECESSARY BETWEEN MARCH 1 AND AUGUST 15 AS FOLLOWS:

1. IF THIS EVIDENCE INDICATES THE POTENTIAL IS HIGH FOR COASTAL CALIFORNIA GNATCATCHER TO BE PRESENT BASED ON HISTORICAL RECORDS OR SITE CONDITIONS, THEN CONDITION A.III SHALL BE ADHERED TO AS SPECIFIED ABOVE.

2. IF THIS EVIDENCE CONCLUDES THAT NO IMPACTS TO THIS SPECIES ARE ANTICIPATED, NO MITIGATION MEASURES WOULD BE NECESSARY.

Issue 3: Would the Project be in conflict with any policy or regulation of an agency with jurisdiction over the Project?

Agencies that have jurisdiction over the Master Program would include the Corps, USFWS, RWQCB, CCC, and CDFG with regard to jurisdictional wetlands. Projects are required to abide by the "no net loss" policy with regard to wetlands per both state and federal law. The Corps and RWQCB must authorize wetland disturbance through permits issued pursuant to the CWA (Sections 404 and 401). USFWS and CDFG would issue permits for take of listed species. In addition, CDFG must issue Section 1605 Streambed Alteration Agreement for maintenance proposals that would impact streambeds. A NPDES Permit issued by RWQCB would be required. Individual CDPs issued by the CCC would be required for maintenance within the CCC jurisdiction and the Deferred Certification Areas of the Coastal Zone.

The Master Program would not conflict with any policy or regulation mandated by the Corps, USFWS, CDFG, RWQCB or CCC, as compliance would be required to issue necessary permits.

Significance of Impacts

As stated above, the Master Program would not conflict with any policy or regulation mandated by the Corps, USFWS, CDFG, RWQCB or CCC, as compliance would be required to issue necessary permits.

Mitigation Measures, Monitoring and Reporting

No significant impacts are identified; therefore, no mitigation measures are required.

Issue 4: Would the Project be in conflict with adjacent land uses?

Maintenance activities have the potential to adversely affect adjacent development. Land use activities that would be sensitive to disruption from maintenance include residential, recreation, hospitals, and schools. Equipment noise and dust would be the primary sources of impact. As discussed in Subchapter 4.6, Noise, hourly average noise levels could reach 75 dB(A) within approximately 50 feet from the edge of the channel. The disruption would primarily be associated with activities within the storm water facilities. However, disruption would also

occur from use of access roads as well as staging areas outside the storm water facilities. In limited cases, disruption may occur from the creation of access roads where none exist.

With respect to noise-sensitive land uses, several factors serve to reduce the noise impact. First, maintenance activities would be required to comply with the City of San Diego Noise Abatement and Control Ordinance. As a result, maintenance activities would be limited to the hours of 7 a.m. to 7 p.m., Monday through Saturday, excluding holidays and would not exceed an hourly average of 75 dB(A) over an 8-hour period (refer to Subchapter 4.6, Noise, for more detail). Thus, maintenance noise would not disrupt the early morning and evening activities (e.g. sleep), which tend to be the most sensitive to noise.

Standard dust control measures required by the City's grading ordinance would be implemented to control dust.

In addition to the regulatory controls on maintenance, the limited duration and frequency of maintenance within specific channels also would serve to minimize the impact on adjacent areas. As discussed in Chapter 3.0, Project Description, most maintenance would be completed within a matter of days and would occur, on average, no more frequently than once every three years. Natural areas would also be affected by noise and dust, especially if they are occupied by sensitive bird species which have been proven to be adversely affected by high noise levels during their breeding season. While recreation activities (e.g. hiking) may be disrupted by equipment noise, the short-duration and frequency of these activities within specific storm water facilities would minimize the impact. Should sensitive birds be determined to be adversely affected by maintenance noise, implementation of controls on the season and level of noise during the breeding season would be required (refer to Subchapter 4.3, Biological Resources).

Significance of Impacts

As stated above, land use conflict potential would be reduced to less than significant levels through regulatory controls and compliance with City of San Diego ordinances.

Mitigation Measures, Monitoring and Reporting

No significant impacts are identified; therefore, no mitigation measures are required.

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4.2 AESTHETICS/NEIGHBORHOOD CHARACTER

4.2.1 Existing Conditions

Visual Setting and Site Characteristics

The storm water facilities included in the Master Program occur in various visual settings. The majority of areas surrounding the affected storm water facilities are comprised of residential and commercial development. Within urban settings, the storm water facilities which are more natural in appearance are considered aesthetic features which enhance the neighborhood character by providing visual relief from development.

Other visual resources located within the vicinity of the storm water facilities subject to the Master Program include water bodies (e.g., the Pacific Ocean, Mission Bay, and San Diego Bay), hillsides, canyons, coastal bluffs and beaches, and other open space areas such as parks and preserves. Many of the storm water facilities segments are located within or near visual resources identified and/or designated in the City's General Plan and community plans. A number of these scenic resources are visible from public roads or paths adjacent to or within the resources. In addition, many of these resources are visible from adjacent residential and other private land uses.

The existing storm water facilities, as detailed in Table 3-1, range in type from natural, soft-bottomed storm water facilities with mature vegetation to concrete-lined, unvegetated storm water facilities. Since the majority of these facilities are trapezoidal in shape, side-slopes on several soft-bottom (earthen) facilities have been reinforced by concrete and/or rip-rap rock revetment. In general, the soft-bottomed, vegetated channels are most often seen as natural storm water courses that are aesthetically pleasing while the concrete-lined channels and basins may detract aesthetic value from the neighborhood. It is noted that there are cases where natural, soft-bottomed storm water facilities are considered a negative aesthetic feature, such as when the storm water facilities are immensely overgrown, filled with trash and debris, and when they act as camps for homeless people. As conveyance structures, storm water facilities, both concrete-lined and soft-bottomed, often become overgrown with native and invasive vegetation as well as trash and debris when they are not maintained.

Neighborhood Character

The neighborhood characteristics for storm water facilities vary, as they are scattered throughout different neighborhoods within the City. Many are within residential neighborhoods, commercial areas, natural canyons/river valleys, and industrial areas.

Views

In general, the public views of the storm water facilities are from roadways. The facilities are often hidden from view by dense vegetation in the area adjacent to the proposed maintenance or by topography since many of the facilities are located at valley bottoms. Many of the facilities

are only visible from private residences or commercial areas, which are not generally considered sensitive views.

4.2.2 Impacts

Significance Criteria

The City of San Diego's Significance Determination Thresholds (2011) state that a project may significantly impact aesthetics and/or neighborhood character if it would:

- Result in the physical loss, isolation or degradation of a community identification symbol or landmark (e.g., stand of trees, coastal bluff, and/or historic landmark), which is identified in the General Plan, applicable community plan or local coastal program; or
- Strongly contrast with the surrounding development or natural topography through excessive height, bulk, signage, or architectural projections.

Analysis of Impacts

Issue 1: Would the Project substantially alter the existing character of the study area?

Issue 2: Would the Project result in the loss of any distinctive or landmark tree(s), or a stand of mature trees?

Aesthetic/neighborhood character impacts related to the proposed maintenance activities would be associated with the loss of large stands of trees and the aesthetic value to the surrounding area associated with those large stands of trees. As the maintenance activities would be associated with maintenance of existing channels and would not result in new channels or buildings, these activities would not constitute a strong contrast with surrounding development or natural topography.

As described in Chapter 3.0, Project Description, the proposed Master Program includes a range of maintenance activities. Depending on the conditions of the storm water facility, vegetation and debris removal and/or dredging would be completed by either mechanical or non-mechanical means. The selection of maintenance method and equipment would primarily be determined by the characteristics of each storm water facility, including size (width and depth), flow-characteristics, surrounding land uses and vegetation, availability of access, and whether the facility is concrete-lined or natural-bottom. In some cases, the maintenance activity may require water diversion or dewatering. The frequency of maintenance would vary with facility and seasonal conditions, but it is anticipated that most facilities would be maintained every three years. IMPs would be developed for each storm water facility and basin to ensure proper maintenance and determine appropriate maintenance.

The removal of well-developed riparian vegetation associated with natural drainages in order to improve the ability of these drainages to convey flood water would diminish the aesthetic value of the natural drainages. However, the impact of maintenance on the aesthetic/neighborhood character value associated with natural drainages possessing mature trees would not be

significant. In general, mature trees spaced at least 50 feet apart would be allowed to remain in place during maintenance. Given the fact that typical riparian tree canopy widths have a radius of 10-20 feet, this would allow the appearance of a continuous tree canopy to exist following maintenance which would retain the aesthetic value of these drainages. In addition, as stated in Subchapter 4.3, Biological Resources, the dominant understory vegetation (e.g. cat-tails) would be expected to re-establish within one year of maintenance. Thus, the aesthetic/neighborhood character impact of removing this understory vegetation would be temporary in nature.

Lastly, as indicated in Chapter 3.0, Project Description, maintenance activities would not alter the existing configuration of existing natural drainage courses included in the Master Program. Disturbance of areas outside the affected storm water facilities could occur from temporary stockpiling of material removed from the channel and staging areas. Aesthetic impacts related to these activities would be temporary in nature as they would normally not be present for more than 30 days. In addition, the Master Program requires disturbed areas which are not needed to maintain the flood control function of a facility to be revegetated as soon as possible during or after completion of the maintenance.

Significance of Impacts

As maintenance activities would retain many of the large trees, and because undergrowth would recover within six to 12 months after maintenance, maintenance activities would not result in a significant aesthetic/neighborhood character impact.

Mitigation Measures, Monitoring and Reporting

In the absence of significant aesthetic/neighborhood character impacts, no mitigation measures are required.

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4.3 BIOLOGICAL RESOURCES

The following discussion is based on a biological resources study completed for the proposed Master Program by HELIX Environmental Planning, Inc. (HELIX) in June 2009 and revised in May 2011. A copy of the study is included as Appendix D.1. Detailed biological resource maps are contained in Appendix D.2 which are included in Volume 4 of this EIR. In general, the study area for this evaluation is comprised of the area between the top of banks of each of the storm water facilities included in the Master Program. This area is identified as the "channel survey area" shown on each of the vegetation maps within Appendix D.2. Information related to mitigation in the form of wetland enhancement, restoration or creation is contained in Appendix D.3. Information regarding benthic macroinvertebrates (BMI) is based on a letter report prepared by Weston Solutions which is located in Appendix D.4.

The baseline biological resource conditions described in this report are based on field visits to each of the storm water facilities that are included in the proposed Master Program. Each of the facilities were surveyed on foot, with the aid of binoculars when necessary. Access was limited in certain portions of the facilities. In these areas vegetation was mapped using aerial interpretation combined with upstream and/or downstream observations. Surveys were focused on identifying plant communities. Sensitive plants and/or animals were recorded when observed. In addition, the suitability of the existing plant communities to support sensitive species was noted. Comprehensive protocol surveys for sensitive species were not conducted due to cost limitations and the likelihood that the occurrence of sensitive species (particularly animals) would vary through time.

Vegetation communities were mapped in accordance with the City's Guidelines for Conducting Biological Surveys (2002b). Detailed vegetation mapping for each of the storm water facilities is included in Appendix D.2. Plant and animal species observed/detected within the study area during site visits were recorded and are also presented in Appendix D.1.

4.3.1 Existing Conditions

Vegetation Communities

Eleven wetland/riparian and seven upland vegetation communities occur within the study area, which cover approximately 232.7acres (Table 4.3-1). Wetland/riparian vegetation communities within the study area include southern riparian forest, southern sycamore riparian woodland, southern willow scrub, mule fat scrub, riparian scrub, freshwater marsh, cismontane alkali marsh, southern coastal saltmarsh, coastal brackish marsh, disturbed wetland, and streambed/open water/natural flood channel. Approximately 36.8 acres of wetland/riparian habitat were mapped within the study area (Table 4.3-1).

Upland vegetation communities include Diegan coastal sage scrub, southern mixed chaparral, non-native grassland, eucalyptus woodland, non-native vegetation/ornamental, disturbed habitat/ruderal, and developed land. Approximately 195.9 acres of upland habitat, including developed land, was mapped within the study area (Table 4.3-1).

Wetland/Riparian Vegetation Communities

Southern Riparian Forest (including disturbed)

Southern riparian forests are composed of winter deciduous trees that require an abundant supply of water at or near the soil surface for most of the year. Species such as willows (*Salix* spp.) and western cottonwood (*Populus fremontii*) form a dense, medium-height canopy. Typical species present in this habitat in the study area include red willow (*Salix laevigata*), western sycamore (*Platanus racemosa*), black willow (*S. gooddingii*), arroyo willow (*S. lasiolepis*), stinging nettle (*Urtica dioica*), pampas grass (*Cortaderia selloana*), and giant reed (*Arundo donax*).

Southern Sycamore Riparian Woodland (including disturbed)

Southern sycamore riparian woodland is a tall, open, broad-leaved, winter-deciduous streamside woodland dominated by western sycamore (*Platanus racemosa*). These stands of woodlands seldom form closed canopy forests, and even may appear as trees scattered in a shrubby thicket of sclerophyllous and deciduous species. Species present on site include western sycamore, poison oak (*Toxicodendron diversilobum*), western cottonwood, castor bean (*Ricinus communis*), and ripgut grass (*Bromus diandrus*).

Southern Willow Scrub (including disturbed)

Southern willow scrub consists of dense, broad-leaved, winter-deciduous stands of trees dominated by shrubby willows in association with mule fat (*Baccharis salicifolia*), and with scattered emergent cottonwood and western sycamores. Typical species occurring in this habitat within the study area include arroyo willow, red willow, black willow, sandbar willow (*Salix exigua*), mule fat, western sycamore, tamarisk (*Tamarix* sp.), Brazilian pepper (*Schinus terebinthifolius*), Mexican fan palm (*Washingtonia robusta*), pampas grass, giant reed, and cattails (*Typha* spp.).

Mule Fat Scrub (including disturbed)

Mule fat scrub is a depauperate, shrubby, riparian scrub community dominated by mule fat and interspersed with shrubby willows. This vegetation community occurs along intermittent stream channels with a fairly coarse substrate and moderate depth to the water table

Riparian Scrub (including disturbed)

Riparian scrub is a generic term for several shrub-dominated communities that occur along storm water facilities and/or riparian corridors. Typical species in this habitat within the study area include mule fat, Hooker's evening primrose (*Oenothera elata* ssp. *hookeri*), and San Diego golden-bush (*Isocoma menziesii* var. *menziesii*).

Table 4.3-1
EXISTING VEGETATION COMMUNITIES[1]

HU	Wetlands[2]											Total
	SRF	SRW	SWS	MFS	RS	FWM	CAM	CSM	CBM	DW	STM/ OW	
San Dieguito	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.02	0.02	**0.21**
Peñasquitos	0.00	0.00	5.05	0.80	0.00	7.23	0.00	1.66	0.53	0.19	5.43	**20.89**
San Diego	36.3	0.77	3.30	0.16	0.00	11.91	0.02	0.00	0.00	0.54	24.01	**77.01**
Pueblo San Diego	0.00	0.00	2.87	0.50	0.50	5.41	0.00	0.53	0.00	5.38	6.69	**21.88**
Sweetwater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	**0.03**
Otay	0.00	0.00	0.30	0.00	0.00	1.94	0.00	0.00	0.00	0.07	0.00	**2.31**
Tijuana	0.00	0.00	4.66	1.93	0.00	1.63	0.00	0.00	0.00	2.93	3.30	**14.45**
TOTAL	**36.30**	**0.77**	**16.18**	**3.39**	**0.50**	**28.29**	**0.02**	**2.19**	**0.53**	**9.16**	**39.45**	**136.78**

HU	Uplands[2]							Total
	Tier II	Tier III A	Tier IIIB	Tier IV				
	DCSS	SMC	NNG	EW	NNV/ ORN	DH/ RUD	DEV	
San Dieguito	0.0	0.0	0.0	0.0	0.3	0.0	5.0	**5.3**
Peñasquitos	1.1	0.5	1.9	1.7	4.7	4.8	28.0	**42.7**
San Diego	1.2	0.1	2.6	0.9	3.8	6.0	22.4	**37.0**
Pueblo San Diego	4.7	0.0	10.2	0.2	3.5	10.5	48.2	**77.3**
Sweetwater	0.0	0.0	0.0	0.0	0.0	0.0	1.3	**1.3**
Otay	0.0	0.0	2.2	0.0	0.5	6.6	2.4	**11.7**
Tijuana	0.0	0.0	2.8	0.0	1.5	8.1	8.2	**20.6**
TOTAL	**7.0**	**0.6**	**19.7**	**2.8**	**14.3**	**36.0**	**115.5**	**195.9**

Source: HELIX (2011)
[1] Upland habitats are rounded to the nearest 0.1 acre, while wetland habitats are rounded to the nearest 0.01; thus, totals reflect rounding
[2]Habitat acronyms: CAM=cismontane alkali marsh, CBM=coastal brackish marsh, CLOW=coast live oak woodland, CSM=coastal saltmarsh, DCSS=Diegan coastal sage scrub, DEV=developed land, DH/RUD=disturbed habitat/ruderal, DW=disturbed wetland, EW=eucalyptus woodland, FWM=freshwater marsh, MFS=mule fat scrub, NNG=non-native grassland, NNV/ORN=non-native vegetation/ornamental, RS=riparian scrub, SMC=southern mixed chaparral, SRF=southern riparian forest, SRW=southern sycamore riparian woodland, STM/OW=streambed/open water, SWS=southern willow scrub
[3]On-site totals comprise 0.01 acre.

Freshwater Marsh (including disturbed)

Freshwater marsh is dominated by perennial emergent monocots that can reach a height between 12 and 15 feet. This vegetation type occurs along the coast and in coastal valleys near river mouths and around the margins of lakes and springs. Species present in this habitat in the study area include cattails, California bulrush (*Scirpus californicus*), umbrella sedge (*Cyperus involucratus*), tall flatsedge (*C. eragrostis*), watercress (*Rorippa nasturtium-aquaticum*), spike-rush (*Eleocharis* spp.), and rabbitsfoot grass (*Polypogon monspeliensis*).

Cismontane Alkali Marsh (including disturbed)

Cismontane alkali marsh is dominated by perennial, emergent, herbaceous monocots. Standing water or saturated soils are present during most or all of the year, and high evaporation and low input of fresh water render these marshes somewhat salty. Characteristic species include yerba mansa (*Anemopsis californica*), sedges (*Carex* spp.), saltgrass (*Distichlis spicata*), beardless wild rye grass (*Leymus triticoides*), and rushes (*Juncus* spp.), among others. Yerba mansa, saltgrass, Mexican rush (*Juncus mexicanus*), bristly ox-tongue (*Picris echioides*), Hooker's evening primrose, and southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*) were the dominant species in this habitat on site.

Southern Coastal Saltmarsh

Coastal saltmarsh is dominated by plants adapted to the higher soil salinity levels and frequent inundation. These areas are periodically flooded by salt water. Typical plant species include California seablite (*Suaeda californica*), common glasswort and pickleweed (*Salicornia* spp.), and saltgrass. Species present on site included glasswort, alkali-heath (*Frankenia salina*), fleshy jaumea (*Jaumea carnosa*), western marsh-rosemary (*Limonium californicum*), California loosestrife (*Lythrum californicum*) and saltgrass.

Coastal Brackish Marsh

Coastal brackish marsh is dominated by perennial, emergent, herbaceous monocots that are adapted to varying soil salinities due to input from saltwater and freshwater. It is very similar to cismontane alkali marsh, with many of the same species. This habitat typically intergrades with coastal salt marshes toward the ocean and occasionally with freshwater marshes at the mouths of rivers. Species observed in this habitat on site include cattails, southwestern spiny rush, saltgrass, and glasswort.

Disturbed Wetland

This community is typically dominated by exotic wetland species that have likely become established following previous disturbance(s), although it may also contain native species. The composition of disturbed wetland is highly variable based on the hydrology, soils, and type and frequency of disturbance. Species present in this habitat within the study area include rabbitfoot grass, curly dock (*Rumex crispus*), giant reed, bristly ox-tongue, cockle-bur (*Xanthium*

strumarium), umbrella sedge, common celery (*Apium graveolens*), Bermuda grass (*Cynodon dactylon*), and poison hemlock (*Conium maculatum*).

Streambed/Open Water

Streambed/open water habitat includes unvegetated drainages with a natural bottom. Areas mapped as open water either support perennial surface flows, or were inundated at the time of mapping.

Upland Vegetation Communities

Diegan Coastal Sage Scrub (including disturbed; Tier II)

Diegan coastal sage scrub is dominated by low, soft-woody subshrubs on xeric sites characterized by shallow soils. Typical species found on site include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum ssp. fasciculatum*), laurel sumac (*Malosma laurina*), black sage (*Salvia mellifera*), California encelia (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), and coast prickly-pear (*Opuntia littoralis*). Disturbed Diegan coastal sage scrub contains many of the same shrub species as undisturbed Diegan coastal sage scrub but is more sparse and has a higher proportion of non-native annual species.

Southern Mixed Chaparral (including disturbed) (Tier IIIA)

Southern mixed chaparral is composed of broad-leaved sclerophyllous shrubs that can reach 6 to 10 feet in height and form dense often nearly impenetrable stands with poorly developed understories. Species present on site include chamise, toyon (*Heteromeles arbutifolia*), mountain mahogany, and laurel sumac.

Non-native Grassland (Tier IIIB)

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs. Characteristic species include oats (*Avena* spp.), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass, ryegrass (*Lolium* sp.) and mustard (*Brassica* spp.).

Eucalyptus Woodland (Tier IV)

Eucalyptus woodland is dominated by any of several species of eucalyptus (*Eucalyptus* spp.), all of which are large, non-native trees that produce abundant amounts of leaf and bark litter. The chemical and physical characteristics of this litter limit the ability of other species to grow in the understory, causing floristic diversity to decrease.

Non-native Vegetation/Ornamental (Tier IV)

Non-native vegetation/ornamental consists of cultivated plants that have naturalized into otherwise native habitat areas or were put in place by humans, usually for the purpose of

beautification, windbreaks, or other related purposes. Species observed in this habitat include Peruvian pepper (*Schinus terebinthifolius*), Brazilian pepper, golden wattle (*Acacia longifolia*), myoporum (*Myoporum laetum*), sea-fig (*Carpobrotus chilensis*), hottentot-fig (*Carpobrotus edulis*), oleander (*Nerium oleander*), Canary Island date palm (*Phoenix canariensis*), fountain grass (*Pennisetum setaceum*), and carrotwood (*Cupaniopsis anacardioides*).

Disturbed Habitat/Ruderal (Tier IV)

Disturbed habitat/ruderal areas are devoid of vegetation due to soil disturbance (dirt roads and/or grading) or are dominated by exotic, annual forbs without a major grass component. Pursuant to City guidelines for mapping disturbed habitat, these areas can be bare ground, or when vegetated, are dominated by at least 50 percent cover of invasive broad-leaved non-native plant species. Plants observed in this community on site include garland daisy (*Chrysanthemum coronarium*), Russian thistle (*Salsola tragus*), castor-bean (*Ricinus communis*), star-thistle (*Centaurea melitensis*), shortpod mustard (*Hirschfeldia incana*), fennel (*Foeniculum vulgare*), horehound (*Marrubium vulgare*), cheeseweed (*Malva parviflora*), and filaree (*Erodium* spp.).

Developed/Concrete Channel

Developed land is where permanent structures and/or pavement have been placed. Unvegetated concrete-lined channels constitute the majority of area within the storm water facilities that are designated “Developed/Concrete Channel”.

Plant Species Observed

A total of 127 plant species were observed within the study area. A list of plant species observed during the site visits is provided in Appendix D.1.

Animal Species Observed or Detected

A total of 96 animal species were observed/detected within the study area, including 12 butterflies (among other invertebrates), 1 amphibian, 3 reptiles, 72 birds, and 8 mammals (Appendix D.1). All animal species were identified by direct observation or vocalizations, presence of scat and/or tracks, or other sign. As discussed in Appendix D.4, BMI are anticipated to occur within the storm water facilities. Although no specific estimate of the number different species were made, BMI are anticipated to include the larval and adult stages of aquatic insects as well as all life stages of non-insects (e.g., amphipods, crayfish, and flatworms).

Wetland Jurisdictional Areas

A program-level jurisdictional delineation was conducted within subject storm water channels, and the results categorized by Hydrologic Units (HUs). An estimate of the amount of jurisdictional wetlands within each HU is shown in Tables 4.3-2 and 4.3-3.

Table 4.3-2
EXISTING CORPS JURISDICTIONAL AREAS (acre[s])[1]

HU[2]	**Wetlands**[3]											**Non-wetland WUS**		**Total**
	SRF	SRW	SWS	MFS	RS	FWM	CAM	CSM	CBM	DW	Subtotal	Earthen	Concrete	
San Dieguito	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	**0.01**	.002	1.49	**1.52**
Peñasquitos	0.00	0.00	2.40	0.09	0.00	6.14	0.00	1.66	0.31	0.05	**10.65**	5.29	13.39	**29.33**
San Diego	12.75	0.00	3.16	0.05	0.00	10.00	0.00	0.00	0.00	0.03	**25.99**	24.99	5.85	**56.83**
Pueblo San Diego	0.00	0.00	1.23	0.19	0.36	5.35	0.00	0.53	0.00	10.87	**10.87**	7.92	14.91	**33.70**
Sweetwater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	0.00	0.28	**0.28**
Otay	0.00	0.00	0.16	0.00	0.00	1.71	0.00	0.00	0.00	0.04	**1.91**	0.00	0.57	**2.48**
Tijuana	0.00	0.00	2.56	0.67	0.00	1.44	0.00	0.00	0.00	2.29	**6.96**	5.66	1.64	**14.26**
TOTAL	**12.75**	**0.00**	**9.51**	**1.00**	**0.36**	**24.65**	**0.00**	**2.19**	**0.31**	**5.62**	**56.39**	**43.88**	**38.13**	**138.40**

Source: HELIX (2011)
[1]Totals reflect rounding
[2]The HUs correspond to the following Storm Water Facility Maps in Appendix D.1: San Dieguito HU=Maps 1-3 and 169; Peñasquitos HU=Maps 4-46, 55-57, 163-168, and 170-172; San Diego HU=Maps 47-54, 58-66, 81-83, and 140-161; Pueblo San Diego HU= Maps 67-80 and 84-121; Sweetwater HU= Map 122; Otay HU= Maps 131-135; Tijuana HU= Maps 123-130 and 136-139
[3]Habitat acronyms: CAM=cismontane alkali marsh, CBM=coastal brackish marsh, CSM=coastal saltmarsh, DW=disturbed wetland, FWM=freshwater marsh, MFS=mule fat scrub, RS=riparian scrub, SRF=southern riparian forest, SRW=southern sycamore riparian woodland, SWS=southern willow scrub, WUS=Waters of the U.S.

Table 4.3-3
EXISTING CDFG AND CITY JURISDICTIONAL AREAS (acre[s])[1]

Hydrologic Unit (HU)[2]	Wetland/Riparian Habitat[3]											Drainage	Total CDFG/ City
	SRF	SRW	SWS	MFS	RS	FWM	CAM	CSM	CBM	DW	Wetland/ Riparian Total	STM/ NFC	
San Dieguito	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.02	**0.19**	0.02	**0.21**
Peñasquitos	0.00	0.00	5.05	0.80	0.00	7.23	0.00	1.66	0.53	0.19	**15.46**	5.43	**20.89**
San Diego	36.30	0.77	3.30	0.16	0.00	11.91	0.02	0.00	0.00	0.54	**53.00**	24.01	**77.01**
Pueblo San Diego	0.00	0.00	2.87	0.50	0.50	5.41	0.00	0.53	0.00	5.38	**15.19**	6.69	**21.88**
Sweetwater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	**0.03**	0.00	**0.03**
Otay	0.00	0.00	0.30	0.00	0.00	1.94	0.00	0.00	0.00	0.07	**2.31**	0.00	**2.31**
Tijuana	0.00	0.00	4.66	1.93	0.00	1.63	0.00	0.00	0.00	2.93	**11.15**	3.30	**14.45**
TOTAL	**36.30**	**0.77**	**16.18**	**3.39**	**0.50**	**28.29**	**0.02**	**2.19**	**0.53**	**9.16**	**97.33**	**39.45**	**136.78**

Source: HELIX (2011)
[1]Totals reflect rounding
[2]The HUs correspond to the following Storm Water Facility Maps in Appendix D.1: San Dieguito HU=Maps 1-3 and 169; Peñasquitos HU=Maps 4-46, 55-57, 163-168, and 170-172; San Diego HU=Maps 47-54, 58-66, 81-83, and 140-161; Pueblo San Diego HU=Maps 67-80 and 84-121; Sweetwater HU=Map 122; Otay HU=Maps 131-135; Tijuana HU=Maps 123-130 and 136-139
[3]Habitat acronyms: CAM=cismontane alkali marsh, CBM=coastal brackish marsh, CSM=coastal saltmarsh, DW=disturbed wetland, FWM=freshwater marsh, MFS=mule fat scrub, RS=riparian scrub, SRF=southern riparian forest, SRW=southern sycamore riparian woodland, STM/OW=streambed/open water, and SWS=southern willow scrub

[4]CDFG Acreage
[5]City Acreage

Federal (Corps) Jurisdictional Areas

The total area under Corps jurisdiction is approximately 138.40 acres. Of this total, 56.39 acres are considered wetlands. The balance, 82.01 acres, are considered non-wetland Waters of the United States (WUS). The non-wetland category includes 43.88 acres of unvegetated earthen channels and 38.13 acres of concrete channels. The 38.13 acres of concrete channels represents an exaggeration of the Corps jurisdiction because the Corps jurisdiction is limited to the ordinary high water mark which covers less area that the full concrete channel width. As illustrated in Table 4.3-2, the majority of wetland habitat occurs along named storm water channels within the San Diego, Pueblo, and Peñasquitos HUs.

State (California Department of Fish and Game Jurisdictional Areas

CDFG jurisdictional areas constitute approximately 136.78 acres within the study area. As illustrated in Table 4.3-3, the approximate acreages of each of the different types of wetlands that are included in the CDFG's jurisdiction area: 36.30 acres of southern riparian forest, 0.77 acre of southern sycamore riparian woodland, 16.18 acres of southern willow scrub, 3.39 acres of mule fat scrub, 0.50 acre of riparian scrub, 28.29 acres of freshwater marsh, 0.02 acre of cismontane alkali marsh, 2.19 acres of coastal saltmarsh, 0.53 acre of coastal brackish marsh, 9.16 acres of disturbed wetland, and 39.45 acres of unvegetated streambed.

City Wetlands

City wetlands include all the same areas as noted above for CDFG jurisdiction. Therefore, City jurisdictional areas constitute approximately 136.78 acres within the study area, of which 39.45 acres are unvegetated natural flood channels (Table 4.3-3).

Sensitive Resources

Sensitive Vegetation Communities

Sensitive vegetation communities are considered rare within the region or sensitive by CDFG (Holland 1986) or the City (City 1997a and 2001). These communities in any form are considered sensitive because they have been historically depleted, are naturally uncommon, or support sensitive species. The study area supports the following 14 sensitive vegetation communities: southern riparian forest, southern sycamore riparian woodland, southern willow scrub, mule fat scrub, riparian scrub, freshwater marsh, cismontane alkali marsh, southern coastal saltmarsh, coastal brackish marsh, disturbed wetland, natural flood channel, Diegan coastal sage scrub, southern mixed chaparral, and non-native grassland.

Sensitive Plants

No federally- or state-listed species or City narrow endemic plants species were observed within the study area; however, the following four sensitive plant species were observed: single-whorl burrobush (*Ambrosia monogyra*), San Diego marsh-elder (*Iva hayesiana*), southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*), and San Diego sunflower (*Viguiera laciniata*). These species are described in more detail below.

The single-whorl burrobush (*Ambrosia monogyra*) is a California Native Plant Society (CNPS) List 2.2 plant. It was observed in ruderal habitat on the banks of a minor channel paralleling Delevan Drive, west of Chollas Creek. The California Natural Diversity Database (CNDDB) also reports this species in the general vicinity of Smuggler's Gulch.

The San Diego marsh-elder (*Iva hayesiana*) is a CNPS List 2.2 plant. It was observed in riparian scrub and Diegan coastal sage scrub adjacent to South Chollas Creek. This species is fairly widespread in San Diego County and would be expected to occur in other locations within the study area.

The southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*) is a CNPS List 4.3 plant. It was observed in cismontane alkali marsh adjacent to the El Camino Real basin, in a seep adjacent to the Alvarado Channel, and in marsh habitat within South Chollas Creek and the San Diego River.

The San Diego sunflower (*Viguiera laciniata*) is a CNPS List 4.3 plant. It was observed within scrub habitats adjacent to the Black Mountain Road basin, the Camino Santa Fe basin, as well as in Diegan coastal sage scrub abutting Chollas Creek, South Chollas Creek and Encanto Channel.

City narrow endemic plant species not observed during the programmatic-level surveys but with potential to occur within the study area are listed in Table 4.3-4. Additional sensitive plant species that were not observed but have potential to occur in the study area are described in Table 4.3-5.

Table 4.3-4
NARROW ENDEMIC SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS[1]	POTENTIAL TO OCCUR
San Diego thorn-mint (*Acanthomintha ilicifolia*)	FT[2]/SE CNPS List 1B.1 MSCP Covered	Low to moderate. Occurs on clay lenses and friable, cracked, clay soils in open areas within grasslands. Project focused around storm water channels, which typically do not support appropriate habitat. Species has been reported in the general vicinity of Map Nos. 52, 61, 62, 64, an d147 (CDFG 2003).
Shaw's agave (*Agave shawii*)	--/-- CNPS List 2.1 MSCP Covered	Low. Generally occurs in coastal sage scrub and maritime succulent scrub, often on volcanic soils.
San Diego ambrosia (*Ambrosia pumila*)	FE[2]/-- CNPS List 1B.1 MSCP Covered	Moderate. Primarily restricted to flat or sloping grasslands, often along valley bottoms or areas adjacent to vernal pools as well as creek beds, seasonally dry drainages, and flood-plains.
Aphanisma (*Aphanisma blitoides*)	--/-- CNPS List 1B.2 MSCP Covered	Very low. Occurs on coastal bluffs and beach dunes, little of which occur within the study area.

Table 4.3-4 (cont.)
NARROW ENDEMIC SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS[1]	POTENTIAL TO OCCUR
Coastal dunes milk vetch (*Astragalus tener* var. *titi*)	FE/SE CNPS List 1B.1 CA Endemic MSCP Covered	Low. Occurs in coastal dune communities. Suitable habitat within the study area only occurs near the mouth of the San Diego River.
Encinitas baccharis (*Baccharis vanessae*)	FT/SE CNPS List 1B.1 CA Endemic MSCP Covered	Low. Found in southern maritime chaparral and mature but relatively low-growing southern mixed chaparral. Project focused around storm water channels, which do not support appropriate habitat.
Otay tarplant (*Deinandra conjugens*)	FT[2]/SE CNPS List 1B.1	Low to moderate. Found on fractured clay soils in grasslands or lightly vegetated coastal sage scrub. Portions of study area within Otay Mesa may support species, which has been reported in the general vicinity of Map Nos. 124-127 (CDFG 2003).
Short-leaved dudleya (*Dudleya brevifolia*)	--/SE CNPS List 1B.1 CA Endemic MSCP Covered	Low. Occurs in open areas and sandstone bluffs of chamise chaparral or Torrey pine forest, which are not common in the study area.
Variegated dudleya (*Dudleya variegata*)	--/-- CNPS List 1B.2 MSCP Covered	Low to moderate. Found on cobbly clay soils in very open sage scrub and grassland, and especially among vernal pool communities. Habitat within the study area is largely unsuitable. Species reported in the general vicinity of Map Nos. 61-62, and 126-127 (CDFG 2003).
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	FE[2]/SE CNPS List 1B.1	Low to moderate. Found in vernal pool communities and vernally moist areas with mima mound topography. Suitable habitat does not occur within the study area. Species reported in the general vicinity of Map Nos. 6-7, 47, 66, 101, 125-128, and 145-146 (CDFG 2003).
Prostrate navarretia (*Navarretia prostrata*)	FT/-- CNPS List 1B.1 CA Endemic MSCP Covered	Very low. Occurs in vernal pool communities, which were not observed within the study area. No CNDDB records within the Master Program study area.
Snake cholla (*Opuntia californica* var. *californica*)	--/-- CNPS List 1B.1 MSCP Covered	Moderate. Occurs in Diegan coastal sage scrub on xeric hillsides from Point Loma south to Chula Vista. Species reported in the general vicinity of Map Nos. 11-13, 70, 76-78, and 85 (CDFG 2003).

Table 4.3-4 (cont.)
NARROW ENDEMIC SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS[1]	POTENTIAL TO OCCUR
California Orcutt grass (*Orcuttia californica*)	FE[2]/SE CNPS List 1B.1	Low to moderate. Occurs in vernal pool communities, which were not observed within the study area. Species reported in the general vicinity of Map No. 128 (CDFG 2003).
San Diego mesa mint (*Pogogyne abramsii*)	FE[2]/SE CNPS List 1B.1 CA Endemic	Low. Occurs in vernal pool communities, which were not observed within the study area. Species reported in the general vicinity of Map No. 66 (CDFG 2003).

Source: HELIX (2011)
[1]Refer to Appendix D of Appendix D.1 of the PEIR for a listing and explanation of status and sensitivity codes.
[2]As of the date of surrender, April 20, 2010, the City has relinquished coverage and does not rely on the City's Federal Incidental Take Permit (ITP) to authorize an incidental take of this vernal pool animal species. Upon completion of a Habitat Conservation Plan (HCP) for vernal pools, the City would enter into an Implementing Agreement in order to obtain species coverage and a Federal ITP for this species.

Table 4.3-5
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS[1]	POTENTIAL TO OCCUR
California adolphia (*Adolphia californica*)	--/-- CNPS List 2.1	Moderate to high. Most often found in sage scrub but occasionally occurs in peripheral chaparral habitats, particularly on hillsides above creeks. Reported in the general vicinity of Map Nos. 4, 51, 59-65, and 76-80 (CDFG 2003).
San Diego bur-sage (*Ambrosia chenopodifolia*)	--/-- CNPS List 2.1	Low to moderate. Arid, low-growing, fairly open Diegan coastal sage scrub is preferred. Olivenhain cobbly loam is the soil type mapped for the San Ysidro population. Species reported in the general vicinity of Map Nos. 129-130 (CDFG 2003).
Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*)	FE/-- CNPS List 1B.1 MSCP Covered	Low. Generally found in southern maritime chaparral and Torrey pine forest. Although this species has been reported in the vicinity of Map Nos. 7-11 (CDFG 2003), it is not expected to occur within the mapped storm water facilities.
Otay manzanita (*Arctostaphylos otayensis*)	--/-- CNPS List 1B.2 MSCP Covered	Very low. Known only from Otay, San Miguel, Jamul, and Guatay mountains in San Diego County.
San Diego sagewort (*Artemisia palmeri*)	--/-- CNPS List 4.2	Moderate to high. Found in moist drainages with sandy soils. SDHNM Plant Atlas has records of this species east of Map 32, as well as in other locations in the City.
Dean's vetch (*Astragalus deanei*)	--/-- CNPS List 1B.1	Low. Dry hillsides in open coastal sage scrub, chaparral, or southern oak woodland. Rocky sandy loam is the soil type mapped for the Tecate population.

Table 4.3-5 (cont.)
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS[1]	POTENTIAL TO OCCUR
Coulter's saltbush (*Atriplex coulteri)*	--/-- CNPS List 1B.2	Low. Found in coastal bluff scrub, coastal dunes, valley and foothill grasslands, and desert slopes.
South coast saltscale (*Atriplex pacifica*)	--/-- CNPS List 1B.2	Moderate. Occurs in coastal bluff scrub or sandy, open coastal sage scrub.
Davidson's saltscale (*Atriplex serenana* var. *davidsonii*)	--/-- CNPS List 1B.2	Low. Primarily occurs in coastal bluff scrub, although Reiser (2001) suggests it was historically associated with alkaline flats.
Golden-spined cereus (*Bergerocactus emoryi*)	--/-- CNPS List 2.2	Low. Sandy soils and dry bluffs along the coast associated with maritime succulent scrub. Species reported in the general vicinity of Map Nos. 128-135 (CDFG 2003).
Thread-leaved brodiaea (*Brodiaea filifolia*)	FT/SE CNPS List 1B.1 MSCP Covered	Low. Clay soils in vernally moist grasslands and vernal pool periphery are typical locales.
Orcutt's brodiaea (*Brodiaea orcuttii*)	--/-- CNPS List 1B.1 MSCP Covered	Low to moderate. Occurs in vernally moist grasslands and on the periphery of vernal pools but will occasionally grow on streamside embankments (Reiser 2001). Species reported in the general vicinity of Map Nos. 51-52 (CDFG 2003).
Dunn's mariposa lily (*Calochortus dunnii*)	--/SR CNPS List 1B.2 MSCP Covered	Low. Dry, stony ridges and firebreaks in chaparral or grassland/chaparral ecotone. Appears to be restricted to gabbroic and metavolcanic soils.
Lakeside ceanothus (*Ceanothus cyaneus*)	--/-- CNPS List 1B.2 MSCP Covered	Very low. Generally found in inland chaparral from Crest up to the Lakeside foothills (Reiser 2001). Suitable habitat does not occur within the study area.
Wart-stemmed ceanothus (*Ceanothus verrucosus*)	--/-- CNPS List 2.2 MSCP Covered	Low. Xeric chamise and mixed chaparrals. Species reported in the general vicinity of Map Nos. 6-11, 42-44, 59-62, 66, 70, and 85-86 (CDFG 2003). However, very little chaparral was mapped in the actual study area.
Southern tarplant (*Centromadia parryi* ssp. *australis*)	--/-- CNPS List 1B.1	Low. Found in valley and foothill grasslands, particularly near alkaline locales.
Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*)	--/-- CNPS List 1B.1	Low to moderate. Occurs in open Diegan coastal sage scrub, typically in proximity to moist ocean breezes (Reiser 2001).

Table 4.3-5 (cont.)
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS[1]	POTENTIAL TO OCCUR
Orcutt's spineflower (*Chorizanthe orcuttiana*)	FE/SE CNPS List 1B.1	Low. Found in coastal chamise chaparral openings with loose sandy substrate (Reiser 2001). Very little chaparral was mapped within the study area.
Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)	--/-- CNPS List 1B.2	Low. Typically found on clay lenses and on the periphery of vernal pools. Species reported in the general vicinity of Map No. 47 (CDFG 2003).
Delicate clarkia (*Clarkia delicata*)	--/-- CNPS List 1B.2	Low. Shaded areas or the periphery of oak woodlands and cismontane chaparral. Very little appropriate habitat occurs within the study area.
Summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*)	--/-- CNPS List 1B.2	Moderate. Mesic north-facing slopes in southern mixed chaparral are preferred habitat of this large, showy shrub. Species has been reported in the general vicinity of Map No. 66 (CDFG 2003).
Salt marsh bird's beak (*Cordylanthus maritimus* spp. *maritimus*)	FE/SE CNPS List 1B.2 MSCP Covered	Low. Salt marshes, particularly slightly raised hummocks. Only two native sites definitely extant in San Diego County (Reiser 2001), neither of which is within the study area.
Orcutt's bird's beak (*Cordylanthus orcuttianus*)	--/-- CNPS List 2.1 MSCP Covered	Moderate to high. Seasonally dry drainages and upland adjacent to riparian habitat is preferred habitat. In the Tijuana River Valley, grows in a cobbly ecotone with sage scrub upslope and disturbed broom baccharis and southern willow scrub near the watercourse. Species reported in the general vicinity of Map Nos. 126-127 (CDFG 2003).
Sea dahlia (*Coreopsis maritima*)	--/-- CNPS List 2.2	Low. Habitat is coastal bluff scrub.
San Diego sand-aster (*Corethrogyne filaginifolia* var. *incana*)	--/-- CNPS List 1B.1	Low. Typically occurs in coastal bluff scrub and coastal chaparral, neither of which occurs within the study area. Species reported in the general vicinity of Map Nos. 138-139 (CDFG 2003).
Del Mar Mesa sand-aster (*Corethrogyne filaginifolia* var. *linifolia*)	--/-- CNPS List 1B.1 MSCP Covered	Low. Found in sandy and disturbed areas within southern maritime chaparral. Species reported within the general vicinity of Map Nos. 6-11 (CDFG 2003).
Tecate cypress (*Cupressus forbesii*)	--/-- CNPS List 1B.1 MSCP Covered	None. Closed-cone coniferous forest and southern mixed chaparral, particularly on Otay Mountain.
Blochman's dudleya (*Dudleya blochmaniae* ssp. *blochmaniae*)	--/-- CNPS List 1B.1 MSCP Covered	Low to moderate. Dry, stony places associated with coastal sage scrub or chaparral near the coast. Species reported in the general vicinity of Map Nos. 133-134 (CDFG 2003).
Sticky dudleya (*Dudleya viscida*)	--/-- CNPS List 1B.2 MSCP Covered	Low. This conspicuous succulent perennial grows primarily on very steep north-facing slopes. Species reported in the general vicinity of Map Nos. 82-83 (CDFG 2003).

Table 4.3-5 (cont.)
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS[1]	POTENTIAL TO OCCUR
Palmer's goldenbush (*Ericameria palmeri* ssp. *palmeri*)	--/-- CNPS List 2.2 MSCP Covered	Moderate to high. This sizeable shrub grows along coastal drainages in mesic chaparral sites, or rarely in Diegan coastal sage scrub. Occasionally occurs as a hillside element (usually at higher elevations inland on north-facing slopes). Species reported in the general vicinity of Map Nos. 65-66 and 76-80 (CDFG 2003).
Round-leaved filaree (*Erodium macrophullum*)	--/-- CNPS List 1B.1	Moderate. Clay soils in open areas of grassland or sage scrub in coastal valleys.
Coast wallflower (*Erysimum ammophilum*)	--/-- CNPS List 1B.2 MSCP Covered	Moderate. Coastal dunes and coastal strand. Species reported in the general vicinity of Map Nos. 6, and 82-83 (CDFG 2003).
Cliff spurge (*Euphorbia misera*)	--/-- CNPS List 2.2	Very low. Occurs in maritime succulent scrub, which does not occur within the study area.
San Diego barrel cactus (*Ferocactus viridescens*)	--/-- CNPS List 2.1 MSCP Covered	High. Occurs in open coastal sage scrub, often at the crown of hillsides or in association with vernal pools. Species reported in the general vicinity of Map Nos. 12, 70, 76-80, 84, and 101 (CDFG 2003).
Palmer's frankenia (*Frankenia palmeri*)	--/-- CNPS List 2.1	Low. This low-growing shrub grows on coastal salt marsh periphery, but the only known extant native population in the U.S. is in Chula Vista (Reiser 2001).
Mexican flannelbush (*Fremontodendron mexicanum*)	FE/SR CNPS List 1B.1	Very low. This large bush occurs in closed-cone coniferous forest and southern mixed chaparral in Otay Mountain habitats.
Orcutt's hazardia (*Hazardia orcuttii*)	--/ST CNPS List 1B.1	None. Open chaparral with chamise. The only known U.S. site where this species occurs is in Encinitas (Reiser 2001), as this species is primarily found in Baja California.
Ramona horkelia (*Horkelia truncata*)	--/-- CNPS List 1B.3	Low. A species limited to gabbro soils occurring in chaparral communities (usually chamise chaparral).
Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)	--/-- CNPS List 1B.2	Low to moderate. Presumed to utilize coastal sage scrub habitat intermixed with grassland and is more partial to clay soils than other closely related varieties.
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	--/-- CNPS List 1B.1	High. Found in coastal salt marshes and vernal pools (Reiser 2001). Species reported in the general vicinity of Map Nos. 6-12 (CDFG 2003).

Table 4.3-5 (cont.)
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS[1]	POTENTIAL TO OCCUR
Robinson's pepper grass (*Lepidium virginicum* var. *robinsonii*)	--/-- CNPS List 1B.2	Moderate. This annual herb grows in openings in chaparral and sage scrub at the coastal and foothill elevations. Typically observed in relatively dry, exposed locales rather than beneath a shrub canopy or along creeks. Species reported in the general vicinity of Map No. 101 (CDFG 2003).
Gander's pitcher-sage (*Lepechinia ganderi*)	--/-- CNPS List 1B.3 MSCP Covered	Low. Found in metavolcanic-derived soils in chaparral.
Nuttall's lotus (*Lotus nuttallianus*)	--/-- CNPS List 1B.1 MSCP Covered	High. Occurs in coastal dune communities. Species reported near the mouth of the San Diego River, in the general vicinity of Map Nos. 55-57, and 82-83 (CDFG 2003).
Felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*)	--/-- CNPS List 1B.2 MSCP Covered	Low. Found in the chaparral understory, typically beneath mature stands of chamise in xeric situations.
Jennifer's monardella (*Monardella stoneana*)	--/-- CNPS List 1B.2	Low. Found in canyons around Otay and Tecate mountains.
Willowy monardella (*Monardella linoides* ssp. *viminea*)	FE/SE CNPS List 1B.1 MSCP Covered	Moderate. Occurs in coastal and riparian scrub, especially in sandy washes (Reiser 2001). Species reported in the general vicinity of Map Nos. 18-19 (CDFG 2003).
San Diego goldenstar (*Muilla clevelandii*)	--/-- CNPS List 1B.1 MSCP Covered	Moderate. Occurs in grasslands, particularly in association with mima mounds and vernal pools. Species reported in the general vicinity of Map Nos. 53-54, 64-66, 84, and 126-127 (CDFG 2003).
Little mousetail (*Myosurus minimus* ssp. *apus*)	--/-- CNPS List 3.1	Very low. Occurs in vernal pool communities, which do not occur within the study area. Species reported in the general vicinity of Map Nos. 124-127 (CDFG 2003).
Spreading navarretia (*Navarretia fossalis*)	FT[2]/-- CNPS List 1B.1	Low to moderate. Occurs in vernal pool communities, which were not observed within the study area. However, the species has been reported in the general vicinity of Map Nos. 47and 123-127 (CDFG 2003), and species' critical habitat overlaps with portions of Map Nos. 124 and 126.
Coast woolly-heads (*Nemacaulis denudata* var. *denudata*)	--/-- CNPS List 1B.2	Moderate. Typically found in coastal dune communities.
Slender woolly-heads (*Nemacaulis denudata* var. *gracilis*)	--/-- CNPS List 2.2	Low. Well-developed dunes whether on the desert or rarely, along the coastal beaches. Species reported in the general vicinity of Map No. 128 (CDFG 2003).

Table 4.3-5 (cont.)
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS[1]	POTENTIAL TO OCCUR
Brand's phacelia (*Phacelia stellaris*)	--/-- CNPS List 1B.1	Moderate. Occurs in coastal bluff scrub and in sandy coastal sage scrub openings near the beach (Reiser 2001).
Torrey pine (*Pinus torreyana* ssp. *torreyana*)	--/-- CNPS List 1B.2 MSCP Covered	None. Occurs in closed-cone coniferous forest along the coast near Del Mar. Would likely have been detected within the study area if present.
Otay Mesa mint (*Pogogyne nudiscula*)	FE[2]/SE CNPS List 1B.1	Low to moderate. Restricted to vernal pools on Otay Mesa and in northern Baja. Species reported in the general vicinity of Map Nos. 85, and 124-127 (CDFG 2003).
Nuttall's scrub oak (*Quercus dumosa*)	--/-- CNPS List 1B.1	Low to moderate. Occurs in chaparral or coastal sage scrub with relatively open canopy cover in flat terrain; on north-facing slopes, may grow in dense monotypic stands. Found in sandy or clay loam soils. Species could potentially occur in upland habitat adjacent to the Program facilities.
Small-leaved rose (*Rosa minutifolia*)	--/SE CNPS List 2.1 MSCP Covered	None. No known native U.S. populations remain; only known U.S. site occurred on periphery of coastal sage scrub in Otay Mesa and was transplanted into biological open space to make way for development.
San Miguel savory (*Satureja chandleri*)	--/-- CNPS List 1B.2 MSCP Covered	Low. Gabbro and metavolcanic soils in interior foothills, chaparral, and oak woodland
Rayless ragwort (*Senecio aphanactis*)	--/-- CNPS List 2.2	Low. Occurs in open coastal sage scrub, cismontane woodlands, and alkaline flats (Reiser 2001).
Bottle liverwort (*Sphaerocarpos drewei*)	--/-- CNPS List 1B.1	Low. Occurs under shrubs within coastal sage scrub and chaparral. Species reported in the general vicinity of Map Nos. 86 (CDFG 2003).
Purple stemodia (*Stemodia durantifolia*)	--/-- CNPS List 2.1	High. Small perennial herb typically found growing in wet sand along minor creeks and seasonal drainages. Species reported in the general vicinity of Map No. 64 (CDFG 2003).
Oil neststraw (*Stylocline citroleum*)	--/-- CNPS List 1B.1	Low to moderate. Coastal scrub areas and chenopod scrub in clay soils in the vicinity of oilfields.

Table 4.3-5 (cont.)
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS[1]	POTENTIAL TO OCCUR
Estuary seablite (*Sueda esteroa*)	--/-- CNPS List 1B.2	High. Found on the periphery of coastal salt marsh, soils are usually mapped as tidal flats. Species reported in the general vicinity of Map Nos. 82-83, and 134 (CDFG 2003).
Parry's tetracoccus (*Tetracoccus dioicus*)	--/-- CNPS List 1B.2 MSCP Covered	Low. Gabbro soils in low growing chamise chaparral and sage scrub. Conditions are typically quite xeric with only limited annual growth.

Source: HELIX (2011)
[1]Refer to Appendix D of Appendix D.1 of the PEIR for a listing and explanation of status and sensitivity codes
[2]As of the date of surrender, April 20, 2010, the City has relinquished coverage and does not rely on the City's Federal Incidental Take Permit (ITP) to authorize an incidental take of this vernal pool animal species. Upon completion of a Habitat Conservation Plan (HCP) for vernal pools, the City would enter into an Implementing Agreement in order to obtain species coverage and a Federal ITP for this species.

Sensitive Animal Species

The following four sensitive animal species were observed/detected within the study area during surveys and are described below.

The coastal California gnatcatcher (*Polioptila californica californica*) is a federally-listed threatened species, state species of special concern, and MSCP Covered species. One individual was observed in Diegan coastal sage scrub on the slopes of the Encanto Channel near the post office. This species likely occurs in other areas of appropriate habitat near the mapped channels. CNDDB records for this species are scattered throughout the City.

The northern harrier (*Circus cyaneus*) is a state species of special concern and MSCP Covered species. One individual was observed foraging over grassland near a drainage ditch in the Otay region. Few individuals are expected to occur within the actual study area as most areas are vegetated with trees and shrubs or are developed. Little appropriate habitat occurs along the mapped storm water facilities.

The yellow warbler (*Dendroica petechia brewsteri*) is a state species of special concern. Two individuals were heard calling in southern riparian forest along the San Diego River.

The little blue heron (*Egretta caerulea*) is a bird of conservation concern species. One individual was observed foraging in freshwater marsh habitat in Rose Creek near Mission Bay Drive. This species is very uncommon in the City and would not likely be found in other locations mapped for the Master Program study area.

Although not detected during the biological surveys, the federally and state listed endangered least Bell's vireo (*Vireo bellii pusillus*) and light-footed clapper rail (*Rallus longirostris levipes*), federally listed endangered southwestern willow flycatcher (*Empidonax traillii extimus*) and San Diego fairy shrimp (*Branchinecta sandiegonensis*), and California species of special concern

yellow-breasted chat (*Icteria virens*) also have been documented in or near portions of the study area. Additional sensitive animal species that were not observed or detected but have potential to occur within the study area are listed in Table 4.3-6.

Table 4.3-6
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS[1]	POTENTIAL TO OCCUR
INVERTEBRATES		
San Diego fairy shrimp (*Branchinecta sandiegonensis*)	FE[2]/--	Low. Occurs in vernal pools and road basins on the mesas in San Diego County.
Quino checkerspot butterfly (*Euphydryas editha quino*)	FE/--	Very low. Occurs in open sage scrub and chaparral. Requires abundant nectar plants and dwarf plantain (*Plantago erecta*), the primary host plant. Not reported in the project study area (CDFG 2003).
Hermes copper butterfly (*Lycaena hermes*)	--/--	Low to moderate. Found in southern mixed chaparral and coastal sage scrub with mature spiny redberry (*Rhamnus crocea*), the larval host plant.
Wandering/saltmarsh skipper (*Panoquina errans*)	--/--	High. Coastal saltmarshes along river mouths and other brackish waters. Larval host plant is saltgrass (*Distichlis spicata*).
Riverside fairy shrimp (*Streptocephalus woottoni*)	FE[2]/--	Low. Occurs in vernal pools and road basins on mesas in San Diego County.
VERTEBRATES		
Reptiles and Amphibians		
Silvery legless lizard (*Anniella pulchra pulchra*)	--/SSC	Moderate. Occurs in areas with loose soil, particularly in sand dunes and or otherwise sandy soil. Generally found in leaf litter, under rocks, logs, or driftwood in oak woodland, chaparral, and desert scrub.
Arroyo toad (*Bufo californicus*)	FE/SSC MSCP Covered	Low. Found on banks with open-canopy riparian forest characterized by willows, cottonwoods, or sycamores; breeds in areas with shallow, slowly moving streams but burrows in adjacent uplands during dry months. No recorded CNDDB locations in the study area, and MSCP list of known locations does not include creeks in the study area.
Orange-throated whiptail (*Cnemidophorus hyperythrus*)	--/SSC MSCP Covered	High. Found in coastal sage scrub, chaparral, and riparian woodland as well as adjacent disturbed areas. Prefers areas with a matrix of open and shady areas with abundant termites (*Reticulitermes* sp.).

Table 4.3-6 (cont.)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS[1]	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Reptiles and Amphibians (cont.)		
Red-diamond rattlesnake (*Crotalus exsul*)	--/SSC	Moderate. Found in chaparral, coastal sage scrub, along creek banks, particularly among rock outcrops or piles of debris with a supply of burrowing rodents for prey. Suitable habitat occurs within the study area.
Coronado skink (*Eumeces skiltonianus interparietalis*)	--/SSC	Moderate. Found in grasslands, sage scrub, open chaparral, oak woodland, and coniferous forests, usually under rocks, leaf litter, logs, debris, or in the shallow burrows it digs.
San Diego horned lizard (*Phrynosoma coronatum* ssp. *blainvillei*)	--/SSC MSCP Covered	High. Found in coastal sage scrub and open chaparral, oak woodlands, and coniferous forests with sufficient basking sites, adequate scrub cover, and areas of loose soil. Their occurrence typically tied to presence of harvester ants (*Pogonomyrmex* sp.), and they are generally excluded from areas invaded by Argentine ants (*Linepithema humile*).
Coast patch-nosed snake (*Salvadora hexalepis virgulte*)	--/SSC	Moderate. Primarily found in chaparral but also inhabits coastal sage scrub and areas of grassland mixed with scrub.
Western spadefoot (*Spea hammondii*)	--/SSC	Moderate. Occurs in open coastal sage scrub, chaparral, and grassland, along sandy or gravelly washes, floodplains, alluvial fans, or playas; require temporary pools for breeding and friable soils for burrowing.
Two-striped garter snake (*Thamnophis hammondii*)	--/SSC	High. Occurs along permanent and intermittent streams bordered by dense riparian vegetation but occasionally associated with vernal pools or stock ponds.
Birds		
Cooper's hawk **(*Accipiter cooperi*)**	--/SSC MSCP Covered	High. Found in oak groves, mature riparian woodlands, and eucalyptus stands or other mature forests. Widespread species expected to occur in several locations within project where trees are present.
Tricolored blackbird (*Agelaius tricolor*)	--/SSC MSCP Covered	Low to moderate. Marsh habitat near grasslands, pastures, and agricultural fields
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	--/SSC MSCP Covered	Moderate. Occurs in coastal sage scrub, chaparral, and shrubby grasslands.
Bell's sage sparrow (*Amphispiza belli belli*)	--/SSC	Low. Chaparral and sage scrub with modest leaf-litter on the ground. Largely eliminated from most coastal areas of San Diego County (Unitt 2004).

Table 4.3-6 (cont.)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS[1]	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Birds (cont.)		
Golden eagle (*Aquila chrysaetos*)	--/SSC MSCP Covered	Low. Nesting occurs on cliff ledges or in trees on steep slopes, with foraging occurring primarily in grassland and sage scrub. Not usually observed near development.
Burrowing owl (*Athene cunicularia*)	--/SSC MSCP Covered	Low. Occurs in grasslands and open scrub habitats. At present, largely restricted to Otay Mesa and North Island. Majority of the study area likely too urbanized to support species.
Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*)	--/SSC MSCP Covered	Moderate. Occurs in coastal sage scrub and chaparral where there are large thickets of cactus in which they nest.
Western snowy plover (*Charadrius alexandrinus nivosus*)	FT/SSC MSCP Covered	Low. Found on beaches, dunes, and salt flats. Very little appropriate habitat within the study area.
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	--/SE	Low to moderate. A rare and sporadic summer visitor to San Diego County, the cuckoo is found only in extensive stands of mature riparian woodland.
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE/-- MSCP Covered	Low to moderate. This migratory species uses mature riparian woodland for nesting. As a breeding species, this flycatcher is restricted to modest/small colonies in San Diego County along the Santa Margarita River, San Luis Rey River, Whelan Lake, Guajome Lake, Couser Canyon, and Pala (Unitt 2004).
California horned lark (*Eremophila alpestris actia*)	--/SSC	Low. Occurs in open fields, grasslands, disturbed areas, and open sage scrub. Open habitat is uncommon in the study area.
Prairie falcon (*Falco mexicanus*)	--/SSC	Low. Nests on cliff or bluff ledges or occasionally in old hawk or raven nests; forages in grassland or desert habitats. All known nesting locations are at least 23 miles from the coast (Unitt 2004); therefore, study area is likely outside species' range.
Yellow-breasted chat (*Icteria virens*)	--/SSC	High. Habitat is shrubby willows and riparian woodland. Is likely to occur along willow-dominated drainages within the City, particularly within the MHPA.
Least bittern (*Ixobrychis exilis*)	--/SSC	Moderate. Found in marshes and other wetland habitat.
California black rail (*Laterallus jamaicensis coturniculus*)	--/ST	Very low. Found in wetland habitats; presumed extirpated from San Diego County.

Table 4.3-6 (cont.)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS[1]	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Birds (cont.)		
Osprey (*Pandion heliaetus*)	--/SSC	Low. Coasts and inland lakes with open water and a supply of fish.
Belding's savannah sparrow (*Passerculus sandwichensis beldingi*)	--/SE MSCP Covered	Moderate. Restricted to coastal salt marshes dominated by pickleweed.
Light-footed clapper rail (*Rallus longirostris levipes*)	FE/SE	High potential along San Diego River and Tijuana River near the coast and in the southern reaches of Rose Creek; low potential elsewhere. Coastal salt marshes, especially those dominated by cordgrass (*Spartina* sp.), but have been known to use brackish and freshwater sites.
Western bluebird (*Sialia mexicana*)	--/-- MSCP Covered	High. Scattered distribution in central and western portions of San Diego County. Has been observed in ruderal habitat near riparian forest along San Diego River and is likely to occur in portions of the study area.
California least tern (*Sternula antillarum browni*)	FE/SE MSCP Covered	Low. Coastal areas adjacent to the ocean. Very little appropriate habitat within the study area.
Least Bell's vireo (*Vireo bellii pusillus*)	FE/SE MSCP Covered	High. Occurs in mature riparian forest and woodland, as well as riparian scrub. CNDDB records include areas along or near the San Diego River, Smuggler's Gulch, Los Peñasquitos Creek, and Map No. 164. Critical habitat for this species occurs in the Smuggler's Gulch vicinity.
Mammals		
Pallid bat (*Antrozous pallidus*)	--/SSC	Moderate. Deserts and canyons. Daytime roosts in buildings, crevices; less often in caves, mines, hollow trees, and other shelters.
Dulzura pocket mouse (*Chaetodipus californicus femoralis*)	--/SSC	Low. Typically found in chaparral, especially where it intergrades with grasslands.
Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)	--/SSC	Moderate. Occurs in open coastal sage scrub, particularly in open, weedy areas with sandy substrates.
Mexican long-tongued bat (*Choeronycteris mexicana*)	--/SSC	High. Occurs in scrublands and forests, especially canyons with riparian vegetation. Roosts in mines, caves, and buildings. Sporadically reported through much of San Diego County (CDFG 2003).

Table 4.3-6 (cont.)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS[1]	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Mammals (cont.)		
Spotted bat (*Euderma maculatum*)	--/SSC	Low. Mountainous regions with ponderosa pines. Roosts primarily in crevices in rocky cliffs and canyons.
Western mastiff bat (*Eumops perotis californicus*)	--/SSC	Moderate. Chaparral and where coast live oaks are found. Also occurs in arid, rocky areas, cliffs, and canyons.
Silver-haired bat (*Lasionycteris noctivagans*)	--/SSC	Moderate. Prefers forested areas adjacent to ponds and streams. Roosts under loose bark, in tree hollows and buildings.
Hoary bat (*Lasiuris cinereus*)	--/SSC	Moderate. Evergreen forests and wooded areas.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	--/SSC	Moderate. Occurs primarily in open sage scrub, chaparral, grasslands, croplands, and disturbed habitat with at least some shrub cover present.
San Diego desert woodrat (*Neotoma lepida intermedia*)	--/SSC	Moderate. Occurs in open chaparral and coastal sage scrub, often building large, stick nests in rock outcrops or around clumps of cactus or yucca.
Pocketed free-tailed bat (*Nyctinimops femorosaccus*)	--/SSC	Low. Occurs in arid scrublands, including chaparral; roosts in crevices in cliff faces.
Big free-tailed bat (*Nyctinimops macrotus*)	--/SSC	Low. Occurs in rocky scrublands and woodlands, and roosts in rocky cliff faces. Reported sporadically in variety of San Diego County locations (CDFG 2003).
Pacific pocket mouse (*Perognathus longimembris pacificus*)	FE/SSC	Low. Fine-grained, sandy or gravelly substrates in coastal strand, coastal dunes, river alluvium, and coastal sage scrub growing on marine terraces.
American badger (*Taxidea taxus*)	--/SSC MSCP Covered	Low. Occurs in open plains and prairies, farmland, and sometimes edges of woods.

Source: HELIX (2011)
[1]Refer to Appendix D of Appendix D.1 of the PEIR for a listing and explanation of status and sensitivity codes
[2]As of the date of surrender, April 20, 2010, the City has relinquished coverage and does not rely on the City's Federal Incidental Take Permit (ITP) to authorize an incidental take of this vernal pool animal species. Upon completion of a Habitat Conservation Plan (HCP) for vernal pools, the City would enter into an Implementing Agreement in order to obtain species coverage and a Federal ITP for this species.

Regional and Regulatory Context

Multiple Species Conservation Program

The City's MSCP Subarea Plan has been prepared to meet the Habitat Conservation Plan requirements of the Federal Endangered Species Act (FESA) and the California Natural Communities Conservation Planning (NCCP) Act of 1992. The Subarea Plan is consistent with the NCCP and describes how the evaluation of proposed development projects relative to the City's portion of the MSCP Preserve (the Multi-Habitat Planning Area [MHPA]) will be implemented. The Plan was adopted in 1997, allowing the City to issue take permits at the local level. Approximately 56,831 acres of habitat are designated as the City's portion of the MHPA, of which approximately 90 percent is to be preserved and the remaining 10 percent may be developed.

Under the FESA, an incidental take permit is required when non-Federal activities would result in "take" of the threatened or endangered specifies. A Habitat Conservation Plan (HCP) must accompany an application for Federal Incidental Take Permit (ITP). Take authorization for federally listed wildlife species covered in the HCP shall generally be effective upon approval of the HCP.

As of the date of surrender, April 20, 2010, the City has relinquished coverage and does not rely on the City's Federal ITP to authorize an incidental take of the two vernal pool animal species and five vernal pool plant species. Upon completion of a Habitat Conservation Plan (HCP) for vernal pools, the City would enter into an Implementing Agreement in order to obtain species coverage and a Federal ITP for the seven vernal pool species

The MHPA is intended to link all core biological areas into a regional wildlife preserve. Many of the natural creeks included in the storm water system encompassed by the project area fall within the MHPA. Approximately 561.50 acres of the project study area are within the MHPA, including portions of the following named channels: San Diego River, Los Peñasquitos Creek, Soledad Creek, Rose Creek, Florida Canyon, Alvarado Creek, Chollas Creek, South Chollas Creek, and Smuggler's Gulch. HUs supporting habitat within the MHPA for the project area include: Peñasquitos, Pueblo San Diego, San Diego, and Tijuana.

MSCP policies and guidelines that are relevant to the proposed maintenance activities are identified and evaluated in Table 4.1-3 in Subchapter 4.1, Land Use.

Wildlife Corridors

Wildlife corridors can be local or regional in scale; their functions may vary temporally and spatially based on conditions and species presence. Wildlife corridors represent areas where wildlife movement is concentrated due to natural or anthropogenic constraints. Local corridors provide access to resources such as food, water, and shelter. Animals use these corridors, which are often hillsides or tributary drainages, to move between different habitats. Regional corridors provide avenues for wildlife dispersal, migration, and contact between otherwise distinct populations by linking two or more large habitats.

Approximately 561.50 acres of the study area are within the City's MHPA. The MHPA in these portions of the project provides connectivity through several creeks and tributary drainages, as well as the San Diego River corridor. Several storm water channels within the Master Program are likely to function as wildlife corridors including but not necessarily limited to the San Diego River, Smuggler's Gulch, Rose Creek, Chollas Creek, Soledad Creek, and Los Peñasquitos Creek.

4.3.2 Impacts

This analysis addresses potential impacts resulting from maintenance of the storm water facilities included in the proposed Master Program including access roads, stockpiling and staging areas.

The following analysis is intended to provide a programmatic estimate of the magnitude of impacts to biological resources that could occur from the various maintenance activities anticipated to result from implementation of the proposed Master Program. The impacts are based on the assumption that disturbance would be normally limited to the bottom and adjacent two feet of bank area when the top-of-bank to top-of-bank width is 20 feet or more. For facilities with a width less than 20 feet, it was assumed that the bottom and all of the banks would be disturbed in order to maximize the ability of these narrower facilities to convey flood water. This analysis includes potential impacts associated with bringing equipment into the storm water facilities on access roads which have been identified for each facility included in the Master Program. The estimated disturbance widths are identified in Table 3-1.

The analysis characterizes impacts as direct or indirect. An impact is considered direct when the primary effect is removal of existing habitat and/or species. Direct impacts would result from clearing of vegetation and removal of accumulated sediment and debris. Indirect impacts occur when secondary effects of adjacent activities, such as noise, reduced water quality, dust, or non-native plant invasion may adversely affect adjacent biological resources. The magnitude of an indirect impact may be the same as a direct impact; however, the effect usually takes a longer time to become apparent because indirect impacts are related to changes in animal behavior or transition of habitats from one type to another which typically takes longer to manifest.

Significance Criteria

According to the City's Significance Determination Thresholds (2011), impacts to biological resources would be significant if the project would:

- Cause a substantial adverse impact on any Tier I, Tier II, Tier IIIA, or Tier IIIB habitats, as identified in the Biology Guidelines of the Land Development manual or other sensitive natural community identified in local or regional plans, policies, regulation, or by the CDFG or USFWS;
- Cause a substantial adverse impact on more than 0.01 acre of wetlands (including, but not limited to marsh, vernal pool, riparian, etc.) through direct removal, filling, hydrological interruption, or other means;
- Cause a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in the

MSCP or other local or regional plans, policies or regulations, or by the CDFG or USFWS;

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors; including linkages identified in the MSCP Plan, or impede the use of native wildlife nursery sites; and/or
- Cause a conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan, either within the MSCP plan area or in the surrounding region.

Analysis of Impacts

Issue 1: Would the Project impact sensitive habitat, including but not limited to City, State, or federally regulated wetlands through direct removal, filling, hydrological interruption, or other means?

Direct Impacts

Impacts on biological resources associated with the proposed Master Program would be related to disturbance to resources located within the storm water facilities to be maintained as well as dewatering, access and staging/stockpiling areas. In addition, impacts could occur from implementation of mitigation measures which involve interim erosion control (e.g. check dams) or off-site enhancement, restoration or creation of habitat to offset impacts from maintenance.

Quantifying the impact of off-site habitat enhancement, restoration or creation is considered speculative pursuant to Section 15145 of the CEQA Guidelines. As discussed in mitigation section of this subchapter, both the amount and location of off-site mitigation are dependent on a number of factors which cannot be forecast at this time. However, impacts would normally consist of temporary to permanent displacement of the vegetation and wildlife which occur on the off-site mitigation site prior to implementation. As off-site mitigation traditionally is limited to areas which do not support high quality biological resources, it is anticipated that off-site mitigation would not result in a significant impact on biological resources. In fact, mitigation is expected to result in improved biological resources once established. In any case, the potential effects of the off-site mitigation would be evaluated in accordance with CEQA. The CEQA process would identify mitigation measures for any impacts to biological resources which are found to be significant from off-site mitigation.

Similarly, quantifying the impact of water quality control measures is difficult to determine. As discussed in Subchapter 4.8, Water Quality, temporary check dams or similar features may be required to reduce water quality impacts from maintenance. The initial impact of these features would be estimated and mitigated as part of the mitigation program developed for the overall maintenance activity which would include installation of the water quality control feature. As temporary facilities, they are intended to be removed when no longer required. For example, once the vegetation has become re-established, it is anticipated that check dams and other interim facilities would be removed. Where these features are located within native vegetation, removal

may cause minimal impact in the course of removing the feature. However, these impacts would not be significant in light of the fact that mitigation would have already occurred for the installation process and because disturbed vegetation would be expected to quickly re-establish.

Quantifying the impact of maintenance on biological resources would depend on the results of a site-specific IHHA required to be completed for each maintenance activity. As discussed in Chapter 3.0 Project Description, the IHHA would identify the minimum amount of vegetation required to be removed to improve the ability of storm water facilities to convey floodwater. However, in order to provide a programmatic basis for evaluating the impacts of maintenance on biological resources, it is assumed that disturbance would be limited to the channel bottom and the adjacent two feet whenever a channel has a bank-to-bank width of over 20 feet. Where the overall width is less than 20 feet, it is assumed that the channel banks as well as bottom would have to be cleared to maximize floodwater conveyance. Table 3-1 included in Chapter 3.0, Project Description, quantifies the assumed width of disturbance in each channel based on these parameters.

Based on the width of disturbance identified in Table 3-1, maintenance activities described in the Master Program would affect up to approximately 41.62 acres of vegetated wetland habitat and 37.08 acres of unvegetated earthen-bottom streambed/natural flood channel. An estimated 61.3 acres of upland habitat could be impacted, of which approximately 50.3 acres are developed (Table 4.3-7). This table quantifies the impacts by HU. A segment by segment breakdown of wetland impacts is provided in Appendix D.1. As many as approximately 14.59 acres of wetland vegetation impacts, 29.23 acres of unvegetated stream impacts and 3.1 acres of upland (excluding developed land) impacts would occur within the MHPA.

Approximately 10.6 acres of wetland impacts and 9.2 acres of unvegetated natural flood channel impacts would occur within the coastal overlay zone. However, in reality, the contemplated maintenance activities would occur over an extended period of time and, thus, the estimated areas of impacts would not occur at any one time. The amount of vegetation that may be impacted would be dependent on the results of the limits of disturbance shown on the IMP for each facility.

<u>Wetland/Riparian Vegetation Communities</u>

As indicated earlier, maintenance activities would impact up to approximately 41.62 acres of wetland/riparian habitats including 4.95 acres of southern riparian forest (including disturbed), 0.09 acre of southern sycamore riparian woodland, 7.49 acres of southern willow scrub (including disturbed), 1.99 acres of mule fat scrub (including disturbed), 0.15 acre of riparian scrub, 17.90 acres of freshwater marsh (including disturbed), 1.57 acres of coastal saltmarsh, 0.51 acre of coastal brackish marsh, and 6.97 acres of disturbed wetland (Table 4.3-7). In addition, 37.08 acres of streambed/natural flood channel would be impacted. The wetland information associated within each specific channel is contained in Appendix D.1.

While dewatering by retaining water upstream or diverting it in a pipe during maintenance would eliminate surface water from the area being maintained, this condition would not result in significant impacts on biological resources that would be any greater than the disruption caused by the maintenance activity itself. Furthermore, the diversion would be short-term in nature, generally lasting less than four weeks.

Table 4.3-7
ESTIMATED AREA OF VEGETATION COMMUNITIES AFFECTED[1]

HU	Wetlands Outside MHPA[2]											Total
	SRF	SRW	SWS	MFS	RS	FWM	CAM	CSM	CBM	DW	STM/ NFC	
San Dieguito	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.02	0.01	**0.19**
Peñasquitos	0.00	0.00	1.60	0.35	0.00	4.66	0.00	0.19	0.05	0.00	1.35	**8.20**
San Diego	0.00	0.09	0.75	0.00	0.00	2.96	0.00	0.00	0.00	0.27	0.20	**4.27**
Pueblo San Diego	0.00	0.00	1.68	0.46	0.15	4.36	0.00	0.32	0.00	4.78	6.29	**18.04**
Sweetwater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	**0.02**
Otay	0.00	0.00	0.28	0.00	0.00	1.73	0.00	0.00	0.00	0.06	0.00	**2.07**
Tijuana	0.00	0.00	0.50	0.01	0.00	1.04	0.00	0.00	0.00	0.54	0.00	**2.09**
Non-MHPA Subtotal	**0.00**	**0.09**	**4.81**	**0.82**	**0.15**	**14.91**	**0.00**	**0.51**	**0.05**	**5.69**	**7.85**	**34.88**
HU	**Wetlands Within MHPA[2]**											**Total**
	SRF	SRW	SWS	MFS	RS	FWM	CAM	CSM	CBM	DW	STM/ NFC	
San Dieguito	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
Peñasquitos	0.00	0.00	1.90	0.17	0.00	1.81	0.00	1.06	0.46	0.04	3.90	**9.34**
San Diego	4.95	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.11	22.88	**28.94**
Pueblo San Diego	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
Sweetwater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
Otay	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
Tijuana	0.00	0.00	0.78	1.00	0.00	0.18	0.00	0.00	0.00	1.13	2.45	**5.54**
MHPA Subtotal	**4.95**	**0.00**	**2.68**	**1.17**	**0.00**	**2.99**	**0.00**	**1.06**	**0.46**	**1.28**	**29.23**	**43.82**
WETLANDS TOTAL	**4.95**	**0.09**	**7.49**	**1.99**	**0.15**	**17.90**	**0.00**	**1.57**	**0.51**	**6.97**	**37.08**	**78.70**

Table 4.3-7 (cont.)
ESTIMATED AREA OF VEGETATION COMMUNITIES AFFECTED[1]

HU	Uplands Outside MHPA[2]							Total
	Tier II	Tier IIIA	Tier IIIB	Tier IV				
	DCSS	SMC	NNG	EW	NNV/ ORN	DH/ RUD	DEV	
San Dieguito	0.0	0.0	0.0	0.0	0.0	0.0	1.2	**1.2**
Peñasquitos	0.0	0.1	0.2	0.0	0.9	0.2	12.8	**14.2**
San Diego	0.4	0.0	0.3	0.1	0.4	0.7	7.0	**8.9**
Pueblo San Diego	1.8	0.0	1.4	0.0	0.8	1.1	25.7	**30.8**
Sweetwater	0.0	0.0	0.0	0.0	0.0	0.0	0.4	**0.4**
Otay	0.0	0.0	0.1	0.0	0.4	0.9	0.8	**2.2**
Tijuana	0.0	0.0	0.3	0.0	0.2	0.1	1.5	**2.1**
Non-MHPA Subtotal	**2.2**	**0.1**	**2.3**	**0.1**	**2.7**	**3.0**	**49.4**	**59.8**
HU	**Uplands Within MHPA[2]**							**Total**
	Tier II	Tier IIIA	Tier IIIB	Tier IV				
	DCSS	SMC	NNG	EW	NNV/ ORN	DH/ RUD	DEV	
San Dieguito	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Peñasquitos	0.0	0.1	0.2	0.1	0.1	0.0	0.1	**0.6**
San Diego	0.0	0.0	0.0	0.0	0.0	0.0	0.8	**0.8**
Pueblo San Diego	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Sweetwater	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Otay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Tijuana	0.0	0.0	0.0	0.0	0.0	0.1	0.0	**0.1**
MHPA Subtotal	**0.0**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**	**0.9**	**1.5**
UPLANDS TOTAL	**2.2**	**0.2**	**2.5**	**0.2**	**2.8**	**3.1**	**50.3**	**61.3**

[1]Totals reflect rounding
[2]Habitat acronyms: CAM=cismontane alkali marsh, CBM=coastal brackish marsh, CSM=coastal salt marsh, DCSS=Diegan coastal sage scrub, DH/RUD=disturbed habitat/ruderal, DEV=developed, DW=disturbed wetland, EW=eucalyptus woodland, FWM=freshwater marsh, MFS=mule fat scrub, NFC=City natural flood channel, NNG=non-native grassland, NNV/ORN=non-native vegetation/ornamental, RS=riparian scrub, SMC=southern mixed chaparral, SRF=southern riparian forest, SRW=southern sycamore riparian woodland, STM=CDFG streambed (includes open water habitat), SWS=southern willow scrub

Jurisdictional Areas (Corps, CDFG, and City)

Up to approximately 9.22 acres of wetlands and 42.98 acres of non-wetland WUS subject to Corps jurisdiction would be impacted within the channel areas (Table 4.3-8). Appendix D.1 contains a detailed estimate of Corps jurisdictional impacts by channel.

Up to approximately 41.62 acres of wetlands/riparian habitat and 37.08 acres of unvegetated streambed subject to CDFG and City jurisdiction would be affected by maintenance activities (Table 4.3-9). This includes concrete-lined channels that support wetland vegetation. Appendix 1 contains a detailed estimate of CDFG jurisdictional impacts by channel.

Upland Vegetation Communities

Maintenance activities would impact up to 4.9 acres of sensitive upland habitat, including 2.2 acres of Diegan coastal sage scrub (including disturbed), 0.2 acre of southern mixed chaparral, and 2.5 acres of non-native grassland (Table 4.3-7). Impacts to these communities would be significant.

Impacts of up to 56.4 acres of non-sensitive uplands (0.2 acre of eucalyptus woodland, 2.8 acres of non-native vegetation/ornamental, 3.1 acres of disturbed habitat/ruderal, and 50.3 acres of developed land) would not be considered significant under the City's Biology Guidelines.

Wildlife

The loss of vegetation would have a concomitant impact on the animal populations that utilize these vegetation communities for activities including foraging, nesting, and movement. For example, amphibians, reptiles, birds and mammals have sufficient mobility that they can move into adjacent habitat. However, most of the animals associated with storm water facilities would be able to relocate into areas up- and down-stream of maintenance activities. Once the vegetation begins to re-establish itself after maintenance, these animals would be able to move back into the maintained areas. As a result, impacts to these animals would not be significant.

Unlike other animals, BMI are not able to readily move into adjacent habitat in response to maintenance activities because they are confined to sediments. In order to determine the potential effect of maintenance on BMI, an evaluation was done by William Isham (Weston Solutions, Inc.), who is well-versed in various aspects of benthic invertebrates. His findings are contained in Appendix D.4 and summarized below.

BMI are important components of ecosystems associated with streambeds. They provide a valuable food source for wildlife including fish, birds, and small mammals and also play an important role in the breakdown of organic matter. BMI typically include the larval and adult stages of aquatic insects as well as all life stages of non-insects (e.g., amphipods, crayfish, and flatworms). No sensitive BMI are expected to occur within the storm water facilities included in the Master Program. Sensitive BMI are restricted to more pristine, non-urbanized sites and have either been eliminated from the urban environment or were never present due to pre-development hydrologic limitations.

Table 4.3-8
ESTIMATED CORPS JURISDICTIONAL AREAS (WUS) AFFECTED (acre[s])[1]

HU[2]	Wetlands[3]											Non-wetland WUS		TOTAL
	SRF	SRW	SWS	MFS	RS	FWM	CAM	CSM	CBM	DW	Total Wetland Impacts	Earthen bottom	Concrete bottom	
San Dieguito	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	**0.01**	0.01	1.19	**1.21**
Peñasquitos	0.00	0.00	1.94	0.08	0.00	5.55	0.00	1.25	0.31	0.01	**9.14**	5.15	10.61	**24.90**
San Diego	4.95	0.00	0.30	0.00	0.00	2.76	0.00	0.00	0.00	0.02	**8.03**	23.30	5.47	**36.80**
Pueblo San Diego	0.00	0.00	0.75	0.19	0.06	2.74	0.00	0.32	0.00	2.90	**6.96**	7.38	14.13	**28.47**
Sweetwater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	0.00	0.26	**0.26**
Otay	0.00	0.00	0.28	0.00	0.00	1.46	0.00	0.00	0.00	0.05	**1.79**	0.00	0.47	**2.26**
Tijuana	0.00	0.00	0.77	0.22	0.00	1.06	0.00	0.00	0.00	1.24	**3.29**	3.67	1.34	**8.30**
TOTAL	**4.95**	**0.00**	**4.04**	**0.49**	**0.06**	**13.58**	**0.00**	**1.57**	**0.31**	**4.22**	**29.22**	**39.51**	**33.47**	**72.98**

Source: HELIX (2011)
[1]Totals reflect rounding
[2]The HUs correspond to the following Storm Water Facility map pages in Appendix D.1: San Dieguito HU=Maps 1-3, 169; Peñasquitos HU=Maps 4-46, 55-57, 163-168, 170-172; San Diego HU=Maps 47-54, 58-66, 81-83, 140-161; Pueblo San Diego HU=Maps 67-80, 84-121; Sweetwater HU=Map 122; Otay HU=Maps 131-135; Tijuana HU=Maps 123-130, 136-139
[3]Habitat acronyms: CAM=cismontane alkali marsh, CBM=coastal brackish marsh, CSM=coastal saltmarsh, DW=disturbed wetland, FWM=freshwater marsh, MFS=mule fat scrub, RS=riparian scrub, SRF=southern riparian forest, SRW=southern sycamore riparian woodland, and SWS=southern willow scrub

Table 4.3-9
ESTIMATED CDFG AND CITY JURISDICTIONAL AREAS AFFECTED (acre[s])[1]

HU[2]	Wetland/Riparian Habitat[3]											Drainage	Total CDFG/City
	SRF	SRW	SWS	MFS	RS	FWM	CAM	CSM	CBM	DW	Total Wetland/ Riparian Impacts	STM/ NFC	
San Dieguito	0.00	0.00	0.00	0.00	0.00	0.16	0.00	00.00	0.00	0.02	**0.18**	0.01	**0.19**
Peñasquitos	0.00	0.00	3.50	0.52	0.00	6.47	0.00	1.25	0.51	0.04	**12.29**	5.25	**17.54**
San Diego	4.95	0.09	0.75	0.00	0.00	3.97	0.00	0.00	0.00	0.38	**10.14**	23.08	**33.22**
Pueblo San Diego	0.00	0.00	1.68	0.46	0.15	4.36	0.00	0.32	0.00	4.78	**11.75**	6.29	**18.04**
Sweetwater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	**0.02**	0.00	**0.02**
Otay	0.00	0.00	0.28	0.00	0.00	1.73	0.00	0.00	0.00	0.06	**2.07**	0.00	**2.07**
Tijuana	0.00	0.00	1.28	1.01	0.00	1.21	0.00	0.00	0.00	1.67	**5.17**	2.45	**7.62**
TOTAL	**4.95**	**0.09**	**7.49**	**1.99**	**0.15**	**17.90**	**0.00**	**1.57**	**0.51**	**6.97**	**41.62**	**37.08**	**78.70**

Source: HELIX (2011)
[1]Totals reflect rounding
[2]The HUs correspond to the following Storm Water Facility map pages in Appendix D.1: San Dieguito HU=Maps 1-3, 169; Peñasquitos HU=Maps 4-46, 55-57, 163-168, 170-172; San Diego HU=Maps 47-54, 58-66, 81-83, 140-161; Pueblo San Diego HU=Maps 67-80, 84-121; Sweetwater HU=Map 122; Otay HU=Maps 131-135; Tijuana HU=Maps 123-130, 136-139
[3]Habitat acronyms: CAM=cismontane alkali marsh, CBM=coastal brackish marsh, CLOW=coast live oak woodland, CSM=coastal saltmarsh, DW=disturbed wetland, FWM=freshwater marsh, MFS=mule fat scrub, NFC= City natural flood channel, RS=riparian scrub, SRF=southern riparian forest, SRW=southern sycamore riparian woodland, SWS=southern willow scrub, and STM=CDFG streambed (includes open water habitat)
[4]CDFG Acreage
[5]City Acreage

The capacity of storm water facilities to support BMI is based on two primary factors: surface water flow and substrate characteristics. The most favorable substrate consists of fine sediments. Low surface flows are the most favorable for BMI. High surface water flows result in scouring which displaces BMI residing in the displaced substrate.

Maintenance of storm water facilities would impact BMI. Direct impacts would occur from excavation of sediment material to increase the capacity of facilities to convey floodwater. BMI occurring within this excavated material would be destroyed. In addition, as discussed in Subchapter 4.8, Water Quality, the removal of vegetation during maintenance has the potential to accelerate erosion of the underlying substrate. When erosion occurs, BMI residing in this substrate material would likely experience high mortality in the process of being transported downstream with transported sediment. On the other hand, the removal of sediments containing pollutants could positively impact BMI by eliminating a deterrent to successful population of sediment. In addition, removing fine-grain sediment and exposing more suitable substrate material could positively affect BMI.

Although maintenance would impact BMI, the impacts would not be significant. Physical disruption to a limited section of a stream would generally have a short-term, quickly reversible impact to BMI communities. This has been documented in numerous situations in San Diego County in recent years. Appendix D.4 cites a streambed restoration project of Forester Creek in the City of Santee as an example of the resilience of BMI. Restoration in Forester Creek began with a complete removal of the stream substrate for a length of approximately 800 meters. Construction activities took approximately one and a half years to complete. In the course of this work, surveys of BMI were conducted including two pre-restoration surveys, two surveys during restoration, and two post-restoration surveys. Table 1 of Appendix D.4 indicates that BMI community quality, richness, and abundance were affected to a moderate degree by disruption of the streambed, but also indicates that even major disturbance does not eliminate the BMI community altogether. Impacts on the BMI community were entirely reversed when the site had revegetated.

The example of Forester Creek would, however, be different from a scenario that would be encountered in concrete-lined channels. In some concrete channels, eroded sediment and cobble from upstream sources have accumulated on the channel bottom and, over time, vegetation may become established. As a result, what was once a very poor substrate for BMI, becomes habitat of a much higher quality. Channel maintenance activities that remove sediment and vegetation would have a greater and more long-lasting impact on the BMI community than in a more natural streambed. However, since the accumulation of sediment would likely occur soon after maintenance and remain until the next maintenance event, no significant impacts on BMI would occur from maintenance in concrete channels.

Indirect Impacts

Potential indirect impacts from maintenance activities would normally be associated with secondary effects, including habitat insularization, water quality, lighting, noise, roadkill, exotic plant species, fugitive dust, and human intrusion. The magnitude of an indirect impact may be the same as a direct impact, but the effect usually takes longer to become apparent because

indirect impacts are related to changes in animal behavior or transition of habitats from one type to another which typically takes longer to manifest.

Habitat Insularization

Habitat insularization is fragmentation of large habitat areas into smaller "islands" effectively isolated from one another. Such fragmentation presents barriers to wildlife movement and breeding, splits plant and animal populations, and increases edge effects. Habitat insularization is often associated with local species extinctions because smaller habitat areas support relatively fewer species than larger ones.
No habitat insularization impacts are expected to occur as a result of proposed maintenance activities because the activities would not result in the isolation of any habitat areas. The majority of the storm water facilities occur in urban areas where surrounding development has substantially reduced the amount of native habitat adjacent to these facilities. Maintenance of storm water facilities would not change the conditions which surround the facilities. Maintenance within areas surrounded by native habitat would not result in habitat insularization. The drainage courses would continue to accommodate wildlife movement and riparian scrub would be expected to re-establish within six to 12 months following maintenance. Thus, maintenance would not result in any substantial increase in habitat insularization.

Water Quality

Runoff is often associated with sedimentation and pollution, which have the potential to significantly impact water quality in adjacent and downstream areas. The use of petroleum products (e.g., fuels, oils, and lubricants) by maintenance equipment could potentially contaminate surface water and significantly impact biological resources. As discussed in Subchapter 4.8, Water Quality, the removal of wetland vegetation occurring as part of the Master Program may result in a decrease in pollutant uptake by plants, as vegetation in the channel bottoms would be removed. As indicated in Subchapter 4.8, Water Quality, additional impacts to water quality could occur as a result of disturbance of sediment on the drainage bottom during clearing activities, and subsequent increases in turbidity if water is present at the time of maintenance. Decreased water quality could significantly impact downstream biological resources by impacting both plants and animals.

Lighting

Night lighting exposes adjacent wildlife species to an unnatural light regime. This lighting may alter their behavior patterns, and consequently result in a loss of species diversity. Except in the case of emergency maintenance, maintenance activities would take place during daylight hours. Due to the fact that emergency maintenance would be limited to one to two weeks, night-time lighting would represent a less than significant impact.

Noise

Project-related noise from such sources as machinery potentially used for clearing (e.g., bulldozers, Gradalls, etc.) could result in a temporary impact to wildlife. Noise-related impacts

would be significant if a sensitive species would be displaced from their nests or territories and fail to breed. The potential exists for maintenance noise to have a significant impact on sensitive wildlife.

Roadkill

Roadkill is not a significant issue for this project, as all maintenance machinery would be slow-moving and the project would not open up access roads for use by the general public.

Exotic Plant Species

Non-native plants could colonize areas disturbed by maintenance and potentially spread into the adjacent preserve areas. Such invasions would displace native plant species, reducing diversity, increasing flammability and fire frequency, change ground and surface water levels, and adversely affect the native wildlife that are dependent on native vegetation.

Clearing of native wetland vegetation within the channels and ditches could result in subsequent colonization by invasive, non-native vegetation such as giant reed because this species is so well-adapted to displacing native wetland species. However, many of the channels and ditches already support a variety of non-native wetland-affiliated species growing in conjunction with native species. Clearing of the channels would remove both native and non-native species, and quick growing species such as cattails would be expected to recolonize many of the wetter areas over the short-term. Invasion by non-native plants in areas where they previously did not exist would be considered a significant impact.

Fugitive Dust

Fugitive dust produced by maintenance would disperse onto vegetation and cause adverse effects to sensitive vegetation. A continual cover of dust would reduce the overall vigor of individual plants by reducing their photosynthetic capabilities and increasing their susceptibility to pests or disease. In turn, this would affect animals dependent on these plants. Fugitive dust is a temporary maintenance impact and, therefore, not considered a significant impact to biological resources.

Human Intrusion

Increases in human activity in natural areas would result in degradation of sensitive vegetation communities by fragmenting habitat, forming edges, and removing existing plants. In addition, illegal dumping of landscape debris and trash may occur. No significant impacts would occur as a result of human activity given that many of the areas are already used as homeless encampments and for illegal dumping. Maintenance activities in the storm water facilities are not expected to result in an increase in these activities.

Significance of Impacts

Sensitive habitats that would be directly impacted include wetland and upland vegetation. As the maintenance would primarily occur within drainage courses, wetland communities would be the

most impacted. An estimated 41.62 acres of different wetland vegetation types and 37.08 acres of unvegetated channel bottom would be impacted by maintenance. Impacted wetland/riparian vegetation communities would include southern riparian forest, southern sycamore riparian woodland, southern willow scrub, mule fat scrub, riparian scrub, freshwater marsh, cismontane alkali marsh, southern coastal saltmarsh, coastal brackish marsh, and disturbed wetland.

An estimated 4.9 acres of sensitive upland vegetation communities would be impacted including Diegan coastal sage scrub, southern mixed chaparral, and non-native grassland. The impacts to these vegetation communities are considered significant.

Maintenance may also have significant impacts on wildlife due to the loss of urban pollutant removal capabilities associated with vegetated storm water facilities. Where conditions are favorable for vegetation to remove urban pollutants, the removal of that vegetation in the course of maintenance would eliminate this capability and potentially expose downstream wildlife to increased concentration of urban pollutants as well as increased sedimentation. This impact is considered potentially significant.

Mitigation Measures, Monitoring and Reporting

The City is proposing a comprehensive mitigation program for wetlands that involves a combination of enhancement, restoration, mitigation credit purchase, and/or creation. The mitigation would be primarily dependent on the type of habitat impacted. In addition to the mitigation measures identified in the following discussion, implementation of Mitigation Measures 4.8.1 through 4.8.3 would reduce water quality impacts related to maintenance to below a level of significance.

Wetland enhancement refers to the actions taken to increase the function of an existing wetland. Wetland enhancement involves removal of invasive species followed by reseeding and/or installation of container stock to facilitate the enhancement process.

Wetland restoration refers to actions taken to return wetland functions to an area that was previously a wetland but has since become an upland habitat. As with enhancement, restoration would include a combination of invasives removal followed by seeding and/or container stock installation.

Wetland creation refers to actions taken to create wetlands where none previously occurred. As with enhancement, creation would include a combination of invasives removal followed by seeding and/or container stock installation. In addition, grading may be required to create suitable hydrologic conditions.

Mitigation credit purchase would consist of purchasing wetland credits created in an approved mitigation bank. The responsibility of long-term maintenance would fall upon the party responsible for the mitigation bank.

Mitigation for impacts to upland vegetation would be accomplished through payments into the City's Habitat Acquisition Fund, purchasing mitigation credits, and/or through enhancement, restoration and/or creation at affected sites.

The overall approach proposed by the City for compensating for wetland and upland impacts is addressed below. This general discussion is followed by specific mitigation measures proposed to implement the approach described below.

Wetlands

Mitigation for the loss of wetland habitat would be performed in accordance with the City's Biology Guidelines. As a result, mitigation would ~~primarily~~ be accomplished through creation, enhancement and/or restoration of wetland habitat. In accordance with the Biology Guidelines, wetland habitat creation will be accomplished at a ratio of 1:1; the balance of the mitigation requirement would be met through enhancement and/or restoration.~~The City may also choose to mitigate for wetland impacts by creating new wetlands. However, habitat creation would not be required for three primary reasons. First, the drainage channel itself would remain after maintenance, and would continue to function for wildlife movement. Second, wetland vegetation has historically returned to these channels between maintenance events. Third, storm water facility maintenance, in most cases, occurs in urban channels where maintenance activities have occurred for many years in the past. The City may also choose to mitigate for wetland loss through acquisition of mitigation credits through an approved mitigation bank.~~

Uplands

Impacts to upland habitat would be mitigated through habitat preservation. Upland mitigation is traditionally accomplished by off-site acquisition of existing habitat. In order to encourage mitigation to occur within areas targeted for preserves, the City has established lower mitigation ratios for upland habitats acquired within preserve areas. Similarly, the mitigation ratios for impacts to habitat within a preserve area are higher in order to discourage impacts within these preserves. The City may also choose to mitigate upland impacts through the purchase of appropriate mitigation bank credits or make payments into the Habitat Acquisition Fund.

Implementation of the following mitigation measures, in conjunction with incorporation of the maintenance protocols specified in the Master Program, would reduce the potential impacts to biological resources to below a level of significance.

Procedural Mitigation Measures

Mitigation Measure 4.3.1: Prior to commencement of any activity within a specific annual maintenance program, a qualified biologist shall prepare an IBA for each area proposed to be maintained. The IBA shall be prepared in accordance with the specifications included in the Master Program.

Mitigation Measure 4.3.2: No maintenance activities within a proposed annual maintenance program shall be initiated before the City's Assistant Deputy Director (ADD) Environmental

Designee and state and federal agencies with jurisdiction over maintenance activities have approved the IMPs and IBAs including proposed mitigation for each of the proposed activities. In their review, the ADD Environmental Designee and agencies shall confirm that the appropriate maintenance protocols have been incorporated into each IMP.

Mitigation Measure 4.3.3: No maintenance activities within a proposed annual maintenance program shall be initiated until the City's ADD Environmental Designee and Mitigation Monitoring Coordinator (MMC) have approved the qualifications for biologist(s) who shall be responsible for monitoring maintenance activities which may impact sensitive biological resources.

Mitigation Measure 4.3.4: Prior to undertaking any maintenance activity included in an annual maintenance program, a mitigation account shall be established to provide sufficient funds to implement all biological mitigation associated with the proposed maintenance activities. The fund amount shall be determined by the ADD Environmental Designee. The account shall be managed by the City's SWD, with quarterly status reports submitted to DSD. The status reports shall separately identify upland and wetland account activity. Based upon the impacts identified in the IBAs, money shall be deposited into the account, as part of the project submittal, to ensure available funds for mitigation.

Mitigation Measure 4.3.5*:* Prior to commencing any activity that could impact wetlands, evidence of compliance with other permitting authorities is required, if applicable. Evidence shall include copies of permits issued, letters of resolution issued by the Responsible Agency documenting compliance, or other evidence documenting compliance and deemed acceptable by the ADD Environmental Designee.

Mitigation Measure 4.3.6: Prior to commencing any activity where the IBA indicates significant impacts to biological resources may occur, a pre-maintenance meeting shall be held on site with the following in attendance: City's SWD Maintenance Manager (MM), MMC, and Maintenance Contractor (MC). The biologist selected to monitor the activities shall be present. At this meeting, the monitoring biologist shall identify and discuss the maintenance protocols that apply to the maintenance activities.

At the pre-maintenance meeting, the monitoring biologist shall submit to the MMC and MC a copy of the maintenance plan (reduced to 11"x17") that identifies areas to be protected, fenced, and monitored. This data shall include all planned locations and design of noise attenuation walls or other devices. The monitoring biologist also shall submit a maintenance schedule to the MMC and MC indicating when and where monitoring is to begin and shall notify the MMC of the start date for monitoring.

Mitigation Measure 4.3.7: Within three months following the completion of mitigation monitoring, two copies of a written draft report summarizing the monitoring shall be prepared by the monitoring biologist and submitted to the MMC for approval. The draft monitoring report shall describe the results including any remedial measures that were required. Within 90 days of receiving comments from the MMC on the draft monitoring report, the biologist shall submit one copy of the final monitoring report to the MMC.

Mitigation Measure 4.3.8: Within six months of the end of an annual storm water facility maintenance program, the monitoring biologist shall complete an annual report which shall be distributed to the following agencies: the City of San Diego DSD, CDFG, RWQCB, USFWS, and Corps. At a minimum, the report shall contain the following information:

- Tabular summary of the biological resources impacted during maintenance and the mitigation; and
- Master table containing the following information for each individual storm water facility or segment which is regularly maintained:
  - Date and type of most recent maintenance;
  - Description of mitigation which has occurred; and
  - Description of the status of mitigation which has been implemented for past maintenance activities.

Wetland Mitigation

Mitigation Measure 4.3.9: Wetland impacts resulting from maintenance shall be mitigated in one of the following ~~three~~ two ways: (1) habitat creation, restoration, and/or enhancement ~~concurrent with maintenance~~, ~~(2) habitat creation, restoration, and/or enhancement prior to maintenance,~~ or (~~3~~2) mitigation credits. The amount of mitigation ~~When mitigation is proposed to be accomplished through concurrent creation, restoration or enhancement, the amount of planting~~ shall be in accordance with ratios in Table 4.3-10 unless different mitigation ratios are required by state or federal agencies with jurisdiction over the impacted wetlands. In this event, the mitigation ratios required by these agencies will supersede, and not be in addition to, the ratios defined in Table 4.3-10.~~.~~ ~~When previously created, restored or enhanced wetland habitat is proposed to be used for mitigation, the ratio shall be 1:1, provided the habitat has been determined to be successfully established by the ADD Environmental Designee in consultation with the Resource Agencies prior to commencing the maintenance activity. Mitigation credits may be used at a ratio of 1:1, provided the mitigation credits are from a mitigation bank which has been approved by the Resource Agencies.~~ No maintenance shall commence until the ADD Environmental Designee has determined that mitigation proposed for a specific maintenance activity meets one of these ~~three~~ two options.

Table 4.3-10
WETLAND MITIGATION RATIOS

WETLAND TYPE	MITIGATION RATIO[1]
Southern riparian forest	3:1
Southern sycamore riparian woodland	3:1
Riparian woodland	3:1
Coastal saltmarsh	4:1
Coastal brackish marsh	4:1
Southern willow scrub	2:1

Table 4.3-10 (cont.)
WETLAND MITIGATION RATIOS

WETLAND TYPE	MITIGATION RATIO[1]
Mule fat scrub	2:1
Riparian scrub[2]	2:1
Freshwater marsh[2]	~~1~~2:1
Cismontane alkali marsh	4:1
Disturbed wetland	~~1~~2:1
Streambed/natural flood channel	~~NA~~2:1

[1] Mitigation ratio within the Coastal Zone will be 3:1
[2] Mitigation ratio within the Coastal Zone will be 4:1
~~[1]Mitigation done in advance or through purchase of mitigation credits would be at a 1:1 ratio.~~

Mitigation locations for wetland impacts shall be selected using the following order of preference, based on the best mitigation value to be achieved.

1. Within impacted watershed, within City limits.
2. Within impacted watershed, outside City limits on City-owned or other publicly-owned land.
3. Outside impacted watershed, within City limits.
4. Outside impacted watershed, outside City limits on City-owned or other publically-owned land.

In order to mitigate for impacts in an area outside the limits of the watershed within which the impacts occur, the SWD must demonstrate to the satisfaction of the ADD Environmental Designee in consultation with the Resource Agencies that no suitable location exists within the impacted watershed.

Mitigation Measure 4.3.10: Whenever maintenance will impact wetland vegetation, a wetland mitigation plan shall be prepared in accordance with the Conceptual Wetland Restoration Plan contained in Appendix H of the Biological Technical Report, included as Appendix D.3 of the PEIR.

Mitigation which involves habitat enhancement, restoration or creation shall include a wetland mitigation plan containing the following information:

- Conceptual planting plan including planting zones, grading, and irrigation;
- Seed mix/planting palette;
- Planting specifications;

- Monitoring program including success criteria; and
- Long-term maintenance and preservation plan.

Mitigation which involves habitat acquisition and preservation shall include the following:

- Location of proposed acquisition;
- Description of the biological resources to be acquired including support for the conclusion that the acquired habitat mitigates for the specific maintenance impact; and
- Documentation that the mitigation area would be adequately preserved and maintained in perpetuity.

Mitigation which involves the use of mitigation credits shall include the following:

- Location of the mitigation bank;
- Description of the credits to be acquired including support for the conclusion that the acquired habitat mitigates for the specific maintenance impact; and
- Documentation that the credits are associated with a mitigation bank which has been approved by the appropriate Resource Agencies.

Upland Mitigation Measures

Mitigation Measure 4.3.11: Upland impacts shall be mitigated through payment into the City's Habitat Acquisition Fund, acquisition and preservation of specific land, or purchase of mitigation credits in accordance with the ratios identified in Table 4.3-11. Upland mitigation shall be completed within six months of the date the related maintenance has been completed.

Table 4.3-11
UPLAND HABITAT MITIGATION RATIOS[1]

Vegetation Type	Tier	Location of Impact with Respect to the MHPA	
		Inside	Outside
Coast live oak woodland	I	2:1	1:1
Scrub oak chaparral	I	2:1	1:1
Southern foredunes	I	2:1	1:1
Beach	I	2:1	1:1
Diegan coastal sage scrub	II	1:1	1:1
Coastal sage-chaparral scrub	II	1:1	1:1

Table 4.3-11 (cont.)
UPLAND HABITAT MITIGATION RATIOS[1]

Vegetation Type	Tier	Location of Impact with Respect to the MHPA	
		Inside	Outside
Broom baccharis scrub	II	1:1	1:1
Southern mixed chaparral	IIA	1:1	0.5:1
Non-native grassland	IIIB	1:1	0.5:1
Eucalyptus woodland	IV	--	--
Non-native vegetation/ornamental	IV	--	--
Disturbed habitat/ruderal	IV	--	--
Developed	IV	--	--

[1]Assumes mitigation occurs within an MHPA

Sensitive Species

Mitigation Measure 4.3.12: Loss of habitat for the coastal California gnatcatcher shall be mitigated through the acquisition of suitable habitat or mitigation credits at a ratio of 1:1. Mitigation shall take place within the MHPA, and shall be accomplished within six months of the date maintenance is completed.

Mitigation Measure 4.3.13: Prior to commencing any maintenance activity which may impact sensitive biological resources, the monitoring biologist shall verify that the following actions have been taken, as appropriate:

- Fencing, flagging, signage, or other means to protect sensitive resources to remain after maintenance have been implemented;
- Noise attenuation measures needed to protect sensitive wildlife are in place and effective; and/or
- Nesting raptors have been identified and necessary maintenance setbacks have been established if maintenance is to occur between January 15 and August 31.

The designated biological monitor shall be present throughout the first full day of maintenance, whenever mandated by the associated IBA. Thereafter, through the duration of the maintenance activity, the monitoring biologist shall visit the site weekly to confirm that measures required to protect sensitive resources (e.g., flagging, fencing, noise barriers) continue to be effective. The monitoring biologist shall document monitoring events via a Consultant Site Visit Record. This record shall be sent to the MM each month. The MM will forward copies to MMC.

Off-site Mitigation

Mitigation Measure 4.3.14: Whenever off-site mitigation would result in a physical disturbance to the proposed mitigation area, the City will conduct an environmental review of the proposed mitigation plan in accordance with CEQA. If the off-site mitigation would have a significant impact on biological resources associated with the mitigation site, mitigation measures will be identified and implemented in accordance with the MMRP resulting from that CEQA analysis.

Impact

Issue 2: Would the Project reduce the level of diversity or numbers of any unique, rare, endangered, sensitive, or fully protected species of plants or animals?

Direct Impacts

Sensitive Plant Species

Implementation of the proposed maintenance would directly impact four sensitive plant species observed within the study area: single-whorl burrobush, San Diego marsh-elder, southwestern spiny rush, and San Diego sunflower. These species are not: (1) federal- or state-listed as threatened or endangered, (2) City narrow endemic plant species, or (3) covered under the City's MSCP Subarea Plan. In the absence of information concerning the nature of the ultimate maintenance activities on specific storm water facilities, the potential impacts to sensitive plant species from future maintenance activities is considered potentially significant.

Several listed and/or narrow endemic plant species have the potential to occur within the Master Program study area. Listed and/or narrow endemic plant species with moderate potential or, low to moderate potential, to occur within or adjacent to the Master Program study area include the following: San Diego ambrosia, willowy monardella, Otay tarplant, snake cholla, variegated dudleya, San Diego thorn-mint, San Diego button-celery, California Orcutt grass, Otay Mesa mint, and spreading navarretia. San Diego ambrosia is known to occur within floodplain areas, and willowy monardella can be found in dry creek beds, and both have been reported in the vicinity of areas mapped for the Master Program. Snake cholla is primarily a sage scrub species, and has been reported in the vicinity of several storm water facilities in the Master Program study area. The remaining plants are primarily grassland or vernal pool species and were considered to have low to moderate potential to occur because of their known distributions in the Otay Mesa area where some channels within the Master Program are located, and where critical habitat for spreading navarretia occurs. Critical habitat for spreading navarretia would be expected to support other listed vernal pool plants such as San Diego thorn-mint, San Diego button-celery, California Orcutt grass, and Otay Mesa mint. As discussed earlier, the City has relinquished coverage and cannot rely on the City's Federal ITP to authorize an incidental take of San Diego thorn-mint, San Diego button-celery, or California Orcutt grass until an HCP has been approved. Although the Master Program would not impact vernal pools, vernal pools may occur near certain areas in which maintenance is proposed. Any impacts to listed or narrow endemic plant species would be considered significant.

The potential for impacts to other listed plant species including coastal dunes milk vetch (*Astragalus tener* var. *titi*), Encinitas baccharis (*Baccharis vanessae*), short-leaved dudleya (*Dudleya brevifolia*), prostrate navarretia (*Navarretia prostrata*), San Diego mesa mint (*Pogogyne abramsii*), thread-leaved brodiaea (*Brodiaea filifolia*), Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*), Orcutt's spineflower (*Chorizanthe orcuttiana*), saltmarsh bird's beak (*Cordylanthus maritimus*), Mexican flannelbush (*Fremontodendron mexicanum*), Orcutt's hazardia (*Hazardia orcuttii*), and small-leaved rose (*Rosa minutifolia*) are low, based on habitat affiliations combined with recent and previous surveys of the study area documented in the CNDDB and cross-referenced with the areas of proposed impact. As a result, maintenance storm water facilities occurring as part of the Master Program would not be expected to have a significant impact on the sensitive plants listed above. As discussed earlier, the City has relinquished coverage and cannot rely on the City's Federal ITP to authorize an incidental take of San Diego thorn-mint and San Diego mesa mint until an HCP has been approved.

Sensitive Animal Species

Given the fact that maintenance would occur within channels where coastal sage scrub is limited and access and staging will occur in primarily disturbed areas, maintenance is not expected to have a direct impact on the coastal California gnatcatcher. However, these activities could result in impacts to nesting raptors such as the Cooper's hawk and northern harrier, as well as to other sensitive species. In the absence of information concerning the nature of the ultimate maintenance activities on specific storm water facilities, the potential impacts to sensitive animal species from future maintenance activities is considered potentially significant.

Maintenance activities within the channels have the potential to impact other sensitive species such as the yellow warbler, double-crested cormorant, and little blue heron. These impacts would not be considered significant due to the low sensitivity status of these species and measures to avoid disruption during the breeding season. No impacts are proposed to areas that are likely to be used by the federally- and state-listed endangered California brown pelican.

The potential for impacts to listed animal species including San Diego fairy shrimp, Quino checkerspot butterfly, Riverside fairy shrimp, arroyo toad, western snowy plover, California black rail, Belding's savannah sparrow, ~~light-footed clapper rail,~~ California least tern, and Pacific pocket mouse are low based on habitat affiliations combined with recent and previous surveys of the study area documented in the CNDDB and cross-referenced with the areas of proposed impact. As a result, maintenance of storm water facilities occurring as part of the Master Program is not expected to have a significant impact on these sensitive animals. As discussed earlier, the City has relinquished coverage and cannot rely on the City's Federal ITP to authorize an incidental take of San Diego fairy shrimp and Riverside fairy shrimp until an HCP has been approved.

Although appropriate habitat for the arroyo toad occurs within the Master Program study area, this species is considered to have low potential to occur because there are no recorded CNDDB locations for this species in the study area and the list of known arroyo toad locations provided in the MSCP does not include creeks within the Master Program study area.

The western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) and southwestern willow flycatcher (*Empidonax traillii extimus*) have low to moderate potential to occur in areas of the Master Program that support mature riparian woodland. Within the Master Program, the most probable locations for these two species to occur are along the San Diego River and Soledad Creek. Any impacts to these species would be considered significant.
Implementation of the proposed project is expected to impact the habitat of the federally- and state-listed endangered least Bell's vireo, which has been documented in CNDDB as occurring in various locations within or near the study area. Any impacts to this species would be significant.

The remaining sensitive animal species with the potential to occur are not federally or state-listed. Of these, the following have high potential to occur within the study area: saltmarsh skipper, orange-throated whiptail, San Diego horned lizard, two-striped garter snake, yellow-breasted chat and Mexican long-tongued bat. Other sensitive species not specifically addressed in this section have low or moderate likelihood of occurring on site.

Implementation of the proposed project is expected to significantly impact the habitat of yellow-breasted chat, which shares the same habitat requirements as the least Bell's vireo.
Any impacts to the remaining non-listed sensitive animal species would be adverse but less than significant because these species are not highly sensitive, and their habitat would not be permanently lost due to the frequency and nature of the maintenance clearing.

Indirect Impacts

Indirect impacts resulting from maintenance activities are primarily related to noise. Equipment noise has the potential to disrupt reproductive and feeding activities, communication, and sleep patterns of sensitive avian species. Refer to Subchapter 4.1, Land Use, for further discussion of the potentially significant noise impacts. Disruption of breeding activities of sensitive birds would constitute a significant indirect impact.

Significance of Impacts

Maintenance activities during the nesting/breeding of sensitive birds including the least Bell's vireo or raptors would have direct and indirect impact on these species resulting from direct mortality, loss of habitat and/or disruption of breeding/nesting activities. Thus, impacts to sensitive animals are considered potentially significant.

Although sensitive plants observed during survey work did not possess particularly high sensitivity classifications or sufficient population numbers to be considered significant, the potential exists for other plants to occur in the maintenance areas that could be significantly impacted by those activities. Thus, impacts to sensitive plants are considered potentially significant.

Mitigation Measures, Monitoring and Reporting

Implementation of Mitigation Measures 4.1-1 through 4.1-8, related to MSCP consistency, in combination with the following measures, would reduce the potential direct and indirect impacts to sensitive species to below a level of significance.

Mitigation Measure 4.3.15: Impacts to listed or endemic sensitive plant species shall be offset through implementation of one or a combination of the following actions:

- Impacted plants would be salvaged and relocated;
- Seeds from impacted plants would be collected for use at an off-site location;
- Off-site habitat that supports the species impacted shall be enhanced and/or supplemented with seed collected on site; and/or
- Comparable habitat at an off-site location shall be preserved.

Mitigation which involves relocation, enhancement or transplanting sensitive plants shall include the following:

- Conceptual planting plan including grading and, if appropriate, temporary irrigation;
- Planting specifications;
- Monitoring Program including success criteria; and
- Long-term maintenance and preservation plan.

Mitigation Measure 4.3.16*:* Maintenance activities shall not occur within the following areas:

- 300 feet from any nesting site of Cooper's hawk (*Accipiter cooperii*);
- 1,500 feet from known locations of the southern pond turtle (*Clemmys marmorata pallida*);
- 900 feet from any nesting sites of northern harriers (*Circus cyaneus*);
- 4,000 feet from any nesting sites of golden eagles (*Aquila chrysaetos*); or
- 300 feet from any occupied burrow or burrowing owls (*Athene cunicularia*).

Mitigation Measure 4.3.17: If evidence indicates the potential is high for a listed species to be present, based on historical records or site conditions, then clearing, grubbing, or grading (inside and outside the MHPA) shall be restricted during the breeding season where development may impact the following species:

- Light-footed clapper rail (between February 15 and August 15);
- Western snowy plover (between March 1 and September 15);
- Least tern (between April 1 and September 15);
- Cactus wren (between February 15 and August 15); or
- Tricolored black bird (between March 1 and August 1.

When other sensitive species, including, but not limited to, the arroyo toad, burrowing owl, or Quino checkerspot butterfly are known or suspected to be present all appropriate protocol surveys and mitigation measures shall be implemented.

Mitigation Measure 4.3.18*:* If a subject species is not detected during the protocol survey, the qualified biologist shall submit substantial evidence to the ADD Environmental Designee and an applicable resource agency which demonstrates whether or not mitigation measures such as noise walls are necessary between the dates stated above for each species. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.

Mitigation Measure 4.3.19: If the SWD chooses not to do the required surveys, then it shall be assumed that the appropriate avian species are present and all necessary protection and mitigation measures shall be required as described in Mitigation Measure 4.3.21

Mitigation Measure 4.3.20: If no surveys are completed and no sound attenuation devices are installed, it will be assumed that the habitat in question is occupied by the appropriate species and that maintenance activities would generate more than 60 dB(A) L_{eq} within the habitat requiring protection. All such activities adjacent to the protected habitat shall cease for the duration of the breeding season of the appropriate species and a qualified biologist shall establish a limit of work.

Mitigation Measure 4.3.21: If maintenance occurs during the raptor breeding season (January 15 to August 31), a pre-maintenance survey for active raptor nests shall be conducted in areas supporting suitable habitat. If active raptor nests are found, maintenance shall not occur within 300 feet of a Cooper's hawk nest, 900 feet of a northern harrier's nest, or 500 feet of any other raptor's nest until any fledglings have left the nest.

Mitigation Measure 4.3.22: If removal of any eucalyptus trees or other trees used by raptors for nesting within a maintenance area is proposed during the raptor breeding season (January 15 through August 31), a qualified biologist shall ensure that no raptors are nesting in such trees. If maintenance occurs during the raptor breeding season, a pre-maintenance survey shall be

conducted and no maintenance shall occur within 300 feet of any nesting site of Cooper's hawk or other nesting raptor until the young fledge. Should the biologist determine that raptors are nesting, the trees shall not be removed until after the breeding season. In addition, if removal of grassland or other habitat appropriate for nesting by northern harriers, a qualified biologist shall ensure that no harriers are nesting in such areas. If maintenance occurs during the raptor breeding season, a pre-maintenance survey shall be conducted and no maintenance shall occur within 900 feet of any nesting site of northern harrier until the young fledge.

Mitigation Measure 4.3.23: If maintenance activities would occur at known localities for listed fish species or within suitable habitat for other highly sensitive aquatic species (i.e., southwestern pond turtle), avoidance or minimization measures (i.e., exclusionary fencing, dewatering of the activity area, live-trapping, and translocation to suitable habitat) must be implemented.

Mitigation Measure 4.3.24*:* If maintenance activities will occur within areas supporting listed and/or narrow endemic plants, the boundaries of the plant populations designated sensitive by the resource agencies will be clearly delineated with flagging or temporary fencing that must remain in place for the duration of the activity.

Mitigation Measure 4.3.25*:* In order to avoid impacts to nesting avian species, including those species not covered by the MSCP, maintenance within or adjacent to avian nesting habitat shall occur outside of the avian breeding season (January 15 to August 31) unless postponing maintenance would result in a threat to human life or property.

Impact

Issue 3: Would the Project interfere with the movement of any resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors?

Significant long-term impacts to wildlife corridors are not anticipated to occur from proposed maintenance activities. Many of the storm water facilities included in the Master Program consist of concrete-lined channels, often surrounded by chain-link fencing, and traversing highly urban areas with no adjacent habitat. Access to these channels for most wildlife is extremely limited due to fencing and surrounding roads and other development, and such channels provide only limited habitat. No significant impacts to wildlife movement or corridors are anticipated to occur in these areas.

In contrast, some of the storm water facilities are within the City's MHPA and may be used as local wildlife movement corridors. In these locations, the MHPA is not limited to just the channels, but also incorporates wider swaths of adjacent habitat. Maintenance activities in these areas could temporarily disrupt animal movement during vegetation/sediment removal activities, but are not expected to have a significant impact over the long term since such facilities are part of wider linkages and the maintenance activities would be restricted to a relatively small component of these areas. In addition, vegetation would not be cleared from the slopes of channels that are wider than 20 feet from bank to bank, thus leaving vegetative cover intact for portions of the channel. Maintenance would only occur periodically, allowing time for some

vegetative cover to reestablish between maintenance events. Furthermore, periodic removal of vegetation and debris from the channel bottom may even aid in wildlife passage in areas where the channel is otherwise choked with vegetation and debris prior to maintenance and vegetation remaining on the slopes provides cover.

Although the temporary loss of cover in portions of the storm water facilities could temporarily change how wildlife move through certain areas, the overall wildlife linkages would not be significantly impacted by implementation of the Master Program, as these linkages are part of broader areas of habitat suitable for wildlife movement.

Significance of Impacts

No significant impacts to wildlife corridors or movement would occur from the proposed maintenance activities.

Mitigation Measures, Monitoring and Reporting

No mitigation measures are required.

Impact

Issue 4: Would the Project conflict with the provisions of the ESL, MSCP or other approved local, regional or state habitat conservation plan?

As discussed in Subchapter 4.1, Land Use, maintenance activities would be consistent with relevant policies and guidelines of the City's MSCP.

Significance of Impacts

As the proposed maintenance activities would conform to the Master Program and previously outlined Mitigation Measures 4.1-1 through 4.1-8 and 4.3-1 through 4.3-25, the project would not conflict with the policies and guidelines of the MSCP, and no significant impacts would occur.

Mitigation Measures, Monitoring and Reporting

No mitigation measures are required.

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4.4 HISTORICAL RESOURCES

The following discussion is based on an archaeological resources analysis completed for the proposed project (Affinis 2011). A copy of the study is included as Appendix E. For the purposes of this discussion, "historical resources" refers to both historic and prehistoric resources.

4.4.1 Existing Conditions

Prehistory

The San Diego region has a diverse historical background. The earliest known human occupation was about 10,000 years ago within the San Dieguito complex. The finds within this complex consisted primarily of scrapers, scraper planes, choppers, large blades, and large projectile points. Sleeping circles, trail shrines, and rock alignments also have been associated with early San Dieguito sites.

The San Dieguito complex is followed by the La Jolla complex at least 7,000 years ago, possibly as long as 9,000 years ago. The sites of this complex typically included millingstone assemblages in shell middens, crude cobble tools (choppers and scrapers), basin metates, manos, discoidals, a small number of Pinto series and Elko series points, and flexed burials.

The Late Prehistoric period is represented by the San Luis Rey complex (Shoshonean predecessors of the ethnohistoric Luiseño) in northern San Diego County and the Cuyamaca complex (Yuman forebears of the Kumeyaay) in the southern portion of the County. Elements of the San Luis Rey complex include small, pressure-flaked projectile points (Cottonwood and Desert Side-notched series); milling implements, including mortars and pestles; Olivella shell beads; ceramic vessels; pictographs and ungathered cremations. The Cuyamaca complex is similar to the San Luis Rey complex, differing in the following points: defined cemeteries away from living areas; use of grave markers; cremations placed in urns; use of specially made mortuary offerings; historic preference for side-notched points; higher numbers of scrapers, scraper planes, etc.; emphasis placed on use of ceramics; wide range of forms and several specialized items; steatite industry; substantially higher frequency of milling stone elements compared with San Luis Rey; and clay-lined hearths. Both the San Luis Rey and Cuyamaca complexes were defined on the basis of village sites in the foothills and mountains.

History

There are three historic periods in San Diego history. The historic periods refer to the time after Spanish colonization and include the study of non-indigenous cultures. While Juan Rodriguez Cabrillo visited San Diego briefly in 1542, the beginning of the historic period in the San Diego area is generally given as 1769. The Spanish Period was from 1769 to 1820, the Mexican Period was from 1820 to 1846, and the American Period was from 1846 to the present.

In 1769, the Royal Presidio and the first Mission San Diego were founded on a hill overlooking Mission Valley. The Mission San Diego de Alcala was constructed in its current location five years later. The Spanish Colonial period lasted until 1820 and was characterized by religious and

military institutions bringing Spanish culture to the area and attempting to convert the Native American population to Christianity. Mission San Diego was the first mission founded in Southern California. Mission San Luis Rey in Oceanside was founded in 1798.

The Mexican period lasted from 1820 to 1846. Following secularization of the missions in 1834, mission lands were given as large land grants to Mexican citizens as rewards for service to the Mexican government. The society made a transition from one dominated by the church and the military to a more civilian population, with people living on ranchos or in pueblos.

The American period began in 1846, just before California became a state and Metropolitan San Diego began to develop in 1850. While the 1880s were a period of alternating boom and bust, by the 1890s, the City entered a time of steady growth. Subdivisions such as Golden Hill, Sherman Heights, Logan Heights, Banker's Hill, and University Heights began in the 1890s. As the City continued to grow in the early 20th century, the downtown's residential character changed. Streetcars and the introduction of the automobile allowed people to live farther from their downtown jobs. New suburbs were developed in Hillcrest, North Park, Mission Hills, and Normal Heights, as well as Point Loma, Ocean Beach, Pacific Beach, and Mission Beach. In the post-World War II years, San Diego grew significantly, with new jobs created in the aircraft industry, shipbuilding, fishing, and other enterprises.

Study Methods

A "constraints level" analysis was completed for this environmental analysis evaluation of impacts to historical resources, including archaeological resources and historic structures. The constraints level study is based on records searches conducted at the South Coastal Information Center (SCIC), vegetation mapping completed for the project and aerial photograph review.

Sites were plotted on USGS topographic maps, and data relating to site type, dates of original site recording and latest site updates, and site significance were recorded for each site within the study Area of Potential Effects (APE).

Based on the survey coverage maps, an attempt was made to estimate the percentage of each channel segment that had been surveyed for historical resources, in order to aid in assessing the potential for historical resources. Other factors evaluated in order to assess the potential for historical resources within a segment were topographic features, such as the steepness of slopes, the degree of past disturbance, and the potential for buried historical resources, due to alluvium or other factors. In some cases, the drainage channel itself is quite disturbed (or concrete-lined), but the surrounding area has a potential for historical resources, which could be subject to impacts from drainage maintenance or access.

No field work was undertaken for the current project, so there may be sites that were previously recorded which no longer exist. Conversely, there may be undocumented sites with the study APE. The historical resources were characterized with the following terms.

Habitation Sites

Prehistoric habitation sites were occupied seasonally or on a semi-permanent basis in order to exploit seasonally available resources. Such sites contain a wide variety of artifact types indicating that a range of activities were carried out on site. The range of activities expected at habitation sites includes food preparation, milling, cooking, production of a wide range of tools, maintenance, ceramic production, leather working, basket weaving, and ritual activities. Subsurface midden or refuse deposits reflecting the length and intensity of occupation are expected at habitation sites.

Temporary Camps

A variety of artifact types are expected at temporary camps, reflecting the range of activities carried out on site. Activities carried out at temporary camps might include any of the activities carried out at habitation sites, but the range of activities is expected to be more restricted. Midden deposits at temporary camps are shallow or non-existent, reflecting the short-term nature of occupation.

Artifact Scatter

Artifact scatters are defined as a surface scatter of artifacts such as ceramics, flaked stone, and ground stone without a subsurface deposit. Some animal bone and/or shell also may be present. Artifact scatters may represent an extractive or special activity area, or a temporary stopping place.

Lithic Scatter

Lithic scatters are defined as low-density scatters of debitage, cores, and other flaked stone debris. They lack diagnostic artifacts that are specific to particular periods and functions.

Bedrock Milling

Bedrock milling is defined as milling features located on bedrock outcrops or large boulders. Such features include mortars, basin metates, and milling slicks. Mortars are deep, conical basins ground into the rock surface. They were used in conjunction with elongated pestles to crush and grind acorns. Basin metates are generally shallow bowl-shaped depressions ground into the rock surface. They were used with rounded, hand-sized manos or grinding stones to grind seeds, such as chia. Slicks are smooth areas of the rock surface which have developed a polish as a result of grinding. They were produced as a result of grinding seeds with a hand-held mano. A surface artifact scatter may be associated with the milling features. However, if the scatter is dense or if a subsurface component is identified, the bedrock milling is identified as part of a habitation site.

Quarry

A quarry site is defined as an area where lithic (stone) raw material was procured. Quarry sites are extractive sites to which work groups came with the express purpose of procuring stone suitable for tool production. As these sites were only briefly visited as needed, they do not generally contain material associated with habitation sites.

Shell Midden

Shell deposits may or may not be associated with other historic material. If the deposit is not associated with a complex assemblage, it may represent a locus where shellfish were processed. If the shell is associated with subsurface deposits reflecting a range of activities, such as milling and tool production, it is classified as a habitation camp or temporary camp.

Historic Sites

A number of site types have been identified. These include trash scatters, habitation sites, historic buildings, and structures.

Rock Art

Rock art includes petroglyphs, patterns etched into rock walls or boulders; and pictographs, patterns painted on rocks using a variety of pigments. Petroglyphs and pictographs tend to be associated with ceremonial or ritual uses and are generally considered culturally significant by the Native American community.

Records Search Results

The results of the records search and data evaluation were divided by HU, including the San Dieguito, Peñasquitos, San Diego, Pueblo San Diego, Sweetwater, Tijuana, and Otay. Results of the records search are detailed below and in Table 4.4-1.

San Dieguito Hydrologic Unit

Three sites are recorded within the study APE in the San Dieguito HU (Table 4.4-1). The significance of these sites is not noted on the site records, but the pictographs and petroglyphs recorded within CA-SDI-7 are generally of historic importance to the Native American community and are therefore a significant historical resource. CA-SDI-7 is not recorded within the channel segment, but it is mapped within 300 feet of the segment. Because the site records for CA-SDI-7 and CA-SDI-581 have not been updated since their original recording in the late 1950s, it is not known if these sites still exist.

Peñasquitos Hydrologic Unit

Twenty sites have been recorded within 300 feet of the channel segments and basins in the Peñasquitos HU, which includes many areas considered rich in archeological resources (Table 4.4-1). The recorded sites include five lithic scatters and three artifact scatters that are not significant resources. Two sites were described as temporary camps, and another was called a temporary camp or habitation site. Four sites were described as habitations, including portions of the ethnohistoric villages of Ystagua (Sorrento Valley) and Rinconada. Another portion of Ystagua was described as a shell midden. Three sites, one called a lithic scatter and the others not described, apparently have been destroyed by Sorrento Valley Road and decades of development, but there may be subsurface remnants, as the sites are in alluvial settings. The historic site was described as an adobe structure, with prehistoric artifacts and marine shell remnants within the adobe bricks.

Table 4.4-1
KNOWN HISTORICAL RESOURCES

Site Number	Site Type	Originally Recorded By	Year Recorded	Updated By	Last Update	Site Significance
SAN DIEGUITO HU						
CA-SDI-7	Rock art	Haenszel	1957	N/A	N/A	Undetermined
CA-SDI-581	Artifact scatter	True	n.d.	N/A	N/A	Undetermined
CA-SDI-11,023	Bedrock milling	Cardenas	1988	N/A	N/A	Undetermined
PEÑASQUITOS HU						
CA-SDI-1010	Lithic scatter	Kidder	1979	N/A	N/A	Destroyed?
CA-SDI-2723	Temporary camp	Rogers	n.d.	Pigniolo	2002	Undetermined
CA-SDI-4605	Habitation	Falk/Ball	1964	N/A	N/A	Undetermined
CA-SDI-4609	**Habitation: part of Village of Ystagua**	**Krase**	**1972**	**N/A**	**N/A**	**Significant**
CA-SDI-4618	Habitation	Hofmeister, Bull	n.d.	N/A	N/A	Undetermined
CA-SDI-4647	Not reported	Harding	1952	N/A	N/A	Destroyed?
CA-SDI-5017	**Habitation: Village of Rinconada**	**Rogers**	**n.d.**	**Bissell**	**1992**	**Significant**
CA-SDI-5204	**Historic**	**McCoy**	**1977**	**Bull**	**1978**	**Undetermined**
CA-SDI-5443	**Shell midden: part of Village of Ystagua**	**Taylor**	**1977**	**N/A**	**N/A**	**Significant**
CA-SDI-5605	Lithic scatter	Moriarty	1977	N/A	N/A	Undetermined
CA-SDI-5606	Lithic scatter	Moriarty	1977	N/A	N/A	Undetermined
CA-SDI-5608	Lithic scatter	Moriarty	1977	Gallegos, Phillips, Kyle	1995	Not significant
CA-SDI-5609	Lithic scatter	Moriarty	1977	Gallegos, Phillips, Kyle	1995	Not significant
CA-SDI-5826	Habitation or temporary camp	Fulmer	n.d.	N/A	N/A	Undetermined
CA-SDI-10,438	Shell and artifact scatter	Cheever	1985	N/A	N/A	Undetermined
CA-SDI-11,017	Artifact scatter	Smith	1982	N/A	N/A	Undetermined
CA-SDI-12,453	**Artifact scatter**	**Huey, Bass**	**1991**	**N/A**	**N/A**	**Undetermined**
CA-SDI-12,557	**Temporary camp**	**Smith**	**1992**	**Bissell**	**1996**	**Undetermined**
CA-SDI-12,558	**Shell midden**	**Smith**	**1992**	**Iversen**	**2005**	**Not significant; destroyed?**

Table 4.4-1 (cont.)
KNOWN HISTORICAL RESOURCES

Site Number	Site Type	Originally Recorded By	Year Recorded	Updated By	Last Update	Site Significance
CA-SDI-17,374	**Temporary camp**	**Rogers**	**n.d.**	**N/A**	**N/A**	**Undetermined**
PUEBLO SAN DIEGO HU						
CA-SDI-5580	**Historic**	**Norwood**	**1978**	**KEA**	**1996**	**Undetermined**
CA-SDI-10,252	Not cultural	Stein	1985	Gross, Robbins-Wade	1990	Not significant
CA-SDI-10,528	Historic	Wade	1986	Smith	2004	Significant
CA-SDI-11,165	**Habitation**	**Reading**	**1978**	**Smith**	**1989**	**Undetermined**
CA-SDI-11,721	**Historic**	**Clevenger, Briggs**	**1990**	**N/A**	**N/A**	**Undetermined**
CA-SDI-12,087	Not cultural	Gross	1990	Robbins-Wade, Gross	1998	Not significant
CA-SDI-12,090	Habitation and historic	Pigniolo, Briggs	1991	N/A	N/A	Undetermined
CA-SDI-12,091	Habitation	Pigniolo	1991	N/A	N/A	Undetermined
CA-SDI-14,162 P-37-014494	Lithic scatter	KEA	1996	N/A	N/A	Undetermined
CA-SDI-14,163 P-37-014495	**Historic**	**KEA**	**1996**	**N/A**	**N/A**	**Undetermined**
CA-SDI-14,164 P-37-014496	**Historic**	**KEA**	**1996**	**N/A**	**N/A**	**Undetermined**
CA-SDI-14,165 P-37-014497	**Historic**	**KEA**	**1996**	**N/A**	**N/A**	**Undetermined**
CA-SDI-14,599 016029	**Habitation**	**Unknown**	**n.d.**	**Tift**	**1997**	**Destroyed**
CA-SDI-17,099 P-37-025706	**Shell midden**	**Hector, Zelenka**	**2004**	**N/A**	**N/A**	**Undetermined**
CA-SDI-17,203 P-37-025853	Habitation	McGinnis	2004	Laguna Mountain	2006	Undetermined
CA-SDI-18,347 P-37-028330	Historic	Jones & Stokes	2005	N/A	N/A	Undetermined

Table 4.4-1 (cont.)
KNOWN HISTORICAL RESOURCES

Site Number	Site Type	Originally Recorded By	Year Recorded	Updated By	Last Update	Site Significance
PUEBLO SAN DIEGO HU (CONT.)						
P-37-014493	Historic	Pigniolo, Beck	1996	N/A	N/A	Undetermined
P-37-014998	Isolated core	Affinis	1990	N/A	N/A	Not significant
P-37-024259	Historic	Pierson	2001	N/A	N/A	Undetermined
P-37-024260	**Historic**	**Pierson**	**2001**	**N/A**	**N/A**	**Undetermined**
SAN DIEGO HU						
CA-SDI-35	Historic and habitation	Pilling	1949	Schaefer	1990	Significant
CA-SDI-44	Temporary camp	Nelson	n.d.	N/A	N/A	Undetermined
CA-SDI-47	Temporary camp	Nelson	n.d.	DeBarros	1996	Undetermined
CA-SDI-202	Historic and habitation	Treganza	n.d.	N/A	N/A	Significant
CA-SDI-11,767	Habitation	Rogers	n.d.	Huey, Baker	1992	Undetermined
CA-SDI-12,128	Shell midden	Huey and Baker	1992	N/A	N/A	Undetermined
CA-SDI-12,863	Historic	McKenna	1992	N/A	N/A	Destroyed
CA-SDI-13,708, P-37-019016	Habitation	Tift and Strudwick	1994	N/A	N/A	Unknown
CA-SDI-14,152, P-37-014380	**Habitation. Part of village of Cosoy**	**Schaefer**	**1996**	**NA**	**NA**	**Significant**
CA-SDI-16,288, P-37-024558	Shell midden	Harris	2002	Recon	2007	Undetermined
CA-SDI-16,290, P-37-024560	**Shell midden**	**Harris**	**2002**	**NA**	**NA**	**Undetermined**

Table 4.4-1 (cont.)
KNOWN HISTORICAL RESOURCES

Site Number	Site Type	Originally Recorded By	Year Recorded	Updated By	Last Update	Site Significance
TIJUANA HU						
CA-SDI-2611	**Lithic scatter**	**Moriarty and Carter**	**1973**	**NA**	**NA**	**Undetermined**
CA-SDI-7208	**Lithic scatter**	**Ferguson**	**1979**	**Pierson**	**2002**	**Not significant**
CA-SDI-10,669	**Habitation**	**Shipek**	**1976**	**ACOE**	**1992**	**Undetermined**
CA-SDI-11,096	Historic	Van Wormer	1989	Van Wormer, Coleman	1994	Destroyed
CA-SDI-17,505, P-37-026708	Historic	Pierson	2005	NA	NA	Not significant
CA-SDI-17,240, P-37-025924	Historic	Steely	2004	NA	NA	Significant
OTAY HU						
CA-SDI-13,072	Historic	Wade	1993	NA	NA	Not significant

Source: Affinis (2011)
Bold indicates that the resource is within or immediately adjacent to a channel

San Diego Hydrological Unit

Eleven archaeological sites have been recorded within the APE in the San Diego HU (Table 4.4-1), which includes the San Diego River from Mission Valley to the ocean, as well as portions of Alvarado Canyon, Murphy Canyon, and the Fairmount Avenue canyon. The historic site consists of the remains of foundations and the support system of the historic Mission Bay Bridge. Two sites are described as camps, apparently for shellfish processing, and three sites are shell middens. The five habitation sites include a large site in Mission Valley; deeply buried deposits that represent the ethnohistoric village of Cosoy, also in Mission Valley; a habitation site in the Fairmount Avenue canyon; two site numbers that have been assigned to the Mission San Diego de Alcala, its associated buildings and archaeological deposits; and the ethnohistoric village of Nipaguay, located in the same area as the mission. Although much of this site area (including both CA-SDI-35 and CA-SDI-202) has been subject to a great deal of disturbance, overall the site is archaeologically significant and retains significance as a Native American historical heritage resource. The alluvial setting of Mission Valley is known to contain buried historic deposits.

Pueblo San Diego Hydrological Unit

Twenty historical resources have been recorded within 300 feet of channel segments in the Pueblo San Diego HU, including 10 historic sites, 4 Native American habitation sites, and 1 site that includes both (Table 4.4-1). Other resources include a lithic scatter, a shell midden, and an isolated artifact. Two sites were determined not to be historic (one shell scatter was in fill soils, and one site, noted as a Spanish Rancho, was found to be remnants of a building that post-dates 1950). One site consists of the historic police pistol range, and one site included remains of a structure, but for the most part the historic sites are trash deposits in canyons. The Pueblo San Diego HU includes the Chollas Creek and South Chollas Creek drainages with potential for buried historical resources, both historic and Native American.

Sweetwater Hydrological Unit

A single drainage segment is within the Sweetwater HU. No historical resources are recorded within the APE of this segment.

Tijuana Hydrological Unit

Six historical resources have been recorded within the APE in the Tijuana HU (Table 4.4-1). These include three historic sites, two lithic scatters, and a large buried site that appears to represent the ethnohistoric village of Millejo (CA-SDI-10,669). Although none of the site records for CA-SDI-10,669 address the site's significance, it appears to have the potential to contain archaeologically and culturally significant deposits. One of the lithic scatter sites, CA-SDI-7208, covers hundreds of acres on Otay Mesa. This site has been tested and determined not to be a significant resource except the portion of the site that has been recorded as CA-SDI-11,424 that is located outside the segment. One historic house has been destroyed, and no historic material was found there during monitoring. The second historic site consists of artifacts found in fill soils, and the third is a bridge on Hollister Avenue over the Tijuana River.

Otay Hydrological Unit

A single historical resource has been recorded within the APE in the Otay HU (Table 4.4-1). CA-SDI-13,072 was described as a 1930s homestead. The site was determined not to be a significant resource.

Potential for Presence of Historical Resources

Over twenty-five years of systematic historical resource survey, evaluation, and data recovery for CEQA mandated projects has resulted in a body of data relating to historical settlement and land use that can be used to construct predictive models of historic settlement. Presented below are some generalizations regarding the location and nature of historic sites within the study area, based on recorded site distributions, the Christenson 1990 study, the Clean Water Program for Greater San Diego study (Gross 1993a and b), and other studies (see Appendix E).

Land Use and Settlement Pattern

Based on studies within San Diego County, several land use and settlement patterns exist. Large habitation sites are usually located in valleys within 210 feet of a seasonal stream, with slopes no greater than 15 percent, generally in grassland areas. Small habitation sites and large resource processing sites were similarly situated, in flat areas of valleys, drainages, or ridges within 295 feet of seasonal streams within chaparral grasslands or southern oak woodlands. Small processing sites were mostly found in flat, grassy valley settings within 525 feet of seasonal streams and were often associated with granitic outcrops. Lithic scatters were found in a variety of locations, but over 50 percent were on flat ridges, terraces, or mesas within 558 feet of water. The average distance of all sites to water was 443 feet.

Hillside and slope locations were the most common landform on which sites occurred (26.6 percent), followed by valley bottom locations (22.7 percent) and hilltop/ridge locations (17.1 percent). Quaternary alluvium (common in valley bottoms) was the most common geologic setting, with the formations of the Poway and La Jolla groups (source of lithic raw material) coming in second.

Gross used statistical analyses to determine whether the patterns noted in landform, underlying geology, elevation, distance to water, and other variables were meaningful, the result of historic selection, or the result of random distribution (1993a and b). These analyses indicated that elevation, distance to water, and differential between site elevation and elevation of the nearest water source are all important considerations in site location. Valley bottom locations were favored, and steep slopes were avoided. Based on these data, one would expect to encounter archaeological sites in valley bottom and valley margin locations. Sites would be much less likely in steep-sided canyons. Lithic quarrying or processing sites may be found on steeper slopes, but these sites would generally not be as significant as habitations or camp sites.

Buried Site Potential

Buried sites hold a great source of research potential since they can reveal chronological data, as well as giving us a "snapshot" of sites that are readily interpretable as temporal and functional units. To determine areas that likely contain subsurface historical resources, various factors that lead to buried sites were examined. For the most part, human activities take place on the ground surface. Artifacts and features appear in a subsurface context through bioturbation or deposition. The depositional mechanisms of site burial include alluvium (flowing water); colluvium (gravity); eolian (wind-blown) sediments; and anthropogenic (human-caused) mechanisms, such as purposeful burial of materials, or cut and fill activities. Therefore, buried sites are often found near floodplains, mouths of streams, coastal valleys, bottoms of slopes, and within areas graded or leveled by man. Buried historical resources often become surface resources through earth-disturbing activities, including erosional gullies, road cuts, plowing, rodent activity, and grading and trenching.

Archaeological sites within the study APE that are known to have deeply buried deposits include the ethnohistoric villages of Ystagua, Rinconada, Millejo, Cosoy, and Nipaguay. In addition to these sites, buried historic material may be expected in such areas as Sorrento Valley/Soledad Canyon, Rose Creek, Mission Valley, Chollas Valley, and the Tijuana River Valley. Other drainages in the study area have some degree of alluvial or colluvial sediments as well, but buried sites have not yet been found in some areas, such as Alvarado Canyon. It is noted that many drainages in the study area do not offer wide drainage bottoms that would be preferred as a site setting.

Other Factors

Other factors also were taken into consideration to determine the potential presence of historical resources within the study area. These factors include previous survey coverage, channel conditions, and integrity of historical resources.

Channels and basins that were previously surveyed and found to contain no historical resources were considered to have a low potential for historical resources. Channels and basins that were not surveyed were considered to have a moderate to high historical resource potential, unless other factors pointed toward a low likelihood of resources (e.g., channel condition and the predictive modeling factors addressed above).

Generally, channels and basins that are concrete-lined or excavated were considered to have a low potential, while undisturbed channels were considered to have a moderate to high potential for historical resources. Again, factors such as degree of past disturbance and topography may alter the potential for historical resources even in natural channels. In some cases, the drainage channel itself is quite disturbed (or concrete-lined), but the surrounding area has a potential for historical resources, which could be subject to impacts from drainage maintenance or access.

The site integrity also was a factor. Urban areas developed prior to CEQA generally have a low potential for resources. This is due to the fact that prior to CEQA, development took place without

regard to the preservation of archaeological and historic sites and development has resulted in the destruction of a high proportion of historical resources.

Predictive Modeling

A predictive model that assigns levels of historical resource sensitivity (low, moderate or high) to each of the channels and basins was developed based on an assessment of the following factors: the existence of known historical resources; previous historical resources surveys conducted; the potential for buried deposits; topography/slope/size of the canyon, availability of land suitable for habitation, and availability of natural resources; and integrity of historical resources. The results of this predictive model are included in Table 4.4-2. It should be noted that the rankings provided are based on a qualitative assessment of factors, rather than a strictly quantitative analysis, and are provided for general information purposes only. A more detailed site-specific historical resource investigation would be completed as part of an IHA. In addition, all wetland mitigation areas shall be surveyed prior to approval of wetland mitigation plans. At that time, based on site-specific data, a more definitive determination would be made regarding the potential for resources to be impacted by maintenance.

Table 4.4-2
HISTORICAL RESOURCES SENSITIVITY BY CHANNEL

Channel No.	Facility Description	Sensitivity
1	Rancho Bernardo Rd. & Bernardo Center Dr.	Low
2	Rancho Bernardo	Moderate
3	Rancho Bernardo	Moderate
4	11044 Via San Marco	Moderate
6	11689 Sorrento Valley Rd.	High
6a	3000 Industrial Court.	High
7	Soledad Creek	Moderate
7-8	Los Peñasquitos Channel	Moderate
9	11000 Roselle St./11100 Flinkote Ave.	Moderate
10	Dunhill St & Roselle St.	Moderate
11-12	Soledad Creek Channel	High
17	Soledad Creek Channel	High
18	Maya Linda & Via Pasar	Moderate
19	Candida & Via Pasar	Moderate
32	Rose Creek Channel	Low
33	Rose Creek Channel	Low
34	Rose Creek Channel	High
35	Rose Creek Channel	High
36	Mission Bay High School	Moderate
37	Pacific Beach Dr. & Olney St.	Moderate
40-42	Chateau Channel	Low

Table 4.4-2 (cont.)
HISTORICAL RESOURCES SENSITIVITY BY CHANNEL

Channel No.	Facility Description	Sensitivity
47	7969 & 7971 Engineer Rd.	Low
49-50	Murphy Canyon Channel	Low
51	Red River Dr. & Conestoga Dr.	Low
52	Camino del Arroyo	Low
53	Cowles Mountain Channel	Low
54	San Carlos Channel	Low
55	West Morena Blvd.	High
55a	West Morena Blvd.	High
55-57	Tecolote Creek Channel	Moderate
58	Murphy Canyon Channel	Low
58a	Murphy Canyon Channel	Low
59-60	Alvarado Channel	Moderate
61-62	Alvarado Channel	Low
64	Alvarado Channel	Low
65 a-c	Fairmont Channel	Low
66	Montezuma Channel	Moderate
67	Auburn Creek Channel	High
68	Auburn Creek Channel	Moderate
69	Auburn Creek Channel	High
70	Auburn Creek Channel	Low
71-72	Chollas Creek Channel	Low
76-77	Auburn Creek Channel	High
78	Chollas Creek Channel	High
79	Chollas Creek Channel	Moderate
79a	Delevan Dr.	Moderate
80	Chollas Creek Channel	Low
81	Camino de la Reina & Camino del Arroyo	Moderate
82	Nimitz Channel	High
83	Famosa Blvd. & Valeta St.	Low
84	Washington Channel	Low
86	Pershing Channel	High
89	Chollas Creek Channel	Moderate
90	Imperial Ave. & Gillette St.	Moderate
91	Chollas Creek Channel	High
92	35th St. & Martin Ave.	High
93	Chollas Creek Channel	High
94-95	South Chollas Creek Channel	High

Table 4.4-2 (cont.)
HISTORICAL RESOURCES SENSITIVITY BY CHANNEL

Channel No.	Facility Description	Sensitivity
97	South Chollas Creek Channel	High
97a	South Chollas Creek Channel	High
98-99	South Chollas Creek Channel	Moderate
100	42nd St. & J St.	Low
101	South Chollas Creek Channel	High
103-104	South Chollas Creek Channel	Moderate
105	Euclid Ave. & Castana St.	Moderate
106-107	Encanto Channel	Moderate
108-111	Encanto Channel	Low
113-115	Jamacha Channel	Low
117	Solola Channel	Moderate
118-119	Solola Channel	Moderate
120-121	Cottonwood Channel	Low
122	Parkside Channel	Low
123	Sanyo Channel	Low
124	La Media Rd. & Airway Rd.	Moderate
125	Camino Maquiladora & Cactus Rd.	Low
126	Siempre Viva Rd. & Bristow Ct.	Moderate
127	Britannia Blvd. & Bristow Ct.	Moderate
128	Virginia Channel	Moderate
129	Smythe Channel	Moderate
130	Smythe Channel	Moderate
131	Nestor Creek Channel	Moderate
132-133	Nestor Creek Channel	Moderate
134	Nestor Creek Channel	Moderate
136-137	Tocayo Channel	Low
138a-c	Tijuana River	High
138-139	Smugglers Gulch Channel	High
145-147	San Diego River	Moderate

4.4.2 Impacts

Significance Criteria

Generally, a resource shall be considered by the Lead Agency to be historically significant if the resource meets the criteria for listing on the California Register of Historical Resources (Public Resources Code 5024.1, 14 CCR Section 4852), including the following:

A. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
B. Is associated with the lives of persons important in our past;
C. Embodies the distinctive characteristics of a type, period, region, or method of maintenance, or represents the work of an important creative individual, or possesses high artistic values; or,
D. Has yielded or may be likely to yield information important in prehistory or history.

The California Register includes resources listed in or formally determined eligible for listing in the National Register of Historic Places, as well as some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory as potentially significant may be eligible for listing in the California Register and are presumed to be significant resources for purposes of CEQA, unless a preponderance of evidence indicates otherwise (Public Resource Code 5024.1, 14 CCR 4850).

The most recent amendments to the CEQA Guidelines direct that lead agencies should first evaluate an archaeological site to determine if it meets the criteria for listing in the California Register. If an archaeological site is an historical resource (i.e., listed or eligible for listing in the California Register) potential adverse impacts to it must be considered (Public Resource Code 21084.1 and 21083.2(l)). If an archaeological site is not an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment.

The City of San Diego Significance Determination Thresholds (2011) have established the following criteria to be used in the determination of significance under CEQA:

- An archaeological site must consist of at least three associated artifacts/ecofacts (within a 50-square meter area) or a single feature and must be at least 45 years of age. Archaeological sites containing only a surface component are generally considered not significant unless demonstrated otherwise. Such site types may include isolated finds, bedrock milling stations, sparse lithic scatters, and shellfish processing stations. All other archaeological sites are considered potentially significant. The determination of significance is based on a number of factors specific to a particular site including site size, type, and integrity; presence or absence of a subsurface deposit, soil stratigraphy, features, diagnostics, and dateable material; artifact and ecofact density; assemblage complexity; cultural affiliation; association with an important person or event; and ethnic importance.

- The determination of significance for historic buildings, structures, objects, and landscapes is based on age, location, context, association with an important person or event, uniqueness, and integrity.

- A site will be considered to possess ethnic significance if it is associated with a burial or cemetery; religious social or traditional activities of a discrete ethnic population; an important person or event as defined by a discrete ethnic population; or the mythology of a discrete ethnic population.

Projects that have a federal nexus (e.g., permits or funding from a federal agency) require compliance with federal regulations. The National Historic Preservation Act (NHPA) and the regulations that implement Section 106 of the Act (36 CFR 800) require federal agencies to consider the effects of their actions on properties listed, or eligible for listing in the National Register of Historic Places. Eligible resources are considered historic properties. The criteria for listing a property on the California Register of Historical Resources were modeled after on those for the National Register of Historic Places, so the significance criteria are quite similar under both sets of regulations.

Section 60.6 of 36 CFR Part 60 presents the criteria for evaluation of cultural resources for nomination to the National Register of Historic Places as follows:

> The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, materials, workmanship, and association, and
>
> a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
> b) that are associated with the lives of persons significant in our past; or
> c) that embody the distinctive characteristics of a type, period or method or maintenance, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
> d) that have yielded, or may be likely to yield, information important in prehistory or history.

Analysis of Impacts

Issue 1: To what extent would Project impact historical resources?

Issue 2: To what extent would Project impact resources associated with Native American values?

As detailed under the existing conditions, a number of known historical resources within the study area (Table 4.4-1) have been determined to be significant under CEQA and City of San Diego guidelines. In addition, the predictive model indicates there is a potential for significant historical

resources within several areas of the APE (Table 4.4-2). It is important to note that the probability assessments of historical resources being found within the channels and basins, presented in Table 4.4-2, are based on very general assumptions and are intended to only provide a plan level of analysis.

The proposed project would significantly impact historical resources through ground-disturbing activities associated with the proposed access/staging and maintenance. It is noted that the potential for impacting significant historical resources is considered lower within the channels and basins themselves since all the basins have been excavated, and many of the channels have been lined with concrete or created through excavation. Nonetheless, the impacts to areas that contain historical resources or with a high or moderate potential to contain historical resources would be considered potentially significant. Impacts to historical resources could also significantly impact Native American values if the resources are determined to have significant value to affiliated Native Americans.

As described in the discussion of mitigation measures below, each project included within the proposed project would undergo a project-specific assessment, referred to as an IHA, to determine the presence and potential impact on archaeological and historical resources at the time maintenance is proposed. At that time, based on more precise data, a more accurate assessment would be made regarding the presence or absence of such resources.

Significance of Impact

Significant impacts to historical resources and Native American values may occur as a result of the proposed project. The proposed project includes access and staging, and maintenance of drainages and channels within areas that have a high potential for historical resources or previously identified historical resources.

Mitigation Measures, Monitoring and Reporting

The following measures shall be implemented prior to the first time maintenance occurs within a drainage facility pursuant to the Master Program. Once a maintenance area has been surveyed, significance has been determined, and mitigation measures undertaken to protect (e.g., fencing or soil capping) and/or mitigate (e.g., data recovery) any affected historical resource, in accordance with the City's HRG, no further historical resource investigation shall be required. Implementation of these measures would reduce impacts to historical resources and Native American values to below a level of significance.

Mitigation Measure 4.4.1: Prior to commencement of the first occurrence of maintenance activity within a drainage facility included in the Master Program, an archaeologist, meeting the qualifications specified by the City's HRG, shall determine the potential for significant historical resources to occur in the maintenance area. If the archaeologist determines that the potential is moderate to high, an IHA shall be prepared. Based on the IMP for the proposed maintenance activity, the archaeologist shall determine the APE, which shall include access, staging, and maintenance areas. The IHA shall include a field survey of the APE with a Native American monitor, using the standards of the City's HRG. In addition, the archaeologist shall request a

record search from the SCIC. Based on the results of the field survey and record search, the archaeologist shall conduct an archaeological testing program for any identified historical resources, using the standards of the City's HRG. If significant historical resources are identified, they shall be taken to the Historical Resources Board for designation as Historic Sites. Avoidance or implementation of an Archaeological Data Recovery Program (ADRP) and Archaeological Monitoring Program shall be required to mitigate project impacts to significant historical resources. The archaeologist shall prepare a report in accordance with City guidelines. At a minimum, the IHA report shall include:

- Description of maintenance to be performed, including length, width, and depth;
- Prehistory and History Background Discussion;
- Results of Record Search;
- Survey Methods;
- Archaeological Testing Methods;
- Impact Analysis; and
- Mitigation Recommendations, including avoidance or implementation of an ADRP and archaeological monitoring program.

In the event that the IHA indicates that no significant historical resources occur within the APE, or have the potential to occur within the APE, no further action shall be required.

Mitigation Measure 4.4.2: Prior to initiating any maintenance activity where the IHA identifies existing significant historical resources within the APE, the following actions shall be taken.

4.4.2.1 The Storm Water Department shall select a Principal Investigator (PI), who shall be approved by the ADD Environmental Designee. The PI must meet the requirements of the City's HRG.

4.4.2.2 Mitigation recommendations from the IHA shall be incorporated into the IMP to the satisfaction of the PI and the ADD Environmental Designee. Typical mitigation measures shall include but not be limited to: delineating resource boundaries on maintenance plans; implementing protective measures such as fencing, signage or capping; and selective monitoring during maintenance activities.

4.4.2.3 If impacts to significant historical resources cannot be avoided, the PI shall prepare an Archaeological Research Design and Data Recovery Program (ARDDRP) for the affected resources, with input from a Native American consultant, and the ARDDRP shall be approved by the ADD Environmental Designee. Based on the approved research design, a phased excavation program shall be conducted, which will include the participation of a Native

American. The sample size to be excavated shall be determined by the PI, in consultation with City staff. The sample size shall vary with the nature and size of the archaeological site, but need not exceed 15 percent of the overall resource area. The area involved in the ARDDRP shall be surveyed, staked and flagged by the archaeological monitor, prior to commencing maintenance activities which could affect the identified resources.

4.4.2.4 A pre-maintenance meeting shall be held on-site prior to commencing any maintenance that may impact a significant historical resource. The meeting shall include representatives from the PI, the Native American consultant, Storm Water Department, Mitigation Monitoring Coordinator (MMC), Resident Engineer (RE), and Maintenance Contractor (MC). The PI shall explain mitigation measures which must be implemented during maintenance. The PI shall also confirm that all protective measures (e.g. fencing, signage or capping) are in place.

4.4.2.5 If human remains are discovered in the course of conducting the ARDDRP, work shall be halted in that area and the following procedures set forth in the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) will be taken:

- The PI shall notify the RE, and the MMC. The MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS).

- The PI shall notify the Medical Examiner, after consultation with the RE, either in person or via telephone.

- Work will be redirected away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner, in consultation with the PI, concerning the provenience of the remains.

- The Medical Examiner, in consultation with the PI, shall determine the need for a field examination to determine the provenience.

- If a field examination is not warranted, the Medical Examiner shall determine, with input from the PI, if the remains are or are most likely to be of Native American origin.

- If Human Remains are determined to be Native American, the Medical Examiner shall notify the Native American Heritage Commission (NAHC). The NAHC shall contact the PI within 24 hours after the Medical Examiner has completed coordination. The NAHC will identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information. The PI will coordinate with the MLD for additional coordination. If (1) the NAHC is unable to identify the MLD, or the MLD fails to make a recommendation within 24 hours after being notified by the Commission; or (2) the landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, then the landowner or their authorized representative shall re-inter the human remains and all associated grave goods with appropriate dignity, on

the property in a location not subject to subsurface disturbance. Information on this process will be provided to the NAHC.

- If Human Remains are not Native American, the PI shall contact the Medical Examiner and notify them of the historic era context of the burial. The Medical Examiner shall determine the appropriate course of action with the PI and City staff (PRC 5097.98). If the remains are of historic origin, they shall be appropriately removed and conveyed to the Museum of Man for analysis. The decision for reinterment of the human remains shall be made in consultation with MMC, EAS, the landowner, and the Museum.

4.4.2.6 The PI shall be responsible for ensuring: (1) that all cultural materials collected are cleaned, catalogued and permanently curated with an appropriate institution; (2) that a letter of acceptance from the curation institution has been submitted to MMC; (3) that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; (4) that faunal material is identified as to species; and (5) that specialty studies are completed, as appropriate. Curation of artifacts associated with the survey, testing and/or data recovery for this project shall be completed in consultation with LDR and the Native American representative, as applicable.

4.4.2.7 The Archaeologist shall be responsible for updating the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B associated with the ARDDRP in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the SCIC with the Final Results Report.

4.4.2.8 The PI shall prepare a Draft Results Report (even if negative) that describes the results, analysis and conclusions of the ARDDRP (with appropriate graphics). The MMC shall return the Draft Results Report to the PI for revision or for preparation of the Final Report. The PI shall submit the revised Draft Results Report to MMC for approval. The MMC shall provide written verification to the PI of the approved report. The MMC shall notify the RE of receipt of all Draft Result Report submittals and approvals. The MMC shall notify the RE of receipt of the Final Results Report.

Mitigation Measure 4.4.3: Prior to initiating any maintenance activity where the IHA identifies a moderate to high potential for the occurrence of significant historical resources within the APE, the following actions shall be taken:

4.4.3.1 Prior to Permit Issuance or Bid Opening/Bid Award

A. Entitlements Plan Check
   1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the applicable maintenance documents through the plan check process.

B. Letters of Qualification have been submitted to ADD
   1. Prior to Bid Award, the applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour HAZWOPER training with certification documentation.
   2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project meet the qualifications established in the HRG.
   3. Prior to the start of work, the applicant must obtain written approval from MMC for any personnel changes associated with the monitoring program.

4.4.3.2 Prior to Start of Maintenance

A. Verification of Records Search
   1. The PI shall provide verification to MMC that a site specific records search (1/4 mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coastal Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
   2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.
   3. The PI may submit a detailed letter to MMC requesting a reduction to the ¼ mile radius.

B. PI Shall Attend Pre-maintenance Meetings
   1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Pre-maintenance Meeting that shall include the PI, Native American consultant/monitor (where Native American resources may be impacted), Maintenance Manager (MM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American Monitor shall attend any grading/excavation related Pre-maintenance Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Maintenance Manager and/or Grading Contractor.
      a. If the PI is unable to attend the Pre-maintenance Meeting, the Applicant shall schedule a focused Pre-maintenance Meeting with MMC, the PI, RE, MM or BI, if appropriate, prior to the start of any work that requires monitoring.
   2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects) The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the archaeological monitoring program.
   3. Identify Areas to be Monitored
      a. Prior to the start of any work that requires monitoring, the PI shall submit an

Archaeological Monitoring Exhibit (AME) (with verification that the AME has been reviewed and approved by the Native American consultant/monitor when Native American resources may be impacted) based on the appropriate maintenance documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.

b. The AME shall be based on the results of a site specific records search as well as information regarding the age of existing pipelines, laterals and associated appurtenances and/or any known soil conditions (native or formation).
c. MMC shall notify the PI that the AME has been approved.

4. When Monitoring Will Occur
   a. Prior to the start of any work, the PI shall also submit a maintenance schedule to MMC through the RE indicating when and where monitoring will occur.
   b. The PI may submit a detailed letter to MMC prior to the start of work or during maintenance requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final maintenance documents which indicate conditions such as age of existing pipe to be replaced, depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.
5. Approval of AME and Maintenance Schedule
   After approval of the AME by MMC, the PI shall submit to MMC written authorization of the AME and Maintenance Schedule from the MM.

4.4.3.3 During Maintenance

A. Monitor Shall be Present During Grading/Excavation/Trenching
   1. The Archaeological Monitor shall be present full-time during all soil disturbing and grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. **The Maintenance Manager is responsible for notifying the RE, PI, and MMC of changes to any maintenance activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the AME.**
   2. The Native American consultant/monitor shall determine the extent of their presence during soil disturbing and grading/excavation/trenching activities based on the AME and provide that information to the PI and MMC. If prehistoric resources are encountered during the Native American consultant/monitor's absence, work shall stop and the Discovery Notification Process detailed in Sections 4.4.3.3.B-C and 4.4.3.4-A-D shall commence.
   3. The PI may submit a detailed letter to MMC during maintenance requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered that may reduce or increase the potential for resources to be present.
   4. The archaeological and Native American consultant/monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR's shall be faxed by the MM to the RE the first day of monitoring, the last day of monitoring,

monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process
   1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert all soil disturbing activities, including but not limited to digging, trenching, excavating or grading activities in the area of discovery and in the area reasonably suspected to overlay adjacent resources and immediately notify the RE or BI, as appropriate.
   2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
   3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.
   4. No soil shall be exported off-site until a determination can be made regarding the significance of the resource specifically if Native American resources are encountered.

C. Determination of Significance
   1. The PI and Native American consultant/monitor, where Native American resources are discovered shall evaluate the significance of the resource. If Human Remains are involved, follow protocol in Section 4.4.3.4 below.
      a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.
      b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) and obtain written approval of the program from MMC, MM and RE. ADRP and any mitigation must be approved by MMC, RE and/or MM before ground disturbing activities in the area of discovery will be allowed to resume. **Note: If a unique archaeological site is also an historical resource as defined in CEQA Section 15064.5, then the limits on the amount(s) that a project applicant may be required to pay to cover mitigation costs as indicated in CEQA Section 21083.2 shall not apply.**
         (1). Note: For pipeline trenching and other linear projects in the public Right-of-Way, the PI shall implement the Discovery Process for Pipeline Trenching projects identified below under "D."
      c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.
         (1). Note: For Pipeline Trenching and other linear projects in the public Right-of-Way, if the deposit is limited in size, both in length and depth; the information value is limited and is not associated with any other resource; and there are no unique features/artifacts associated with the deposit, the discovery should be considered not significant.

(2). Note, for Pipeline Trenching and other linear projects in the public Right-of-Way, if significance cannot be determined, the Final Monitoring Report and Site Record (DPR Form 523A/B) shall identify the discovery as Potentially Significant.

D. Discovery Process for Significant Resources - Pipeline Trenching and other Linear Projects in the Public Right-of-Way
The following procedure constitutes adequate mitigation of a significant discovery encountered during pipeline trenching activities or for other linear project types within the Public Right-of-Way including but not limited to excavation for jacking pits, receiving pits, laterals, and manholes to reduce impacts to below a level of significance:

1. Procedures for documentation, curation and reporting
   a. One hundred percent of the artifacts within the trench alignment and width shall be documented in-situ, to include photographic records, plan view of the trench and profiles of side walls, recovered, photographed after cleaning and analyzed and curated. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact.
   b. The PI shall prepare a Draft Monitoring Report and submit to MMC via the RE as indicated in Section 4.4.3.6-A.
   c. The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) the resource(s) encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines. The DPR forms shall be submitted to the South Coastal Information Center for either a Primary Record or SDI Number and included in the Final Monitoring Report.
   d. The Final Monitoring Report shall include a recommendation for monitoring of any future work in the vicinity of the resource.

4.4.3.4 Discovery of Human Remains

If human remains are discovered, work shall halt in that area and no soil shall be exported off-site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:

A. Notification
   1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS) of the Development Services Department to assist with the discovery notification process.
   2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.

B. Isolate discovery site
   1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenience of the remains.
   2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenience.
   3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.

C. If Human Remains **ARE** determined to be Native American
   1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, **ONLY** the Medical Examiner can make this call.
   2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.
   3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health & Safety Codes.
   4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.
   5. Disposition of Native American Human Remains will be determined between the MLD and the PI, and, if:
      a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission, OR;
      b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, THEN
      c. To protect these sites, the landowner shall do one or more of the following:
         (1) Record the site with the NAHC;
         (2) Record an open space or conservation easement; or
         (3) Record a document with the County.
      d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Section 4.4.3.5.c., above.

D. If Human Remains are **NOT** Native American
   1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.
   2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).
   3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the San Diego Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant/landowner, any known descendant group, and the San Diego Museum of Man.

4.4.3.5 Night and/or Weekend Work

A. If night and/or weekend work is included in the contract
   1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Pre-maintenance meeting.
   2. The following procedures shall be followed.
      a. No Discoveries
         In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVR and submit to MMC via fax by 8AM of the next business day.
      b. Discoveries
         All discoveries shall be processed and documented using the existing procedures detailed in Sections 4.4.3.3 - During Maintenance, and 4.4.3.4 – Discovery of Human Remains. Discovery of human remains shall always be treated as a significant discovery.
      c. Potentially Significant Discoveries
         If the PI determines that a potentially significant discovery has been made, the procedures detailed under Sections 4.4.3.3 During Maintenance and 4.4.3.4-Discovery of Human Remains shall be followed.
      d. The PI shall immediately contact the RE and MMC, or by 8AM of the next business day to report and discuss the findings as indicated in Section 4.4.3.3-B, unless other specific arrangements have been made.

B. If night and/or weekend work becomes necessary during the course of maintenance
   1. The Maintenance Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
   2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

4.4.3.6 Post Maintenance

A. Submittal of Draft Monitoring Report
   1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Historical Resources Guidelines (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring. **It should be noted that if the PI is unable to submit the Draft Monitoring Report within the allotted 90-day timeframe as a result of delays with analysis, special study results or other complex issues, a schedule shall be submitted to MMC establishing agreed due dates and the provision for submittal of monthly status reports until this measure can be met.**
      a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program or Pipeline Trenching Discovery Process shall be included in the Draft Monitoring Report.
      b. Recording Sites with State of California Department of Parks and Recreation The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report.
   2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report.
   3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval.
   4. MMC shall provide written verification to the PI of the approved report.
   5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Artifacts
   1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued
   2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.

C. Curation of artifacts: Accession Agreement and Acceptance Verification
   1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.
   2. When applicable to the situation, the PI shall include written verification from the Native American consultant/monitor indicating that Native American resources

were treated in accordance with state law and/or applicable agreements. If the resources were reinterred, verification shall be provided to show what protective measures were taken to ensure no further disturbance occurs in accordance with Section 4.4.3.4 – Discovery of Human Remains, Subsection C.

3. The PI shall submit the Accession Agreement and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC.
4. The RE or BI, as appropriate shall obtain signature on the Accession Agreement and shall return to PI with copy submitted to MMC.
5. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)
   1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC of the approved report.
   2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

4.5 HYDROLOGY

4.5.1 Existing Conditions

Watershed and Drainage Characteristics

The study area for this hydrology evaluation includes portions of 7 of the 11 HUs identified in the 1994 San Diego RWQCB *Water Quality Control Plan for the San Diego Basin* (Basin Plan). The Basin Plan encompasses approximately 3,900 square miles in the southwestern portion of California. HUs are defined in the Basin Plan as "[t]he entire watershed of one or more streams…" Summary descriptions of the seven HUs are provided below, with maintenance area locations and descriptions included on Figure 3-1 and Table 3-1 in Chapter 3.0, Project Description.

- San Dieguito HU (5.0) – The San Dieguito HU is a generally rectangular-shaped area of approximately 350 square miles associated with the San Dieguito River watershed. Major tributaries and water bodies include Santa Ysabel and Santa Maria creeks, and Lakes Sutherland, and Lake Hodges. Four maintenance areas identified under the proposed plan are located within the San Dieguito HU.

- Peñasquitos HU (6.0) – The Peñasquitos HU is a rectangular-shaped area of approximately 170 square miles associated with several smaller drainages including Peñasquitos, Rose Canyon, and San Clemente Canyon creeks. Water bodies within this HU include Los Peñasquitos (Sorrento) Lagoon, Mission Bay, and Miramar reservoir.

- San Diego HU (7.0) – The San Diego HU is a long, generally triangular-shaped area of approximately 440 square miles that encompasses the San Diego River watershed. Major water bodies within this area include El Capitan, San Vicente, and Murray reservoirs, as well as Lake Jennings and Lake Cuyamaca.

- Pueblo San Diego HU (8.0) – The Pueblo San Diego HU is a small, rectangular area encompassing approximately 60 square miles. No major drainages occur within this HU, with much of the western HU boundary adjacent to San Diego Bay.

- Sweetwater HU (9.0) – The Sweetwater HU is a linear area encompassing approximately 160 square miles associated with the Sweetwater River watershed. Major water bodies within this unit include the Sweetwater and Loveland reservoirs, as well as the southern portion of San Diego Bay.

- Otay HU (10.0) – The Otay HU is a club-shaped area of approximately 160 square miles associated with the Otay River and related tributaries including Jamul and Dulzura creeks. Major water bodies within this HU include Upper and Lower Otay reservoirs.

- Tijuana HU (11.0) – The Tijuana HU is a triangular-shaped area of approximately 470 square miles that encompasses the portions of the Tijuana River watershed north of the international border. Principal drainages include portions of the Tijuana River in the westernmost portion of the HU, as well as Campo and Cottonwood creeks. Major water bodies within this unit include Morena Reservoir, Barrett Lake, and the Tijuana Estuary.

All of the described HUs and associated drainage courses are ultimately tributary to the Pacific Ocean, with several encompassing coastal lagoons and embayments, as noted above.

Groundwater

Groundwater resources within the San Diego Region occur within unconsolidated alluvial materials, semi-consolidated sediment, and bedrock. The principal aquifers within the study area are mainly alluvial and associated with larger drainage courses, including the San Dieguito, San Diego, Sweetwater, Otay, and Tijuana Rivers. Alluvial aquifers in the San Diego Region are typically: (1) associated with unconsolidated deposits of mostly of sand and gravel; (2) shallow in depth, generally not exceeding 200 feet; (3) unconfined (i.e., not under pressure due to confinement by impermeable strata); (4) recharged primarily through infiltration of surface flows (e.g., precipitation and irrigation); and (5) subject to increased contaminant levels in more developed areas. A notable exception to the above discussion occurs in the form of the San Diego Formation Aquifer, which is located in the southwestern portion of San Diego County and occurs in sedimentary strata including sandstone, conglomerate, bentonite, and mudstone. The noted aquifer extends from Mission Bay south to the international border, and east into areas including Mission Valley, Otay Mesa, and the Tijuana River Valley. In addition to the described groundwater sources, perched aquifers also may occur locally within the study area. Perched groundwater generally consists of one or more unconfined aquifers underlain by impermeable or semi-permeable strata, with such aquifers typically limited in volume and extent but subject to variation with seasonal precipitation and/or irrigation levels.

Regulatory Framework

Maintenance activities conducted under the Master Program would be subject to a number of regulatory requirements related to hydrology. The principal sources for these requirements include the City grading and storm water standards.

4.5.2 Impacts

Significance Criteria

According to the City's Significance Determination Thresholds (2011), impacts to hydrology would be significant if the project would:

- Substantially increase flooding of upstream or downstream properties or to environmental resources;

- Substantially modify existing drainage patterns in a manner that would result in significant impacts on downstream properties or to environmental resources; or

- Grade, clear, or grub more than one acre of land that would drain into a sensitive water body or stream causing uncontrolled runoff resulting in erosion and sedimentation; or

- Extract water from an aquifer resulting in decreased aquifer recharge resulting in significant impacts on hydrologic conditions and well-water supplies.

Analysis of Impacts

Issue 1: Would the Master Program result in an increase in impervious surfaces or a substantial alteration of on- and off-site drainage patterns, affecting the rate and volume of surface runoff, associated flooding hazards, or aquifer recharge?

As discussed in Subchapter 3.2, the objectives of the Master Program include efforts to reduce potential flood hazards from the accumulation of materials and vegetation within storm water facilities, and related effects to system operation and capacity. As a result, the anticipated maintenance activities would be expected to generate beneficial effects with respect to storm water system function.

No significant adverse impacts on hydrology would be expected. Maintenance activities under the Master Program would not include the installation of additional impervious surfaces such as pavement or structures. Accordingly, no adverse impacts related to increased runoff volumes or velocities, associated flooding hazards, or long-term aquifer recharge would occur from the Master Program.

Maintenance activities would not affect existing drainage patterns. Maintenance activities allowed by the Master Program would restore the ability of storm water facilities to convey flood waters without modifying the existing drainage patterns. The proposed removal of accumulated sediment, debris, and vegetation would eliminate obstructions to flow within the maintained facilities but would not modify the existing drainage patterns.

The construction of temporary ramps to facilitate equipment access in storm water facilities would generally not result in substantial obstructions that would significantly affect drainage patterns. Such structures would typically be located along one side of the drainage (i.e., they would not span the drainage or extend into the low-flow portion of the channel), and would be removed after completion of maintenance operations.

Water by-pass operations would result in minor, temporary localized changes to drainage patterns resulting from erection of temporary barriers to direct flows around maintenance activities. Because diverted flows would be temporary in nature and would be directed to downstream locations within the same storm water facilities (e.g., drainage channels), no associated significant impacts would result.

Maintenance activities would not affect groundwater levels. As no new impermeable surface would be added to the drainage facilities, maintenance would not restrict the absorption of water into the groundwater table. The short-term nature of temporary by-pass operations would minimize any effect on local groundwater levels. In reality, reducing the vegetation within the drainage channel would eliminate the loss of potential groundwater that would otherwise result from transpiration.

Significance of Impacts

Program implementation would not: (1) substantially alter on- or off-site drainage patterns; (2) result in any substantial increase in impervious surface area or associated runoff volumes and velocities; (3) generate any associated flooding hazards; or (4) substantially affect the level or recharge capacity of any groundwater aquifers. As a result, no significant hydrology impacts are anticipated.

Mitigation Measures, Monitoring and Reporting Program

No significant impacts are identified; therefore, no mitigation is required.

4.6 NOISE

4.6.1 Existing Conditions

Noise Definition

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is defined as unwanted sound. The sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The unit of measurement of sound pressure is a decibel (dB). Because noise and sound can vary in intensity over one million times within the human hearing range, a logarithmic loudness scale is used to characterize dB values at a convenient and manageable level. Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, noise levels at maximum human sensitivity are factored more heavily into sound descriptions in a process called "A-weighting," written as dB(A). Hourly average noise levels are usually expressed as dB(A) L_{eq} or the equivalent noise level over that period of time. Because community receptors are more sensitive to noise intrusion during the evening and at night, state law requires that an artificial dB(A) increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL). Land use compatibility relative to traffic noise is typically displayed as CNEL, which incorporates all single noise events within a weighted 24-hour period. L_{dn} is another 24-hour noise descriptor that is virtually identical (less than 0.5 dB) to the CNEL descriptor. However, it is not weighted between the hours of 7 p.m. and 10 p.m. As such, CNEL is more restrictive.

Noise Standards

General community noise and land use compatibility guidelines are set forth in the Noise Element in the City's General Plan as shown in Table 4.6-1, Land Use – Noise Compatibility Guidelines Equivalent Level (CNEL) in decibels. These guidelines are based primarily on noise and land use recommendations from the State Department of Health Office of Noise Control. They are further modified based on the U.S. Department of Housing and Urban Development (HUD) document entitled "Planning Guidelines for Local Agencies." An exterior noise exposure of 65 dB(A) CNEL is compatible with residential and other noise sensitive uses. Noise standards for offices (business and professional) are 70 dB(A) CNEL. Least sensitive commercial, manufacturing, and some recreational uses are considered compatible with noise levels up to 75 dB(A) CNEL.

Table 4.6-1
LAND USE - NOISE COMPATIBILITY GUIDELINES

Land Use Category	**Exterior Noise Exposure (dBA CNEL)**				
	>60	60-65	65-70	70-75	75<
Open Space and Parks and Recreational					
Community & Neighborhood Parks; Passive Recreation					
Regional Parks; Outdoor Spectator Sports, Golf Courses; Athletic Fields; Outdoor, Spectator Sports, Water Recreational Facilities; Horse Stables; Park Maintenance Facilities					
Agricultural					
Crop Raising & Farming; Aquaculture, Dairies; Horticulture Nurseries & Greenhouses; Animal Raising, Maintain & Keeping; Commercial Stables					
Residential					
Single Units; Mobile Homes; Senior Housing		45			
Multiple Units; Mixed-Use Commercial/Residential; Live Work; Group Living Accommodations		45	45		
Institutional					
Hospitals; Nursing Facilities; Intermediate Care Facilities; Kindergarten through Grade 12 Educational Facilities; Libraries; Museums; Places of Worship; Child Care Facilities		45			
Vocational or Professional Educational Facilities; Higher Education Institution Facilities (Community or Junior Colleges, Colleges, or Universities)		45	45		
Cemeteries					
Sales					
Building Supplies/Equipment; Food, Beverages & Groceries; Pets & Pet Supplies; Sundries, Pharmaceutical, & Convenience Sales; Wearing Apparel & Accessories			50	50	
Commercial Services					
Building Services; Business Support; Eating & Drinking; Financial Institutions; Assembly & Entertainment; Radio & Television Studios; Golf Course Support			50	50	
Visitor Accommodations		45	45	45	
Offices					
Business & Professional; Government; Medical, Dental & Health Practitioner; Regional & Corporate Headquarters			50	50	
Vehicle and Vehicular Equipment Sales and Services Use					
Commercial or Personal Vehicle Repair & Maintenance; Commercial or Personal Vehicle Sales & Rentals; Vehicle Equipment & Supplies Sales & Rentals; Vehicle Parking					
Wholesale, Distribution, Storage Use Category					
Equipment & Materials Storage Yards; Moving & Storage Facilities; Warehouse; Wholesale Distribution					
Research & Development				50	

Table 4.6-1 (cont.)
LAND USE - NOISE COMPATIBILITY GUIDELINES

	Compatible	Indoor Uses	Standard construction methods should attenuate exterior noise to an acceptable indoor noise level.
		Outdoor Uses	Activities associated with the land use may be carried out.
	Conditionally Compatible	Indoor Uses	Building structure must attenuate exterior noise to the indoor noise level indicated by the number for occupied areas.
		Outdoor Uses	Feasible noise mitigate techniques should be analyzed and incorporated to make the outdoor activities acceptable.
	Incompatible	Indoor Uses	New construction should not be undertaken.
		Outdoor Uses	Severe noise interference makes outdoor activities unacceptable.

An interior sound level of 45 dB(A) is mandated by State law for multi-family dwellings. This interior noise level is considered desirable for single-family dwellings as well by the City. With standard construction practice and closed windows, exterior-to-interior attenuation of 15 dB(A) can generally be achieved. Thus, interior noise levels of 45 dB(A) can normally be met in areas of ambient noise of up to 60 dB(A) CNEL as long as they have the option of closing their windows. The ability to close windows to shut out noise requires supplemental ventilation.

Fixed source and/or operational noise governed by the City Noise Abatement and Control Ordinance Section 59.5.0401. The applicable sound level is a function of the time of day and land use zone. Sound levels are measured at the property line of the noise source. The limits are given in Table 4.6-2.

Table 4.6-2
CITY OF SAN DIEGO NOISE ORDINANCE LIMITS

Land Use Zone[1]	**Time of Day**	**1-Hour Average Sound Level** (dB)
Residential: All R-1	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	50 45 40
All R-2	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	55 50 45
R-3, R-4, and all other residential	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	60 55 50

Table 4.6-2 (cont.)
CITY OF SAN DIEGO NOISE ORDINANCE LIMITS

Land Use Zone[1]	**Time of Day**	**1-Hour Average Sound Level** (dB)
All commercial	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	65 60 60
Manufacturing, all other industrial (including agriculture and extractive industry)	Any time	75

Source: City Noise Abatement and Control Ordinance Section 59.5.0401
[1]The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts

Subsections A, B, and C of Section 59.5.0404 of the City Land Development Code establish the following limitations on construction noise.

A. It shall be unlawful for any person between the hours of 7 p.m. of any day and 7 a.m. of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Land Development Code, with exception of Columbus Day, Washington's Birthday, or on Sundays, to erect, construct, demolish, excavate for, alter, or repair any building or structure in such a manner as to create disturbing, excessive, or offensive noise unless a permit has been applied for and granted beforehand by the Noise Abatement and Control Administrator. In granting such a permit, the Administrator shall consider whether the construction noise in the vicinity of the proposed work site would be less objectionable at night than during the daytime because of different population densities or different neighboring activities; whether obstruction and interference with traffic, particularly on streets of major importance, would be less objectionable at night than during the daytime; whether the type of work to be performed emits noises at such a low level as to not cause significant disturbances in the vicinity of the work site; the character and nature of the neighborhood of the proposed work site; whether great economic hardship would occur if the work were spread over a longer time; whether proposed night work is in the general public interest; and the Administrator shall prescribe such conditions, working times, types of construction equipment to be used, and permissible noise levels as he or she deems to be required in the public interest.

B. Except as provided in Subsection C. hereof, it shall be unlawful for any person, including the City, to conduct any construction activity so as to cause, at or beyond the property lines of any property zoned residential, an average sound level greater than 75 decibels during the 12-hour period from 7:00 a.m. to 7:00 p.m.

C. The provisions of Subsection B. of this section shall not apply to construction equipment used in connection with emergency work, provided the Administrator is notified within 48 hours after commencement of work.

Existing Ambient Noise Levels

The storm water facilities included in the Master Program occur in various land use contexts and, thus, exhibit variable ambient noise levels. The majority of the facilities are located in urban areas where noise levels are dominated by traffic noise although sporadic, localized noise is generated by residential uses (e.g., lawn mowing). Adjacent commercial and industrial areas may generate noise levels related to heating and ventilation equipment and truck deliveries, as well as outdoor equipment operation. Lower ambient noise levels occur where storm water facilities pass through open space areas within the City.

4.6.2 Impacts

The focus of the following analysis is on the potential for the proposed project to result in short-term impacts on adjacent land uses which would result from periodic maintenance activities. Except for noise during maintenance activities, storm water facilities would not generate noise. Thus, no long-term noise-related impacts would occur.

Significance Criteria

The City's Significance Determination Thresholds (2011) state that a project may result in a significant noise impact if it would:

- Result in temporary noise which exceeds noise levels identified in Municipal Code 59.5.0404.

Analysis of Impacts

Issue 1: **Would maintenance activities create noise levels that would exceed standards established by the City's Municipal Code?**

Implementation of the Master Program would result in temporary noise during operation of equipment within the storm water facilities. Mechanical clearing would be utilized, whenever possible, to reduce cost. Depending on the conditions associated with each drainage facility, different types of equipment would be utilized. The decision as to which equipment would be used would be based upon the density and volume of accumulated material; the size of the drainage and access, which may preclude the use of certain types of equipment; the flow-characteristics of the drainage; and the need to complete maintenance activities in a timely and efficient manner. The types of equipment would include, but not be limited to, skid-steers, backhoes, Gradalls, excavators, loaders, dump trucks, and bulldozers. Maintenance equipment would utilize designated access roads.

In order to estimate the potential noise generated by a typical maintenance activity, assumptions were made as to the type of equipment associated with each of the proposed maintenance techniques. Equipment noise levels were based on statistics contained in the Federal Highway Administration's (FHWA) Construction Equipment Noise Levels and Ranges manual. The noise estimate assumes an average channel depth of 10 feet and width of 30 feet with sloping banks. Table 4.6-3 identifies the equipment noise levels based on the FHWA manual as well as an estimate of the percentage of the time the equipment would be used during maintenance activities.

Table 4.6-3 EQUIPMENT NOISE LEVELS		
Equipment	**Usage Factor**	**Noise at 50 Feet**
Dump truck	40%	84 dB(A)
Gradall	40%	85 dB(A)
Crane	40%	85 dB(A)
Loader	40%	80 dB(A)
Chainsaw	25%	83 dB(A)
Weed whip	40%	77 dB(A)

In-channel Maintenance (Full)

In most cases, equipment such as a skid-steer or bulldozer would enter the drainage using an existing or constructed access ramp and push the accumulated material with a bucket to a central site within the drainage. From there, material would be scooped up with a loader operating in the drainage, and loaded into a dump truck which also would be located in the drainage. The loaded dump truck would then leave the drainage and transport the material to an approved off-site disposal area; a maximum of five truckloads per hour are assumed. The average noise levels in areas surrounding maintenance activities are identified in Table 4.6-4.

Table 4.6-4 SURROUNDING NOISE LEVELS FROM IN-CHANNEL MAINTENANCE (FULL)						
Location	**Feet from Channel Edge**		**dB(A) Distance (feet)**			
	50	**100**	**75**	**70**	**65**	**60**
Access side	85.4	79.0	158	260	434	739
Opposite side	81.8	77.3	135	237	414	716

In-channel Maintenance (Partial)

Where direct access into the channel is not feasible, maintenance equipment would be lowered into the drainage facility from the bank using a crane or Gradall. Material would be scooped up from the channel using equipment operating from the edge of the drainage facility and loaded into a dump truck for off-site disposal. As with the full in-channel maintenance scenario, a maximum of five truckloads per hour are assumed. The average noise levels in areas surrounding maintenance activities are identified in Table 4.6-5.

Table 4.6-5 **SURROUNDING NOISE LEVELS FROM IN-CHANNEL MAINTENANCE (PARTIAL)**						
Location	**Feet from Channel Edge**		**dB(A) Distance (feet)**			
	50	**100**	**75**	**70**	**65**	**60**
Access side	86.6	79.5	158	256	424	716
Opposite side	82.3	77.4	138	237	404	689

Edge Maintenance

Where access exists along the edge of the drainage facility, maintenance activities would rely on a Gradall or excavator positioned on the side of the drainage to scoop up the accumulated material. This method would be limited by the width and depth of the drainage, which may exceed the reach of the available equipment. The average noise levels in areas surrounding maintenance activities are identified in Table 4.6-6.

Table 4.6-6 **SURROUNDING NOISE LEVELS FROM EDGE OF CHANNEL MAINTENANCE**						
Location	**Feet from Channel Edge**		**dB(A) Distance (feet)**			
	50	**100**	**75**	**70**	**65**	**60**
Access side	84.1	76.3	115	178	273	440
Opposite side	75.2	71.2	56	119	217	384

Non-mechanical Clearing

Where equipment access is unavailable in the channel or along the edge of the channel, maintenance would be conducted with hand-held equipment. Workers would enter the channel with the necessary tools to cut and remove growth (e.g., chainsaws and weed whackers) to clear and cut brush. Brush would be manually hauled from the channel to the closest designated access for disposal. Non-mechanical clearing assumes that two chainsaws and two weed whips would be working in the channel with a dump truck making one run per hour. The average noise levels in areas surrounding maintenance activities are identified in Table 4.6-7.

Table 4.6-7 **SURROUNDING NOISE LEVELS FROM NON-MECHANICAL CLEARING**						
Location	**Feet from Channel Edge**		**dB(A) Distance**			
	50	**100**	**75**	**70**	**65**	**60**
Access side	74.2	68.6	46	89	151	253
Opposite side	72.9	67.9	40	79	142	243

As indicated above, noise levels resulting from maintenance activities, depending on distance from maintenance activities, could be high enough to affect nearby sensitive receptors. In general, noise sensitive uses (e.g., residential development, churches, schools, etc) could experience noise levels in excess of 75 dB(A) if they occur within the following distances:

- 138 feet of in-channel (partial);
- 135 feet of in-channel (full);
- 115 feet of edge; and
- 46 feet of non-mechanical clearing.

Despite the fact that maintenance activities could generate noise levels greater than 75 dB(A), the maintenance activities would be subject to noise limitations imposed by the City's Noise Abatement and Control Ordinance. As a result, the noise levels associated with maintenance would not exceed a 75 dB(A) over an 8-hour period. Similarly, except in emergencies, maintenance would be limited to the hours of 7:00 a.m. and 7:00 p.m. on weekdays and Saturdays. Furthermore, maintenance equipment would be equipped with properly operating and maintained muffling devices.

Significance of Impact

Mandatory compliance with the City's Noise Abatement and Control Ordinance combined with advance noticing of nearby noise sensitive uses would reduce maintenance noise impacts to less than significant levels.

Mitigation Measures

As no significant noise impacts would occur, no mitigation measures are required.

4.7 PALEONTOLOGICAL RESOURCES

4.7.1 Existing Conditions

Paleontology is the science dealing with pre-historic plant and non-human animal life. Paleontological resources (or fossils) typically encompass the remains or traces of hard and resistant materials such as bones, teeth, or shells, although plant materials and occasionally less resistant remains (e.g., tissue or feathers) also may be preserved. The potential for fossil remains at a location can be predicted through established correlations between the fossils and geologic formations. For this reason, knowledge of the geology of a particular area and the paleontological resource sensitivity of particular formations makes it possible to predict where fossils may occur.

The area encompassing the City's storm water system includes numerous surficial deposits and geologic formations. As illustrated in Table 4.7-1 and summarized below, a number of these geologic formations have a moderate to high potential to contain significant deposits of fossils.

Table 4.7-1
PALEONTOLOGICAL RESOURCE POTENTIAL OF GEOLOGIC FORMATIONS

Geologic Unit	Potential Fossil Localities	Sensitivity Rating
Alluvium	All communities where this unit occurs	Low
Ardath Shale	All communities where this unit occurs	High
Bay Point/Marine Terrace	All communities where this unit occurs	High
Cabrillo Formation	All communities where this unit occurs	Moderate
Delmar Formation	All communities where this unit occurs	High
Friars Formation	All communities where this unit occurs	High
Granitic/Plutonic	All communities where this unit occurs	Zero
Lindavista Formation	A. Mira Mesa/Tierrasanta B. All other areas	A. High B. Moderate
Lusardi Formation	A. Black Mountain Ranch/Lusardi Canyon Poway/ Rancho Santa Fe B. All other areas	A. High B. Moderate
Mission Valley Formation	All communities where this unit occurs	High
Mt. Soledad Formation	All communities where this unit occurs	Moderate
Otay Formation	All communities where this unit occurs	High
Point Loma Formation	All communities where this unit occurs	High
Pomerado Conglomerate	A. Scripps Ranch/Tierrasanta B. All other areas	A. High B. Moderate
River/Stream Terrace Deposits	A. South Eastern Chollas Valley/Fairbanks Ranch Skyline/Paradise Hills/Otay Mesa Nestor/San Ysidro B. All other areas	A. Moderate B. Low
San Diego Formation	All communities where this unit occurs	High

Table 4.7-1 (cont.)
PALEONTOLOGICAL RESOURCE POTENTIAL OF GEOLOGIC FORMATIONS

Geologic Unit	Potential Fossil Localities	Sensitivity Rating
Santiago Peak Volcanics A. Metasedimentary B. Metavolcanic	A. Black Mountain Ranch/La Jolla Valley/ Fairbanks Ranch/Mira Mesa/Peñasquitos B. All other areas	A. Moderate B. Zero
Scripps Formation	All communities where this unit occurs	High
Stadium Conglomerate	All communities where this unit occurs	High
Sweetwater Formation	All communities where this unit occurs	High
Torrey Sandstone	A. Black Mountain Ranch/Carmel Valley B. All other areas	A. High B. Low

Source: City (2011)

Alluvium

Alluvial materials are associated primarily with larger active stream channels, and generally encompass variable amounts of silt, sand, and gravel. These deposits are approximately 10,000 years or less in age (Holocene), and typically do not contain important fossils in the Coastal Plain region. Notable exceptions do occur, however, including mammoth remains found in floodplain deposits of the Tijuana River Valley. Within the Program area, late Quaternary alluvial deposits occur within larger drainages and associated floodplains such as Otay, Mission, Sorrento, and San Dieguito valleys as well as Rose Canyon. Because of their relatively young age and mode of deposition (i.e., high energy environments), these formations are assigned a low paleontological resource sensitivity.

Ardath Shale

The Ardath Shale is part of the La Jolla Group, and occurs generally from Soledad Valley to La Jolla, and from Pacific Beach to Clairemont. This formation is approximately 47 to 48 million years old (middle Eocene), and has yielded diverse and well-preserved assemblages of marine microfossils, invertebrates, and vertebrates. Due to the nature and quality of the described fossil assemblages, a high paleontological resource sensitivity is assigned to the Ardath Shale.

Bay Point/Marine Terrace

The Bay Point Formation is a nearshore marine sedimentary deposit that is approximately 220,000 years old (late Pleistocene), and is exposed along the northern shore of Mission Bay (i.e., Crown Point) and portions of the San Diego waterfront. This unit has produced a large and diverse number of well-preserved fossil marine invertebrates, along with rare vertebrate fossils including sharks, rays, and bony fishes. Accordingly, this unit is assigned a high paleontological resource sensitivity.

Unnamed marine terrace deposits are between approximately 80,000 to 180,000 years old (Late Pleistocene). These deposits have a moderate to high paleontological resource sensitivity due to the large variety of marine vertebrate and invertebrate fossils that have been recovered from them.

Cabrillo Formation

The Cabrillo Formation is composed primarily of marine sandstones and conglomerates, and occurs along the eastern and southwestern sides of the Point Loma peninsula in coastal cliffs and road cuts, as well as on Mount Soledad. This formation is approximately 70 million years old (late Cretaceous), and has produced marine invertebrates and vertebrates. Based on the nature of recovered materials, the Cabrillo Formation is assigned a moderate paleontological sensitivity.

Delmar Formation

The Delmar Formation is part of the La Jolla Group, and occurs from Sorrento Valley to Batiquitos Lagoon, with the best exposures located in coastal cliffs between Torrey Pines State Reserve and Encinitas. This formation is approximately 49 to 50 million years old (early to middle Eocene), with fossils from this formation including estuarine vertebrates and invertebrates, aquatic reptiles, and terrestrial mammals. Due to the nature and diversity of associated fossils, the Delmar Formation is assigned a high paleontological resource sensitivity.

Friars Formation

The Friars Formation is the uppermost unit of the La Jolla Group, a series of interbedded marine, lagoonal and non-marine sedimentary rocks. This formation occurs from Mission Valley north to Rancho Santa Fe, and from Tecolote Canyon east to Santee/Lakeside. The Friars Formation is approximately 46 million years old (middle Eocene), with fossil occurrences including a rich assemblage of vertebrates (especially terrestrial mammals), marine microfossils and invertebrates, and terrestrial plants. Accordingly, this formation is assigned a high paleontological resource sensitivity.

Granitic/Plutonic

Much of the San Diego region is underlain by granitic bedrock associated with the Southern California Batholith. These materials are generally early Cretaceous in age and were emplaced as molten material that subsequently crystallized to form regional granitic/plutonic bodies (with these rocks exposed by subsequent uplift/erosion in many areas). Due to their described molten nature of formation, granitic/plutonic materials exhibit no potential for the occurrence of sensitive paleontological resources.

Lindavista Formation

This distinctive, rust-colored formation includes marine and/or non-marine terraces deposited on level wave-cut platforms during a period of dropping sea levels. The Lindavista Formation is approximately 0.5 to 1.5 million years in age (early Pleistocene), and occurs extensively as mesa surfaces in the Otay Mesa, San Diego Mesa, Linda Vista Mesa, Kearny Mesa, and Mira Mesa areas. Fossils are rare in this formation and have only been recorded in a few areas, including Mira Mesa and Tierrasanta. Accordingly, the Lindavista Formation is assigned a high paleontological resource sensitivity in Mira Mesa and Tierrasanta, and a moderate sensitivity in all other areas.

Lusardi Formation

The Lusardi Formation consists of marine sandstones and conglomerates, with local occurrences including Lusardi and La Zanja canyons near Rancho Santa Fe, and the Poway area. This formation is approximately 80 million years old (late Cretaceous) and has produced a large number of vertebrate and invertebrate fossils. Based on these conditions, the Lusardi Formation is assigned a high paleontological resource sensitivity in the Black Mountain Ranch/Lusardi Canyon, Rancho Santa Fe, and Poway areas, and a moderate sensitivity in other locations.

Mission Valley Formation

This unit is the middle member of the Poway Group and consists of marine and non-marine sedimentary rocks that occur discontinuously from Otay Valley to Miramar Reservoir and from Old Town to Spring Valley and Santee. The Mission Valley Formation is approximately 42 million years old (middle Eocene), with the marine strata having produced abundant and generally well-preserved microfossils, invertebrates, and vertebrates. The non-marine portions of this formation have yielded well-preserved samples of petrified wood as well as fairly large and diverse assemblages of fossil land mammals. The occurrence of both terrestrial and marine fossil assemblages in this formation is extremely important paleontologically, as it allows for the direct correlation of terrestrial and marine faunal time scales. Accordingly, the Mission Valley Formation is assigned a high paleontological resource sensitivity.

Mt. Soledad Formation

The Mount Soledad Formation is the lowest (oldest) member of the La Jolla Group, and occurs in the vicinity of Rose Canyon, Tourmaline Beach, the north end of Point Loma, and Mount Soledad. This formation is approximately 48 to 50 million years old (early to middle Eocene), and has yielded fossils of various kinds of marine organisms (including marine microfossils and invertebrates), as well as pollen. Based on the somewhat limited nature and distribution of fossil occurrences, this formation is assigned a moderate paleontological resource sensitivity.

Otay Formation

The Otay Formation is a fluvial (river deposited) sedimentary unit that is exposed in portions of Otay Mesa, as well as areas west of the Sweetwater Reservoir. This formation is approximately 29 million years old (late Oligocene), with a well-preserved and diverse assemblage of important terrestrial vertebrate fossils recovered from the upper (sandstone-mudstone) unit. Based on these discoveries, the Otay Formation is considered to be the richest source of late Oligocene terrestrial vertebrates in California, and is assigned a high paleontological resource sensitivity.

Point Loma Formation

The Point Loma Formation includes a series of alternating marine shales, mudstones, and sandstones, and occurs along the western side of Point Loma and the northern flank of Mount Soledad. This formation is approximately 75 million years old (late Cretaceous) and has produced numerous well-preserved and diverse marine invertebrates and vertebrates, as well as

occasional terrestrial plants and dinosaurs. The paleontological resources of the Point Loma Formation represent some of the best-preserved examples of late Cretaceous marine fossils known from California and one of the few sources of dinosaur fossils in the state. Accordingly, this formation is assigned a high paleontological sensitivity.

Pomerado Conglomerate

The Pomerado Conglomerate is the uppermost formation of the Poway Group, a sequence of primarily non-marine conglomerate and sandstone units. This formation occurs generally from La Mesa north to at least Miramar Reservoir, and east to Santee. The lower and middle portions of the Pomerado Conglomerate are between approximately 40 and 42 million years old (middle Eocene), with the lower member producing terrestrial mammal fossils (including insectivores, primates, and rodents) in the Scripps Ranch area. The middle member has yielded nearshore marine mollusks (e.g., clams and snails) and unidentifiable mammal bone fragments. Based on the noted occurrences, the Pomerado Conglomerate is assigned a high paleontological resource sensitivity in the Scripps Ranch and Tierrasanta areas, and a moderate sensitivity in other locations.

River/Stream Terrace Deposits

River terrace deposits consist of coarse-grained gravelly sandstones, pebble/cobble conglomerates, and claystones, and are present along the edge of many larger coastal valleys. These materials generally occur at levels above the active stream channels and represent sediments deposited by ancient river courses. River terrace deposits are typically between approximately 10,000 and 500,000 years old (late Pleistocene), and while fossil occurrences are uncommon, important resources have been recovered from these deposits. Specifically, a number of vertebrate remains have been collected from river terrace deposits, including ground sloth, mammoth, wolf, camel, and mastodon fossils from the South Bay Freeway; and well-preserved ground sloth remains from the San Dieguito River Valley. Because fossil occurrences in river terrace deposits are uncommon but high value materials have been recovered, this unit is assigned a moderate paleontological resource sensitivity in the southeastern Chollas Valley, Fairbanks Ranch, Skyline, Paradise Hills, Otay Mesa, Nestor, and San Ysidro areas, and a low sensitivity for other locations.

San Diego Formation

The San Diego Formation is a marine sedimentary deposit, and is extensively exposed from Otay Mesa/Otay Ranch to Mission Valley (with isolated occurrences between Rose Canyon and Pacific Beach). This formation is between approximately 1.5 and 3 million years old (late Pliocene), and has produced extremely diverse assemblages of marine organisms, as well as rare terrestrial mammal and plant fossils. The San Diego Formation represents one of the most important sources of information on Pliocene marine organisms and environments in the world, and is assigned a high paleontological resource sensitivity.

Santiago Peak Volcanics

The Santiago Peak Volcanics include moderately metamorphosed volcanic rocks, including localized deposits of volcaniclastic materials (i.e., sedimentary units derived from weathered volcanic rocks). This formation occurs more commonly in locations east of the Program area, but is exposed or present at shallow depths in portions of Otay Valley, Peñasquitos Canyon, the San Diego River Valley, La Zanja Canyon, and the San Dieguito River Valley. The Santiago Peak Volcanics are approximately 120 to 130 million years old (early Cretaceous), with important marine microfossils and invertebrate fossils known from the volcaniclastic metasedimentary units. Accordingly, metasedimentary rocks from this formation are assigned a moderate paleontological resource sensitivity in the Black Mountain Ranch, La Jolla Valley, Fairbanks Ranch, Mira Mesa, and Peñasquitos areas. No potential for sensitive paleontological resources is present in all other units and locations of this formation, due to the molten nature of formation for volcanic rocks.

Scripps Formation

The Scripps Formation is part of the La Jolla Group, and occurs from Presidio Park north to Del Mar, and from Clairemont east to La Jolla Valley. This formation is approximately 47 million years old (middle Eocene), and has yielded predominantly marine vertebrate and invertebrate fossils, although reptiles, mammals, and plant remains also have been recovered. Based on the described fossil occurrences, the Scripps Formation is assigned a high paleontological resource sensitivity.

Stadium Conglomerate

The Stadium Conglomerate is the lower member of the Poway Group, and includes two conglomeratic units that are distinct with respect to both composition and the time of formation. The two described units can occur either together or separately, with observed locations in the Mission Valley, Murphy Canyon, Tierrasanta, Rancho Peñasquitos, and Rancho Bernardo areas. Both members of this formation are middle Eocene, with ages ranging from approximately 42 to 43 million years old for the upper member, and 43 to 44 million years for the lower (Cypress Canyon) member. Fossil occurrences in the Stadium Conglomerate include marine microfossils and invertebrates, as well as sparse but well-preserved vertebrates from the upper member, and abundant and diverse assemblages of land mammals from the Cypress Canyon Member. Based on these fossil occurrences, the Stadium Conglomerate is assigned a high paleontological resource sensitivity.

Sweetwater Formation

The Sweetwater Formation is a non-marine sedimentary deposit that occurs in the central and eastern portions of Otay Valley, as well as areas to the north and east (including Lower Otay Lake and Sweetwater Valley). This formation is approximately 37 to 42 million years in age (middle Eocene), and has produced important dental remains of terrestrial mammals. Accordingly, the Sweetwater Formation is assigned a high paleontological resource sensitivity.

Torrey Sandstone

The Torrey Sandstone is a member of the La Jolla Group, and occurs from Sorrento Valley to Batiquitos Lagoon, and inland from the coast to La Jolla Valley. This formation is approximately 48 to 49 million years old (early to middle Eocene) and has produced important fossil plants and marine invertebrates. Based on the nature, location, and quality of recovered materials, the Torrey Sandstone is assigned a high paleontological resource sensitivity in the Black Mountain Ranch/Carmel Valley vicinity, and a low potential in all other areas.

Unnamed Formation

An unnamed formation consisting of terrestrial sedimentary rocks occurs in the Rose Canyon area between Mission Bay and SR-52. This formation is approximately 51 to 55 million years old (early Eocene), with associated fossil discoveries including dental remains of terrestrial mammals. Based on the nature of associated fossil materials, this formation is assigned a high paleontological resource sensitivity.

4.7.2 Impacts

Significance Criteria

The City's Significance Determination Thresholds (2011) state that a project may significantly impact paleontological resources if it would:

- Grade/excavate more than 1,000 cubic yards of material and extend to depths of 10 feet or more in geologic formations with a high paleontological sensitivity rating;
- Grade/excavate more than 2,000 cubic yards of material and extend to depths of 10 feet or more in geologic formations with a moderate paleontological sensitivity rating;
- Grade/excavate to a depth less than 10 feet within an area that has been previously graded and where unweathered formations with moderate or high sensitivity are present at the surface; and/or
- Grade/excavate within a fossil recovery site or near a fossil recovery site within the same geologic formation as the project site.

Analysis of Impacts

Issue 1: Would the project impact paleontological resources?

Despite the presence of a number of fossil-bearing formations, the potential for maintenance activities to significantly impact important fossil resources is considered low. In general, maintenance activities would not penetrate areas which exhibit a moderate to high potential for significant fossil deposits. As described in Chapter 3.0, Project Description, excavation activities within storm water facilities would be limited to sediment removal and would not encroach into

undisturbed geologic formations. Although limited, the potential does exist for encroachment into fossil-bearing formations in the course of constructing new or reconstructing existing access roads. Encroachment beyond the significance thresholds cited above would constitute a significant impact on paleontological resources.

Significance of Impact

The potential for significant impacts to paleontological resources from proposed maintenance activities is considered to be generally low, although significant impacts could occur depending on site-specific geologic conditions and proposed grading/ground disturbance. With incorporation of the monitoring and mitigation measures (where applicable), impacts to paleontological resources would be avoided or reduced to less than significant levels.

Mitigation Measures, Monitoring and Reporting

The following measure shall be implemented prior to the first time maintenance occurs within a drainage facility pursuant to the Master Program. Once a maintenance area has been surveyed and paleontological resources identified, no further investigation shall be required, provided protective measures required to preserve known sites within the maintenance area are implemented during subsequent maintenance activities, and monitoring measures are in place if the maintenance area has been identified as having a moderate to high potential for paleontological resources.

Mitigation Measure 4.7.1: Prior to initiating any maintenance activity where significant paleontological resources may occur within the APE, the following actions shall be taken.

4.7.1.1 Prior to Permit Issuance or Bid Opening/Bid Award

A. Entitlements Plan Check
   1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate maintenance documents.

B. Letters of Qualification have been submitted to ADD
   1. Prior to Bid Award, the applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines.
   2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the project.
   3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program.

4.7.1.2 Prior to Start of Maintenance

A. Verification of Records Search
   1. The PI shall provide verification to MMC that a site specific records search has been completed. Verification includes, but is not limited to a copy of a confirmation letter from San Diego Natural History Museum, other institution or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
   2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.

B. PI Shall Attend Pre-maintenance Meetings
   1. Prior to beginning any work that requires monitoring, the Applicant shall arrange a Pre-maintenance Meeting that shall include the PI, Maintenance Manager (MM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Pre-maintenance Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the Maintenance Manager and/or Grading Contractor.
      a. If the PI is unable to attend the Pre-maintenance Meeting, the Applicant shall schedule a focused Pre-maintenance Meeting with MMC, the PI, RE, MM or BI, if appropriate, prior to the start of any work that requires monitoring.
   2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects) The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the paleontological monitoring program.
   3. Identify Areas to be Monitored
      a. Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate maintenance documents (reduced to 11x17) to MMC for approval identifying the areas to be monitored including the delineation of grading/excavation limits. Monitoring shall begin at depths below 10 feet from existing grade or as determined by the PI in consultation with MMC. The determination shall be based on site specific records search data which supports monitoring at depths less than ten feet.
      b. The PME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).
      c. MMC shall notify the PI that the PME has been approved.
   4. When Monitoring Will Occur
      a. Prior to the start of any work, the PI shall also submit a maintenance schedule to MMC through the RE indicating when and where monitoring will occur.
      b. The PI may submit a detailed letter to MMC prior to the start of work or during maintenance requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final maintenance documents which indicate conditions such as depth of excavation

and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.

5. Approval of PME and Maintenance Schedule
   After approval of the PME by MMC, the PI shall submit to MMC written authorization of the PME and Maintenance Schedule from the MM.

4.7.1.3 During Maintenance

A. Monitor Shall be Present During Grading/Excavation/Trenching
   1. The monitor shall be present full-time during grading/excavation/trenching activities including, but not limited to mainline, laterals, jacking and receiving pits, services and all other appurtenances associated with underground utilities as identified on the PME that could result in impacts to formations with high and/or moderate resource sensitivity. **The Maintenance Manager is responsible for notifying the RE, PI, and MMC of changes to any maintenance activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the PME.**
   2. The PI may submit a detailed letter to MMC during maintenance requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.
   3. The monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR's shall be faxed by the MM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process
   1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
   2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
   3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

C. Determination of Significance
   1. The PI shall evaluate the significance of the resource.
      a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.

b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval of the program from MMC, MC and/or RE. PRP and any mitigation must be approved by MMC, RE and/or MM before ground disturbing activities in the area of discovery will be allowed to resume.
   (1). Note: For pipeline trenching projects only, the PI shall implement the Discovery Process for Pipeline Trenching projects identified below under "D."
c. If resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.
d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.
   (1). Note: For Pipeline Trenching Projects Only. If the fossil discovery is limited in size, both in length and depth; the information value is limited and there are no unique fossil features associated with the discovery area, then the discovery should be considered not significant.
   (2). Note, for Pipeline Trenching Projects Only: If significance cannot be determined, the Final Monitoring Report and Site Record shall identify the discovery as Potentially Significant.

D. Discovery Process for Significant Resources - Pipeline Trenching Projects
The following procedure constitutes adequate mitigation of a significant discovery encountered during pipeline trenching activities including but not limited to excavation for jacking pits, receiving pits, laterals, and manholes to reduce impacts to below a level of significance.
1. Procedures for documentation, curation and reporting
   a. One hundred percent of the fossil resources within the trench alignment and width shall be documented in-situ photographically, drawn in plan view (trench and profiles of side walls), recovered from the trench and photographed after cleaning, then analyzed and curated consistent with Society of Invertebrate Paleontology Standards. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact and so documented.
   b. The PI shall prepare a Draft Monitoring Report and submit to MMC via the RE as indicated in Section 4.7.1.1-A.
   c. The PI shall be responsible for recording (on the appropriate forms for the San Diego Natural History Museum) the resource(s) encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines. The forms shall be submitted to the San Diego Natural History Museum and included in the Final Monitoring Report.
   d. The Final Monitoring Report shall include a recommendation for monitoring of any future work in the vicinity of the resource.

4.7.1.4 Night and/or Weekend Work

A. If night and/or weekend work is included in the contract
   1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Pre-maintenance meeting.
   2. The following procedures shall be followed.
      a. No Discoveries
         In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSVR and submit to MMC via the RE via fax by 8AM on the next business day.
      b. Discoveries
         All discoveries shall be processed and documented using the existing procedures detailed in Section 4.7.1.3 - During Maintenance.
      c. Potentially Significant Discoveries
         If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section 4.7.1.3 - During Maintenance shall be followed.
      d. The PI shall immediately contact the RE and MMC, or by 8AM on the next business day to report and discuss the findings as indicated in Section 4.7.1.3-B, unless other specific arrangements have been made.

B. If night and/or weekend work becomes necessary during the course of maintenance
   1. The Maintenance Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
   2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

4.7.1.5 Post Maintenance

A. Preparation and Submittal of Draft Monitoring Report
   1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring,
      a. For significant paleontological resources encountered during monitoring, the Paleontological Recovery Program or Pipeline Trenching Discovery Process shall be included in the Draft Monitoring Report.
      b. Recording Sites with the San Diego Natural History Museum
         The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.

2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report.
3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval.
4. MMC shall provide written verification to the PI of the approved report.
5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Fossil Remains
1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and catalogued.

C. Curation of artifacts: Deed of Gift and Acceptance Verification
1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this project are permanently curated with an appropriate institution.
2. The PI shall submit the Deed of Gift and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC.
3. The RE or BI, as appropriate shall obtain signature on the Deed of Gift and shall return to PI with copy submitted to MMC.
4. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)
1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC of the approved report.
2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

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4.8 WATER QUALITY

The following discussion of water quality is based largely on a technical paper prepared by Weston Solutions, Inc. (Weston), which is contained in Appendix F. Weston completed an extensive literature review and conducted several field tests in order to develop a model for assessment and quantification of potential water quality impacts due to flood control channel maintenance within the City of San Diego. This model is described in the Standard Operating Procedures (SOP) contained in Appendix A of Appendix F. The model provides a threshold by which appropriate mitigation measures and their effectiveness can be determined.

4.8.1 Existing Conditions

Overview

Water quality varies throughout the watersheds within which the storm water facilities are located. Water quality is dependent on two primary factors: (1) water pollutant sources, and (2) the conditions which exist within each storm water facility (e.g. vegetation type, substrate material and flow regime). Each of these factors is discussed below.

Pollutant Sources

The study area includes substantial urban development comprised of a variety of development types including residential, commercial, and industrial land uses. Significant areas of landscaping as well as pavement and other types of impervious cover occur within the drainage areas of the storm water facilities included in the Master Program. In addition, areas of open space, including both previously disturbed areas and native habitats, also exist within the watershed within which the storm water facilities are located. A number of pollutant sources are associated with urban areas including both point and non-point sources. Specifically, point sources encompass defined flows or discharges such as drainage courses, storm drains, outfalls, and pipelines, while non-point sources include unconfined drainage such as overland or sheet flow, and are generally not traceable to a specific source.

Urban runoff typically contains greater concentrations of pollutants than non-urban runoff, and potentially includes pollutants such as total suspended solids, sediment, floatables (e.g., trash and debris), synthetic organics (e.g., pesticides, herbicides and polychlorinated biphenyls [PCBs]), oxygen-demanding substances (e.g., decaying vegetation, animal waste), heavy metals (copper, lead, zinc and cadmium), hydrocarbons (e.g., oil and grease), pathogens (e.g., bacteria and viruses), and nutrients (e.g., nitrogen and phosphorus).

All of these pollutants can adversely affect receiving waters, as well as associated plant and animal life, and human health and safety. Specific pollutant issues and sources may include: (1) the presence of pathogens in coastal waters and related effects to human health due to upstream conditions such as leaking sewer or septic systems; (2) the discharge of elevated concentrations of pollutants such as oil and grease, solvents, and pesticides into biological environments (e.g., wetlands) and related effects to plant and animal life, with pollutant sources including roads, parking areas, and construction sites; (3) the occurrence of eutrophication (e.g., algal blooms) in

downstream receiving waters as a result of excessive nutrients from sources including chemical fertilizers; (4) the downstream transport of eroded material (i.e., sedimentation) from sources such as construction-related grading and excavation, with associated adverse effects to aquatic life from conditions including turbidity; and, (5) the discharge of metals from sources such as the deterioration of galvanized metal, paint or treated lumber, and associated toxic effects to downstream plant and animal life. A summary of typical pollutant sources and loadings for various land use types is provided in Tables 4.8-1 and 4.8-2. While pollutant levels often exhibit spikes in association with storm runoff, dry season pollutant levels also are considerable due to landscape irrigation runoff that transports pollutants in the curb, gutter and storm drains to receiving waters.

Historic and current surface water quality monitoring has been or is being conducted within the study area watersheds in association with mandates under the federal Clean Water Act (CWA), associated requirements of National Pollutant Discharge Elimination System (NPDES), and related local storm water standards (refer to the discussion of regulatory framework below for additional information). Specifically, these on-going efforts include wet and dry season monitoring, bioassessment studies, ambient lagoon/bay monitoring, and coastal storm water monitoring, most of which have been regularly conducted since 1998. The results of the described monitoring efforts have documented the regular exceedence of established water quality standards (e.g., the RWQCB Basin Plan) for a number of pollutant levels/conditions, including bacteria indicators (total coliform, fecal coliform, enterococcus) total dissolved solids (TDS), total suspended solids (TSS), turbidity, chemical pesticides (e.g., diazinon, chloropyrifos, malathion), metals (e.g., lead, zinc and copper), nutrients (e.g. total nitrogen, nitrate, total phosphorus) chemical oxygen demand (COD), biological oxygen demand (BOD), and toxicity to aquatic test species.

Table 4.8-1
SUMMARY OF TYPICAL POLLUTANT SOURCES FOR URBAN STORM WATER RUNOFF

POLLUTANT	TYPICAL POLLUTANT SOURCES
Total Suspended Solids, Turbidity, Sediment and floatables	Streets, driveways, landscaping, construction, atmospheric deposition, erosion
Pesticides	Landscaping, roadsides, utility right-of-ways, soil wash-off
Organic materials	Landscaping, trash collection/disposal areas, animal wastes
Oxygen-demanding substances	Landscaping, animal wastes, trash collection/disposal areas, leaky sanitary sewer lines or septic systems, chemical spills
Metals	Automobiles, bridges, atmospheric deposition, industrial areas, soil erosion, corroding metal surfaces, combustion processes
Oil and grease/hydrocarbons	Roads, driveways, parking lots, vehicle maintenance areas, gas stations, illicit dumping to storm drains

Table 4.8-1 (cont.)
SUMMARY OF TYPICAL POLLUTANT SOURCES FOR URBAN STORM WATER RUNOFF

POLLUTANT	TYPICAL POLLUTANT SOURCES
Bacteria and viruses	Over-irrigated landscaping, leaky sanitary sewer lines or septic systems, sanitary sewer cross-connections, animal wastes, transients, improper handling and management of food and solid waste, wildlife, birds, and plant regrowth
Nitrogen and phosphorus	Landscaping fertilizers, atmospheric deposition, automobile exhaust, soil erosion, animal wastes, detergents, leaky sanitary sewer lines or septic systems

Source: U.S. Environmental Protection Agency (USEPA 1999)

Table 4.8-2
TYPICAL POLLUTANT LOADINGS IN RUNOFF FOR VARIOUS LAND USES (lbs/acre/yr)

Land Use[1]	Pollutant[2]									
	TSS	TP	TKN	NH_3 – N	NO_2+ NO_3– N	BOD	COD	Pb	Zn	Cu
Commercial	1000	1.5	6.7	1.9	3.1	62	420	2.7	2.1	0.4
Parking Lot	400	0.7	5.1	2	2.9	47	270	0.8	0.8	0.04
HDR	420	1	4.2	0.8	2	27	170	0.8	0.7	0.03
MDR	190	0.5	2.5	0.5	1.4	13	72	0.2	0.2	0.14
LDR	10	0.04	0.03	0.02	0.1	N/A[3]	N/A	0.01	0.04	0.01
Freeway	880	0.9	7.9	1.5	4.2	N/A	N/A	4.8	2.1	0.37
Industrial	860	1.3	3.8	0.2	1.3	N/A	N/A	2.4	7.3	0.5
Park	3	0.03	1.5	N/A	0.3	N/A	2	0	N/A	N/A
Construction	6000	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: USEPA (1999)
[1]HDR=High Density Residential; MDR=Medium Density Residential; LDR=Low Density Residential
[2]TSS=Total suspended solids; TP=Total Phosphorus; TKN=Total Kjeldahl Nitrogen; NH_3–N=Ammonia–Nitrogen; NO_2+NO_3–N=Nitrite+Nitrate minus Nitrogen; BOD=Biochemical Oxygen Demand; COD=Chemical Oxygen Demand; Pb=Lead; Zn=Zinc; Cu=Copper
[3]N/A=Not available; insufficient data to characterize

Based on the above information and the extensive level of urban development within the study area, overall surface water quality is generally moderate to poor. Groundwater quality within the study area also is expected to be generally moderate to poor due to salt water intrusion in coastal aquifers.

Local Water Quality Conditions

The State Water Resources Control Board (SWRCB) and RWQCBs produce bi-annual qualitative/quantitative assessments of statewide and regional water quality conditions. Since 1998, these assessments have focused on CWA Section 303(d) impaired water listings and priority status for assignment of total maximum daily load (TMDL) requirements. The Section 303(d) and TMDL assessments involve prioritizing waters on the basis of impaired water quality and the necessity for assigning quantitative pollutant load restrictions. These data are submitted to the USEPA for final review and approval. The most recent 303(d) list for California (including the San Diego Region) covers the period of 2004-2006, and was approved by the USEPA in June 2007 (SWRCB 2007). This list identifies over 100 individual impaired waters for the San Diego Region (including numerous creeks, surface reservoirs, and coastal water segments), with 46 associated pollutant/stressor categories. The seven hydrologic units identified above that are affected by the proposed plan include a number of the listed water bodies and pollutants/stressors. Many of the point and non-point flows within the study area drain directly or indirectly (i.e., via tributaries) into listed impaired water bodies, with these areas thus having the potential to adversely affect water quality. A proposed list is pending approval by the USEPA.

Water Quality Functions of Storm Water Facilities

The concrete and natural channels that serve as storm water facilities play a role with water quality as well as flood control. Four factors associated with storm water facilities determine the ability to remove water-borne pollutants: (1) sediment type and the capacity of the sediments for pollutant sorption/retention and its potential to settle or migrate as channel velocities increase, (2) vegetation composition and the capacity of the plant communities for pollutant sorption/retention, (3) surface water flow related to retention time and scouring potential, and (4) type of constituent in the water column and sediment that have varying pollutant retardation characteristics that vary under conditions. Each of these factors is discussed below.

Sediment Characteristics

The grain-size distribution characteristics of sediment present in the storm water system dictates the capacity of those sediments for pollutant sorption/retention, and its potential to settle or migrate as channel velocities increase. Sediments containing higher fractions by weight of clay particles possess a higher capacity for pollutant sorption/retention than coarse grained sand and gravels mixtures. Fine-grained sediments, particularly non-cohesive silts have low shear strength and are subject to scouring during storm events that can carry pollutants back into the water column. In addition to grain size distribution, the organic content of sediments also influences pollutant sorption/retention. Similar to the charged surface of clay particles that favor pollutant sorption/retention, organic materials in sediment also increase these characteristics.

Table 4.8-3 presents a summary of the sediment characteristics and associated pollutant capacity. This rating system for sediment pollutant removal capacity is used as part of the water quality assessment process and model. The site-specific sediment characteristics for each maintenance project are assessed through field and laboratory measurements, and a pollutant removal capacity

assigned based on these results. The sediment rating is then used in the model to determine the potential for sediment to adsorb and retain pollutants and whether impacted sediment has the potential to migrate back into the water column during storm flows between maintenance activities.

Table 4.8-3
POLLUTANT REMOVAL CAPACITY OF SEDIMENT

Pollutant Removal Capacity	Sediment Characteristics
Nominal	• Concrete or other impermeable substrate • No sand and/or fines, organic carbon, detritus, and/or nutrient source
Low	• Sand and cobble substrate • No visible deposition of fines, organic carbon, and/or detritus • pH<6 or >8 • Redox: +100 mV
Moderate	• Less than 50 percent sand • Some visible deposition of fines, organic carbon, and/or detritus • Neutral pH (6.0 to 8.5) • Redox: -100 to +100 mV
High	• Less than 25 percent sand • Visible deposition of fines and other solids • Neutral pH (6.0 to 8.5) • Redox: < -100 mV

Vegetation Pollutant Removal Characteristics

Within a wetland, metals, pesticides, and other hydrophobic constituents in storm water are potentially transferred from the water column by flow modification (i.e., sedimentation and deposition), sorption, retention, and/or infiltration. Potential transformations (i.e., removal) of these chemical classes within the wetland systems include volatilization, photolysis, hydrolysis, precipitation, cation exchange reactions, and biotransformation. Additional mechanisms of nutrient (nitrogen and phosphorus) removal in these wetland systems include both bacterial transformations and physio-chemical processing including adsorption, absorption, precipitation, and sedimentation. The type of plant and sediment community/system present in the storm water facilities will have a direct influence on the effectiveness of the facility to remove pollutants from urban runoff.

Table 4.8-4 presents the vegetative characteristics and the associated potential pollutant removal capacity. Desirable plant traits for pollutant removal include rapid growth, high tissue nutrient content, and capability to attain a high standing crop. Absorption through the root systems of vegetation associated with the bottom of storm water facilities offers a second way that storm water facilities can remove urban pollutants. This process is commonly referred to as biofiltration. As indicated in Table 4.8-4 vegetation that consists of at least 75 percent cover of submerged and emergent wetland (e.g. freshwater marsh) exhibits the greatest capacity to remove pollutants.

The site-specific vegetative characteristics for each storm water facility can be assessed through field measurements, and a pollutant removal capacity assigned based on these results. The vegetative characteristic rating can then be used to determine the potential for the plant community to adsorb and retain pollutants. The capacity of the plant and sediment community to adsorb and retain pollutants is also a function of retention time. Pollutant uptake occurs when flows and velocities are low enough to allow for sufficient retention time. As velocities increase during storm events, retention times decrease and the capacity of the system to adsorb and retain pollutants is significantly reduced. The storm water facilities are not designed to retain storm flows, but rather convey them to reduce flooding.

Table 4.8-4
POLLUTANT REMOVAL CAPACITY OF VEGETATION

Pollutant Removal Capacity	Vegetative Characteristics
Nominal	• No visible vegetation in wet areas
Low	• Young growth of new inhabitants • Woody and terrestrial species present Minimal wetland species (submerged and/or emergent macrophytes) • Low surface area coverage and density
Moderate	• Mature population near carrying capacity >50 percent coverage of wet areas • Both submerged and emergent wetland species
High	• Young life-stage and population >75 percent coverage of wet areas Both submerged and emergent wetland species • Wetland species that reproduce through tubers and/or rhizomes

Absorption through the root systems of channel vegetation requires prolonged exposure (often in excess of 24 hours) to provide sufficient time for the roots to absorb pollutants. This occurs during low flow, dry weather flows as well as short duration and intensity storm flows.

Therefore, dry and wet weather conditions need to be considered in determining the potential capacity of an existing plant and sediment system to adsorb and retain pollutants due to changes in retention times as flows and velocities increase during storm events.

Vegetation can also act as a pollutant source when they die off or are dislodged during high flow conditions and transported downstream along with the pollutants which they have absorbed, transformed or absorbed.

Surface Water Flow Impact to Retention Time and Scour Potential

The ability of plants and sediment to capture pollutants varies greatly with the flow characteristics of each facility. Typically, surface flow ranges from dry weather (low flow) to wet weather (high flow) conditions. As discussed previously, low flow conditions, during dry weather, enhances the pollutant capturing capacity of plants and sediment because it allows for longer exposure time for adsorption and absorption. High flow conditions, during wet weather, are not generally conducive to the pollutant removal process because of the high quantities and velocities associated with high flows. In addition to greatly diminishing the capacity of plants and sediments to capture pollutants, high flows may often dislodge plant and sediment material where pollutants have been previously sequestered. In this event, pollutants would be transported back into the water column and into downstream areas. The characteristics of the sediment and plants along with the anticipated flow conditions all play key roles in determining the potential impacts to water quality for maintenance activities. The ability of different flows to facilitate removal of pollutants is illustrated in Table 4.8-5.

Table 4.8-5
POLLUTANT REMOVAL CAPACITY OF SURFACE FLOW

Pollutant Removal Capacity	Surface Flow Characteristics
Nominal	• No visible surface water
Low	• Very deep (> 2 ft) or very shallow (< 0.5 ft) • Fast flowing and channeling • No deposition of fines • Redox: > +100 mV
Moderate	• Shallow (0.5 to 1 ft) • Moderate and variable flow depending on volume inputs • Observable HRT, some deposition of fines • Redox: -100 to +100 mV
High	• Moderate water depth (1 to 2 ft) • Slow flow with a significant HRT (> 1 h) • Deposition of fines • Redox: < -100 mV

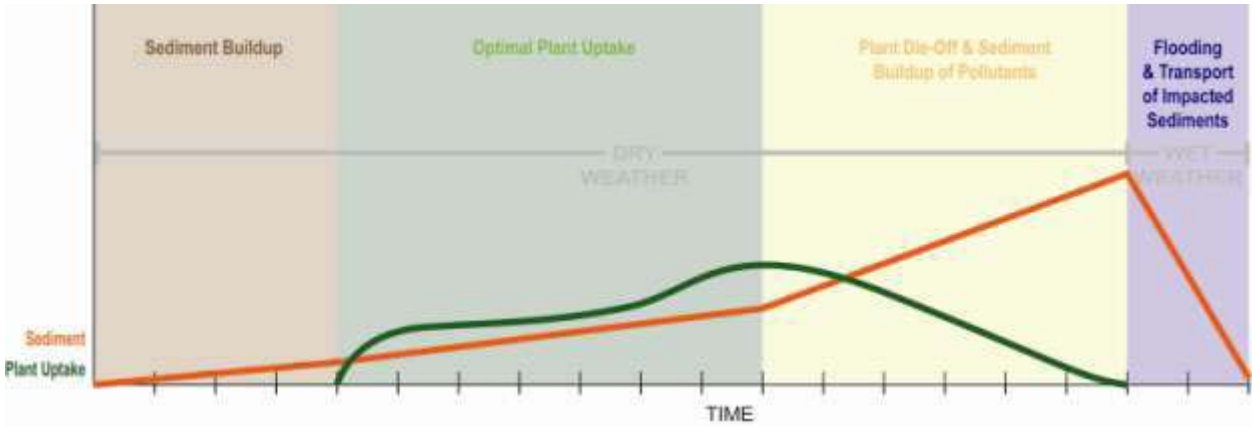
The site-specific flow characteristics for each storm water facility are determined through field measurements, and in consideration of sediment characteristics, are used to assess the scouring potential of the sediment under anticipated storm conditions. Should the sediment contain pollutants of concerns, as determined from sediment sampling and analysis, and possess a scouring velocity that is expected to be reached during storm events predicted over the maintenance period, the removal of these sediments provide a benefit. The benefit is achieved by the removal of impacted sediments from the system that would have otherwise been released back into the water column during storm events. Furthermore, flow characteristics can be used to assess the capacity of the plant and sediment community to adsorb and retain pollutants which is a function of retention time. Pollutant uptake occurs when flows and velocities are low enough to allow for sufficient retention time. As velocities increase during storm events, retention times decrease and the capacity of the system to adsorb and retain pollutants is significantly reduced. The capacity of the plant and sediment system to adsorb and retain pollutants is therefore limited. In determining the loss of capacity from maintenance activities, impacts are based on the pollutant removal capacity limited to low flows during dry weather and small low intensity storms.

Type of Constituents in the Water Column and Sediment

The determination of sorption/retention capacity of plant and sediment systems is also dependant on the type of constituents and their concentration in surface water and sediment. Specific plant and sediment uptake and retention characteristics vary greatly between constituents, and therefore, require a pollutant-specific approach to determining impacts and benefits. The water quality assessment process and model include site-specific sediment and dry weather flow water quality sampling and analysis prior to maintenance activities serve as a basis for determining potential water quality impacts.

The inter-relationship of vegetation, sediment and surface flow conditions is illustrated in the Figure 4.8-1. This figure presents a typical timeline for a typical natural storm water facility that includes both dry and wet weather flow conditions. During dry weather flows and low storm flows, sediment typically drops out of channel flows and accumulates over time, depending on channel configuration and scouring velocities reached by storm events between maintenance periods. During this sediment accumulation, constituents bound to these sediments also accumulate, and the sediment acts as a pollutant reservoir or sink. Overtime, where conditions allow, various vegetative communities may be established that include plants that may uptake certain constituents such as nutrients depending on the plant type and concentration. This requires sufficient detention time under low flow conditions to allow these transfers and transformations to occur. However, plants also go through cycles of die-off and re-growth that may release constituents back into the channel flows. Furthermore, during high flow wet weather conditions, sediment containing adsorbed constituents can be transported downstream when scouring velocities are reached.

Figure 4.8-1
INTERRELATIONSHIP OF VEGETATION, SEDIMENT AND SURFACE FLOW



Regulatory Framework

Maintenance activities conducted under the Master Program would be subject to a number of regulatory requirements related to water quality. The principal sources for these requirements include the CWA, the State Porter-Cologne Water Quality Act (Porter-Cologne Act), the San Diego RWQCB Basin Plan, and City grading and storm water standards, as outlined below.

Clean Water Act Standards

The 1972 CWA established the National Pollutant Discharge Elimination System (NPDES) permit program to regulate the discharge of pollutants to waters of the U.S. from industrial, commercial, institutional, and other point sources. Amendments to the CWA in 1987 established a framework for regulating urban storm water runoff and other non-point source pollutants. Specific NPDES requirements that may be applicable to the proposed maintenance activities are described below.

General Construction Activity Permit

Conformance with the Construction Activity Permit is required prior to disturbance exceeding one acre. This permit is issued by the SWQCB under an agreement with the USEPA. Specific conformance requirements include implementing a Storm Water Pollution Prevention Plan (SWPPP) and an associated monitoring program as well as a Storm Water Sampling and Analysis Strategy (SWSAS) for applicable projects (i.e., those discharging directly into waters impaired due to sedimentation, or involving potential discharge of non-visible pollutants that may exceed water quality objectives). These plans identify detailed measures to prevent and control the off-site discharge of pollutants in storm water runoff. Specific pollution control measures typically involve the use of best available technology economically achievable (BAT) and/or best conventional pollutant control technology (BCT) levels of treatment, with these

requirements implemented through BMPs. While site-specific BMPs can vary with conditions such as proposed grading parameters, slope and soil characteristics, detailed guidance for construction-related BMPs is provided in the Construction Permit text and the City Municipal Code *Land Development Manual-Storm Water Standards*, as well as additional sources including the *Storm Water Best Management Practices Handbooks*, *EPA Nationwide Menu of Best Management Practices for Storm Water Phase II*, and the California Department of Transportation (Caltrans) *Storm Water Quality Handbooks*.

General Groundwater Extraction Permits

Conformance with the noted groundwater permits is required by the RWQCB prior to disposal of extracted groundwater that is tributary to San Diego Bay (Groundwater Permit I), or waters other than San Diego Bay (Groundwater Permit II). For Groundwater Permit I, all discharges of extracted groundwater are subject to the specific numeric and narrative discharge criteria identified in the permit text and the RWQCB Basin Plan (as described below), including standards related to petroleum compounds, organic compounds, metals, toxic pollutants, suspended and settleable solids, and solvents. Requirements under Groundwater Permit II are applicable to discharge activities which either: (1) involve more than 100,000 gallons per day (gpd) of discharge; or (2) include pollutants that would exceed applicable discharge requirements, including the Basin Plan water quality and beneficial use objectives described below. Compliance with these standards typically involves using BMPs for a number of physical and/or chemical parameters, such as (depending on site-specific conditions) erosion/sedimentation controls and testing/treatment of extracted groundwater prior to disposal.

Municipal Storm Water Permit

The Municipal Storm Water Permit identifies waste discharge requirements for urban runoff related to applicable new development, redevelopment and existing development sites under the jurisdiction of co-permittees (including the City). The intent of these requirements is to protect environmentally sensitive areas and provide conformance with applicable water quality standards, including the CWA and the RWQCB Basin Plan (as outlined below). Identified requirements involve using a number of planning, design, operation, treatment, and enforcement measures to reduce pollutant discharges from individual development projects (and the municipal storm water system as a whole) to the maximum extent practicable (MEP). Specifically, these measures include: (1) using jurisdictional planning efforts (such as discretionary general plan approvals) to provide water quality protection; (2) requiring coordination between individual jurisdictions to provide watershed-based water quality protection; (3) implementing applicable low impact development, site design, source control, and volume- or flow-based (as defined in the permit text) treatment control BMPs to avoid, reduce, and/or mitigate effects including increased erosion and sedimentation, hydromodification,[1] and the discharge of pollutants in urban runoff; and (4) using appropriate education/outreach,

[1]Hydromodification is defined in the Municipal Permit as the change in natural watershed hydrologic processes and runoff characteristics (e.g., infiltration and overland flow) caused by urbanization or other land use changes that result in increased stream flows, sediment transport, and morphological changes in the channels receiving the runoff.

monitoring, reporting, and enforcement efforts to ensure proper implementation, documentation, and (as appropriate) modification of permit requirements.

The need to address hydromodification and its influence on water quality is included in the San Diego Regional Water Board Order R9-2007-001, Provision D.1.g of California Regional Water Quality Control Board San Diego Region Order R9-2007-0001, which requires the San Diego Storm Water co-permittees to implement a Hydromodification Management Plan (HMP) "…to manage increases in runoff discharge rates and durations from all Priority Development Projects, where such increased rates and durations are likely to cause increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force."

To address this permit condition, the co-permittees, represented by the County of San Diego, hired a consultant team and proceeded with developing an HMP that meets the intent of the Permit Order. The permit requires the co-permittees to develop an HMP for all Priority Development Projects (PDP), with certain exemptions. The HMP must develop standards to control flows within the geomorphically-significant flow range. Supporting analyses must be based on continuous hydrologic simulation modeling.

As required by Permit Order No. R9-2007-0001, the City of San Diego incorporated the approved HMP into its local Standard Urban Storm Water Mitigation Plan (SUSMP) and implemented the HMP for all applicable PDPs by January 14, 2011.

Pursuant to the described Municipal Storm Water Permit requirements, the City (along with other applicable co-permittees) developed the SUSMP to address storm water quality issues, and adopted the related Storm Water Standards Manual. These documents provide (among other things) direction for applicants to determine if and how they are subject to City storm water and related Municipal Storm Water Permit standards, and identify requirements for the inclusion of permanent BMPs to provide regulatory conformance for applicable projects. The current City Storm Water Standards were most recently updated in March 2008 to specifically address interim requirements under the 2007 Municipal Permit.

The Municipal Storm Water Permit also requires co-permittees to fund and implement Urban Runoff Management Plans (URMPs) to document the specific runoff management measures and programs proposed to comply with the Municipal Permit requirements. Specifically, such measures would ensure that pollutant discharges in urban runoff are reduced to the MEP, and that such discharges would not cause or contribute to a violation of applicable water quality standards. The URMPs involve evaluations conducted on an individual jurisdictional basis (JURMPs), on a multi-jurisdictional watershed-based approach (WURMPs), and on a multi-jurisdictional regional basis (RURMP). Pursuant to these requirements, the City has prepared a JURMP and participated in the development of several WURMPs and the RURMP that encompass portions of the Program study area, with additional information provided below under the discussion of City Standards.

Urban Runoff Management Programs

As discussed above under CWA Standards, the NPDES Municipal Permit requires co-permittees to prepare and implement URMPs based on JURMP, WURMP, and RURMP considerations. Pursuant to these requirements the City adopted a JURMP, with the overall goal of this plan to "[r]educe the amount of pollutants carried by urban runoff." To this end, the City JURMP provides detailed direction on topics such as:

- Ensuring that discharges from municipal urban runoff conveyance systems do not cause or contribute to a violation of water quality standards;
- Effectively prohibiting non-urban runoff discharges; and
- Reducing the discharge of pollutants from urban runoff conveyance systems to the MEP through efforts such as education and enforcement.

Detailed implementation activities for each program area listed above are contained in the JURMP, with individual City departments responsible for performing those tasks that are applicable and necessary to be in compliance with the Municipal Permit and related City standards. Specifically, this includes efforts such as appropriate staff training, monitoring/ reporting, performing self-assessments, and modifying programs and activities as necessary.

The City has participated in and co-authored WURMPs for a number of applicable watersheds, including the San Dieguito, Peñasquitos, San Diego River, Mission Bay and La Jolla, San Diego Bay, and Tijuana River watersheds. All of these plans address similar issues as the described JURMP, but are focused on a watershed-based approach that extends across jurisdictional boundaries and entails coordination and cooperation between the various managing agencies.

The City also has participated in and co-authored a RURMP to address similar issues described in the JURMP that are regional in nature and more efficiently addressed at the regional level through collaboration with all co-permittees subject to the Municipal Permit.

<u>City of San Diego Storm Water-Related Construction and Development Requirements</u>

Municipal Code

Pursuant to the City Storm Water Management and Discharge Control Ordinance (San Diego Municipal Code 43.03 et seq.), all new development in the City is required to comply with the storm water pollution prevention measures identified in Section 142.0146 (grading), and Section 142.0220 (storm water runoff control and drainage) of the Land Development Code. These measures require that development actions prevent erosion, sedimentation, and pollutant discharge to the MEP. Both temporary (construction) and permanent erosion, sedimentation, and water pollution control measures are required to be implemented to the satisfaction of the City, including efforts such as erosion prevention; sediment control; phased grading; BMP selection and operation; and monitoring, maintenance, and (as necessary) modification of implemented measures. The referenced Storm Water Standards Manual provides background information on

storm water regulations and the relationship between City, state, and federal standards, and also gives comprehensive direction for maintaining conformance with all applicable storm water requirements. Specifically, the Storm Water Standards Manual identifies procedures for determining applicable storm water requirements, preparing and submitting appropriate plans and technical materials, selecting pertinent short- (construction) and long-term BMPs, and identifying and implementing monitoring and maintenance requirements for BMPs and related programs.

Storm Water Standards Manual

Per requirements in the NPDES Municipal Permit, a Model SUSMP was collectively developed by the Municipal Permit co-permittees to address post-construction urban runoff pollution from new development and redevelopment projects that fall under "priority project" categories. The primary goal of the Model SUSMP is to develop and implement practicable policies to ensure that urbanization does not increase the urban runoff flow rates, velocities, or pollutant loads from a project site. This goal may be achieved through site-specific controls and/or drainage area-based or shared structural treatment controls. The Model SUSMP was submitted to and approved by the RWQCB and contains BMPs that must be used for certain designated project types to achieve this goal. The NPDES Municipal Permit also required the co-permittees to adopt the Model SUSMP requirements into their own regulations, called Local SUSMPs.

The City of San Diego adopted the Storm Water Standards Manual in 2002, to fulfill the Local SUSMP requirements. In accordance with the Storm Water Standards Manual, the City of San Diego reviews and approves the SUSMP project plan(s) as part of the approval process for discretionary projects, and prior to issuing permits for ministerial projects. To allow flexibility in meeting SUSMP design standards, structural treatment control BMPs may be located on or off site, used singly or in combination, or shared by multiple developments, provided certain conditions are met.

All new development and significant redevelopment projects that fall into one of the various "priority project" categories are subject to these SUSMP requirements (e.g., residential, commercial, or hillside developments that exceed established criteria for size or extent). In the instance where a project feature, such as a parking lot, falls into a priority project category, the entire project is subject to the associated SUSMP requirements. The majority of the established priority project categories pertains, to urban development and would not apply to the types of activities anticipated under the proposed plan. Two of the noted priority project categories do encompass non-urban development, however, including hillside development and projects that discharge to environmentally sensitive lands.

In addition to the priority project categories indicated above, the City has established standard permanent storm water requirements that apply to projects involving any of the following conditions:

- New impervious areas such as rooftops, roads, parking lots, driveways, paths, and sidewalks;

- New pervious landscape areas and irrigation systems;

- Permanent structures within 100 feet of any natural water bodies;
- Trash storage areas;
- Liquid or solid material loading and unloading areas;
- Vehicle or equipment fueling, washing, or maintenance area;
- A General NPDES Permit for Storm Water Discharges Associated with Industrial Activities (except construction);
- Commercial or industrial waste handling or storage, excluding typical office or household waste;
- Any grading or ground disturbance during construction; and
- Any new storm drains, or alterations to existing storm drains.

Projects involving one or more discretionary actions and including any of the above improvements or activities are subject to the previously described requirements of the City Storm Water Standards Manual. Depending on the nature, location, and characteristics of the proposed project/activities, various BMPs are available to address associated concerns, including site design, source control, and treatment control measures. Appropriate BMPs are identified on a project-by-project basis, as identified on project plans and specifications submitted in conjunction with the application for the necessary discretionary approval(s).

RWQCB Basin Plan Requirements

The Porter-Cologne Act and the CWA require that Water Quality Control Plans be prepared for the nine state-designated hydrologic basins in California. Basin Plans guide the conservation and enhancement of water resources and establish beneficial uses of inland surface waters, tidal prisms, harbors, and groundwater basins for each of the nine regions within the state. The San Diego RWQCB Basin Plan establishes a number of beneficial uses and water quality objectives for surface and groundwater resources. Beneficial uses are generally defined in the Basin Plan as "the uses of water necessary for the survival or well being of man, plus plants and wildlife." Identified beneficial uses include categories such as municipal, industrial, agricultural, recreational, and biological resource applications, with such uses identified for individual hydrologic designations and/or receiving waters in the Basin Plan. Water quality objectives identified in the Basin Plan are based on established beneficial uses, and are defined as "the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses." Water quality objectives for individual surface and groundwater resources can include both narrative requirements and specific numeric objectives. Narrative objectives typically include quantitative and/or qualitative standards for identified pollutants, as well as general anti-degradation requirements. In addition to the beneficial use and water quality objective criteria described above, the Basin Plan also identifies implementation programs to protect beneficial uses, establishes surveillance and monitoring activities to evaluate

the effectiveness of the Basin Plan, and incorporates all applicable State and Regional Board plans and policies by reference.

In concert with the described Basin Plan policies and directives, the San Diego RWQCB regulates waste discharge and reclaimed water use to minimize and control adverse effects on the quality and beneficial uses of surface and groundwater. To this end, the RWQCB issues permits, (i.e., waste discharge requirements and master reclamation permits), which require that waste and reclaimed water not be discharged in a manner that would cause a violation of applicable water quality objectives or adversely affect identified beneficial uses.

4.8.2 Impacts

Significance Criteria

According to the City's Significance Determination Thresholds (2011), impacts to water quality would be significant if the project would:

- Grade, brush, or grub more than one acre of land, especially into slopes over a 25 percent grade, and would drain into any water body or stream (except in limited cases, projects which would disturb over five acres of land would have a significant impact);
- Result in loss of vegetation on slopes (e.g., brush management measures); and/or
- Substantially degrade water quality in a manner that could adversely affect human health/safety or biological resources due to increased sediment loads during site grading and construction as well as urban runoff pollution during the life of the project.

In addition, impacts to water quality would be significant if the project would:

- Diminish the capacity of the maintained facility to retain specific pollutants that exceed or are within 25 percent of a concentration standard established by the San Diego Basin Plan for the water body segment in which the maintenance would occur.

Analysis of Impacts

Issue 1: Would the Master Program increase pollutant discharges, during or following maintenance, including downstream sedimentation, to receiving waters, including to water quality sensitive areas or to impaired water bodies on the Clean Water Act §303(d) list?

Maintenance is expected to have both positive and negative impacts on water quality. Negative impacts on water quality would be associated with erosion and sedimentation during and following excavation activities, diminished pollutant removal capacity, introduction of hazardous

materials related to the operation of mechanized equipment use (e.g., fuels, etc.), trash generation related to maintenance operations/crews, and the dewatering of dredged material.

Negative impacts due to the removal of sediment and plant communities during maintenance include reductions of the capacity of these systems to retain pollutants present in dry weather and low storm flows. The sorption and retention capacity of the plant and sediment system depends on the characteristics of the sediment and plants, flow conditions and type of pollutants and concentrations in the water column and sediments. Retention time plays a key role in the pollutant removal capacity of the system that decreases as flow and velocities increase during storm events. Therefore the capacity of the plant and sediment communities is dynamic and the factors of sediment and plant type, flow conditions and pollutant types all need to be considered.

On the other hand, maintenance may have a positive effect on water quality. Removal of contaminated sediment during maintenance would have a positive impact by removing pollutants that have bonded to these sediments. High velocities and volumes of runoff could transport these pollutants into downstream areas. In general, velocities of greater than five cubic feet per second (cfs) are considered capable of re-suspending sediments. Thus, where these velocities could occur, the removal of accumulated polluted sediment could benefit downstream areas. Excavation of contaminated sediments would also facilitate on-site removal of surface water pollutants by exposing fresh sediments with an increased potential to bond with pollutants. Similarly, removal of plant material which has maximized its potential to retain and adsorb pollutants would also improve the water quality function of natural drainages by removing the pollutants sequestered by those plants, and allowing the plant material to be renewed along with its retention and adsorption capacity.

Erosion and Sedimentation

Potentially significant erosion and sedimentation impacts could be associated with the following maintenance activities: (1) use of mechanized equipment to remove accumulated sediments; (2) construction of ramps, and/or staging areas; (3) replacement of riprap in channel banks or energy dissipation structures; and/or (4) construction of water bypass facilities.

No significant erosion and sedimentation impacts would be associated with non-mechanical maintenance activities or the use of mechanized equipment in concrete-lined facilities. Non-mechanical activities would focus on above-ground vegetation, leaving the root system to continue to hold soil. Mechanized equipment used in concrete-lined facilities would not entail any grading or disturbance of previously undisturbed or compacted earthen areas which could promote erosion.

The removal of sediment and vegetation with mechanical equipment would not be expected to result in a significant increase in erosion and downstream sedimentation due to the characteristics of areas where mechanical maintenance is expected to be conducted and due to implementation of protocols defined in the Master Program.

With respect to channel characteristics, the areas being proposed for maintenance have historically been areas of deposition due to the upstream sediment supply and the channel

hydraulic characteristics. Following maintenance, these areas would be expected to continue to be depositional areas, as they have been for years. Because these areas would continue to be depositional, ongoing and regular future maintenance will be required once the channel capacitates are again restricted by the accumulation of sediment and the growth of vegetation within the channels. In addition, the removal of the sediment and vegetation would result in a larger cross sectional area in the channel, which would result in a decrease in channel velocities in these areas which would decrease erosion potential.

In addition to the inherent factors discussed above, the Master Program includes specific maintenance protocols designed to minimize erosion and sedimentation resulting from maintenance activities. In particular, the Master Program requires installation of check dams when recommended by the IHHA. The check dams would be constructed by placing 3-foot steel poles in the channel bed. Chain link fencing (1-2 feet high) would be installed between these poles at the channel flowline. The exact height of these structures would be based on the specific channel characteristics to avoid restricting the ability of the channel to convey floodwater.

Check dams would promote the accumulation of sediment upstream of the check dam, which would give added protection against downstream sedimentation, by resulting in slower velocities upstream and promoting deposition. Once vegetation begins to establish within the maintenance area and its natural function in limiting erosion begins to return, the fencing would be removed to ensure that the structures do not cause additional flooding. The chain link fence would be removed, but the posts would be retained. Leaving the posts in place offers two benefits. First, it would allow the posts to be used to monitor sediment accumulation depth to assess future maintenance needs. Second, it would allow them to be reused to create check dams during future maintenance events and reduce the impact of installing the posts repeatedly to create check dams.

Implementation of BMPs outside the channel related to access and staging would minimize erosion and sediment from areas outside the channel.

The replacement of riprap could facilitate erosion through the use of mechanized equipment to "prepare" these areas for rock placement. The erosion potential would be limited to the brief period between the removal of the existing riprap and the riprap replacement. As riprap replacement would not occur during high rainfall events, the erosion risk would be minimal. Potential water bypass activities would involve the redirection and/or discharge of water, with associated potential to cause erosion and sedimentation in graded or destabilized areas (e.g., vegetation removal sites). ~~Riprap or other techniques would used to reduce the discharge velocity of redirected water to prevent downstream erosion.~~

Reduced Pollutant Removal Capacity

The removal of vegetation and sediment as a result of maintenance may decrease the capacity of the storm water facilities to adsorb and retain pollutants. The impact on maintenance depends on a number of key factors. As discussed earlier, facilities which exhibit the following characteristics have the highest value for pollutant removal: (1) dense coverage of freshwater marsh vegetation, (2) high levels of fines (clay particles) and organic material in the substrate, and (3) moderate water depth and slow flow rates. As a consequence, maintenance in these

facilities would have the highest potential for impact. Impacts to facilities that are unvegetated, have an impermeable substrate (e.g. concrete) and have no visible surface waters would not be significant because these facilities have only nominal pollutant removal capacity. Maintenance in facilities having characteristics which fall between these two extreme conditions would have varying degrees of impact on pollutant removal capacity.

Construction-related Hazardous Materials/Trash Generation

Maintenance activities involving the use of mechanized equipment would result in the introduction of hazardous materials such as vehicle fuels/lubricants. The accidental discharge of construction-related hazardous materials or trash into the drainage system could potentially result in significant impacts to local and downstream receiving waters, particularly materials such as petroleum compounds that are potentially toxic to aquatic species in low concentrations. However, implementation of the protocols contained in the Master Program would serve to reduce potential impacts to below a level of significance. These protocols include the following:

- Minimize the amount of hazardous materials stored on site, and restrict storage/use locations to areas at least 50 feet from storm drains and surface waters;
- Store construction-related trash in areas at least 50 feet from storm drains and surface waters, and implement regular (at least weekly) removal of trash for disposal at an approved site;
- Cover and/or enclose storage facilities for hazardous materials and trash, and maintain accurate and up-to-date written hazardous material inventories;
- Store hazardous materials off the ground surface (e.g., on pallets) and in their original containers, with the legibility of labels protected. Replace damaged labels;
- Use berms, ditches, and/or impervious liners (or other applicable methods) in material storage and vehicle/equipment maintenance and fueling areas to provide a containment volume of 1.5 times the volume of stored/used materials and prevent discharge in the event of a spill;
- Place warning/information signs in areas of hazardous material use or storage to identify the types of materials present, as well as applicable use restrictions and containment/clean-up procedures;
- Mark storm drains (or other appropriate locations) to discourage inappropriate hazardous material or trash disposal;
- Provide training for applicable employees in the proper use, handling, and disposal of hazardous materials as well as appropriate action to take in the event of a spill;
- Store readily accessible absorbent and clean-up materials in applicable locations such as hazardous material storage and vehicle/equipment maintenance areas;

- Post regulatory agency telephone numbers and a summary guide of clean-up procedures in a conspicuous location at or near the job site trailer; and

- Monitor and maintain hazardous material use/storage facilities and operations to ensure proper working order on at least a monthly basis.

Net Effects of Maintenance on Pollutant Removal Capacity

As discussed earlier, maintenance of storm water facilities is expected to have both positive and negative impacts with respect to water quality. Thus, the impact of maintenance within a specific facility would be a function of the relationship of the negative and positive aspects associated with that facility. When the negative effects outweigh the positive effects, with respect to a water pollutant that is over and/or within 25 percent of the relevant water quality objective, the maintenance activity would have a significant impact on water quality. When the positive effects outweigh or are equal to the negative effects on such pollutants, the maintenance activity would not result in a significant water quality impact.

In order to estimate the impact of maintenance upon water quality, Weston developed a methodology to assess the net impact. This methodology is described in Appendix A of Appendix F of this EIR and summarized below.

Methodology

The methodology for determining impacts and benefits related to storm water facility maintenance is depicted in Figure 4.8-2. The basic procedure for weighing benefits versus impacts involves a comparison on the average annual pollutant load removal capacity of the storm water facility in the pre- and post-maintenance condition over the anticipated period between maintenance activities (normally 3-5 years). The benefit side of the equation would include the amount of pollutants removed in the form of sediment and plant material removed in the course of maintenance. However, this benefit would only be included in the calculations if the expected flow rates would be anticipated to potentially re-suspend sediments and/or plant material containing pollutants and transport them downstream. As stated earlier, flow velocities in excess of 5 cfs are generally considered likely to re-suspend sediment and plant material.

The methodology is based on assessing the ability of the primary features of storm water facilities that have a water quality function. As discussed earlier, these features are related to surface flow, vegetation and sediment characteristics. Due to the minimal amount of published information regarding the ability of natural drainages to remove pollutants, Weston used published information on engineered wetlands and applied conversion factors to mimic natural systems. As discussed in Appendix F, the primary source of engineered wetland literature is associated with wastewater treatment.

The ability of a storm water facility to remove pollutants in surface water would be based on the following three characteristics: vegetation, sediment and surface flow. These characteristics are described in Tables 4.8-3, 4.8-4 and 4.8-5, respectively. Each of these factors would be assigned a score of 0 to 3; zero would be applied to nominal category described in these tables while a

score of 3 would be assigned to the high category. Thus, channels covered by dense wetland vegetation would be rated highest while concrete channels would be rated lowest. With respect to sediments, those consisting primarily of fines and organic carbon, very little sand with high solids deposition and neutral pH would be rated highest because they have the greatest potential to adsorb pollutants; concrete channels would be rated lowest. With respect to surface water, storm water facilities where the water depth is between one to two feet where velocities are non-scouring would be rated highest for capacity to remove pollutants while facilities exhibiting no surface water would be rated lowest.

The total pollutant removal score for a storm water facility would be derived by adding the ratings from all three factors. An overall score of 0 to 2 would be considered a poor. Scores between 3 and 4 would be considered fair. Scores of between 5 and 7 would be considered fair. Scores of 8-9 would be considered optimum recovery conditions.

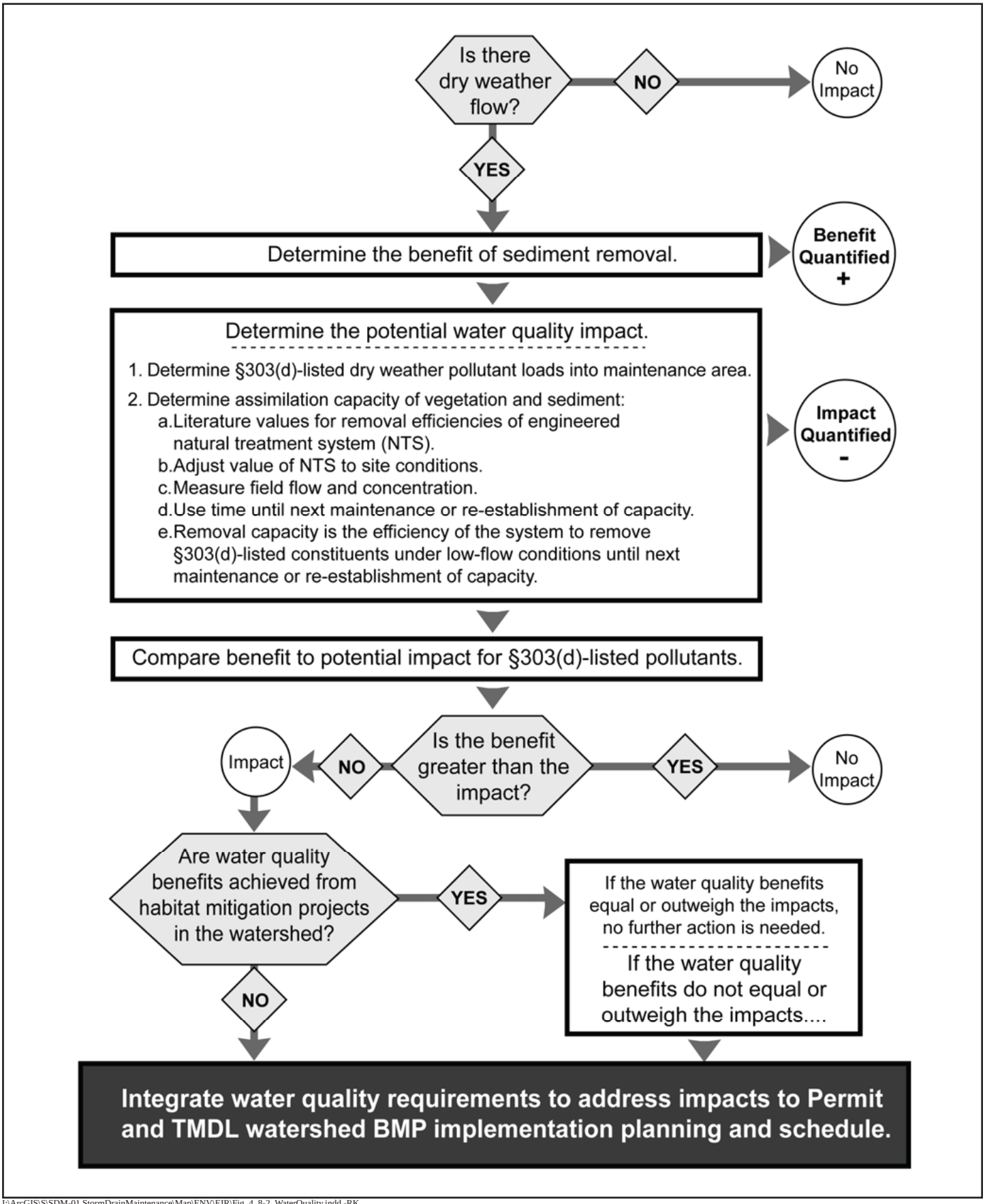
The ability of storm water facilities to recover to their pre-maintenance condition would also be taken into account because the impact/benefit methodology is calculated over the maintenance intervals. Thus, storm water facilities which recover favorable pollutant retention characteristics most quickly would experience less impact than those where vegetation and sediment may be slow to become re-established. As with the impact analysis, the focus of the evaluation regarding recovery potential would be based on vegetation, sediment and surface water characteristics. As with the impact analysis, each factor would be assigned a score of 0 to 3. The highest score would be assigned when the vegetation is expected to recover within one year. The lowest score for sediment would be given when sufficient re-deposition of sediment is expected to occur within one year of maintenance. With respect to surface flow recovery, the highest score would be assigned to facilities where the depth of water would return to levels greater than one-foot within one year.

As with the pollutant removal capacity, the total recovery score for a maintained storm water facility would be derived by adding the ratings from all three factors. An overall score of 0 to 2 would be considered a poor. Scores between 3 and 4 would be considered fair. Scores of between 5 and 7 would be considered fair. Scores of 8-9 would be considered optimum recovery conditions.

If the comparison of benefits versus impacts indicates that the impact on a water pollutant from the proposed maintenance would exceed the benefits with respect to a specific pollutant, maintenance would be determined to have a significant impact with respect to pollutant if the existing level for that pollutant exceeds or is within 25 percent of the standard established by the San Diego Basin Plan.

Case Studies

In order to illustrate the methodology described above and the general effect on water pollutant removal capacity of storm water facilities, Weston used the methodology on a segment of Chollas Creek (Map No. 93) and Alvarado Creek (Map No. 64). These two segments were selected because they were required to undergo emergency maintenance. Thus, the two



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Water Quality Impact Methodology

CITY OF SAN DIEGO MASTER STORM WATER SYSTEM MAINTENANCE PROGRAM

Figure 4.8-2

segments afforded and opportunity to apply the methodology to a "real life" situation. The results of these two case studies are presented in detail in Appendix F and summarized below.

As indicated earlier, the work began with an estimation of the capacity of each of these two segments to remove pollutants based on vegetation, sediment and surface flow characteristics. In addition, the work estimated the capacity of the storm water systems after maintenance to remove pollutants over the anticipated interval between maintenance events. The results of this evaluation process are presented in Tables 4.8-6 and 4.8-7.

Alvarado Creek

As illustrated in Table 4.8-6, the following pollutants are identified as exceeding the Basin Plan standard in the watershed: total nitrogen, total phosphorus, manganese and selenium. A comparison of the removal capacity of Alvarado Creek with that of Chollas Creek also reveals that this segment of Alvarado Creek is quite effective in removing nitrogen and phosphorus due to the large amount of the freshwater marsh occurring within the channel.

Using total nitrogen as an example, maintenance would substantially reduce the ability of this segment of Alvarado Creek to remove this pollutant by approximately 83 percent the first year after maintenance, and then by 66 percent and 50 percent for the second and third year, respectively. Similarly, the removal capacity for pollutants which exceed the Basin Plan standard was similarly reduced by more than 80 percent during the first year.
On the basis of the calculations performed by Weston, which included the amount of pollutants removed with the sediment during maintenance, it was concluded that the maintenance in this channel would not have a significant impact on the capacity of this segment to remove all of the pollutants which already exceed the established Basin Plan standards. Although maintenance also reduced the capacity of the segment to remove other pollutants, the impact is not considered significant because these pollutants are not within 25 percent of the Basin Plan standard.

Chollas Creek

As illustrated in Table 4.8-7, the following pollutants are identified as exceeding the Basin standard in the watershed: total nitrogen, total phosphorus, diazinon, total copper, total lead, total manganese and total zinc. A comparison with Table 4.8-6 also reveals that this segment is not as effective in removing pollutants as Alvarado Creek. This reduced capacity is related to the fact that the cobble bottom is not as effective in capturing pollutants and the freshwater marsh is not as well developed.

As with the segment in Alvarado Creek, a review of Table 4.8-7 indicates that the removal capacity for pollutants which exceed the Basin Plan standard is generally reduced by more than 80 percent during the first year.

On the basis of the calculations performed by Weston, which included the amount of pollutants removed with the sediment during maintenance, it was concluded that the maintenance in this channel would not have a significant impact on the capacity of this segment to remove all of the pollutants which already exceed the established Basin standards. Although maintenance also

reduced the capacity of the segment to remove other pollutants, the impact is not considered significant because these pollutants are not within 25 percent of the Basin Plan standard.

In general, the evaluation shows that the ability of natural drainages to remove water pollutants is diminished by maintenance. As would be expected, the reduction is greatest during the initial years after maintenance, and improves over time as vegetation re-establishes. However, after 3-5 years, when maintenance may be required again, the removal capacity may not have returned to the pre-maintenance condition. Thus, continued maintenance is anticipated to diminish the ability of natural drainages to remove pollutants.

Depending on the nature of the vegetation, surface flow and sediment character similar impacts could occur in other segments as a result of maintenance. The actual degree of impact would be determined during IWQAs that are required to be conducted by the Master Program. These assessments would employ the methodology discussed earlier to determine the degree of impact and the amount and nature of mitigation measures to offset significant water quality impacts associated with maintenance.

Table 4.8-6
EFFECT OF MAINTENANCE ON WATER POLLUTANT REMOVAL BEFORE AND AFTER MAINTENANCE ON ALVARDO CREEK (MAP NO. 64)

	Basin Standard	Measured Concentration	Estimated Annual Load Removal Capacity Over Three-year Period (pounds)				Net Change in Treatment Capacity over 3 year Period	Significant Impact?
			Without Maintenance	With Maintenance				
			Total Treatment Capacity of Vegetation and Sediment	Treatment Capacity of Vegetation and Sediment	Pollutants Removed with Excavated Sediment[1]	Total Treatment Capacity		
Nitrate as N	10 mg/L	1.04 mg/L	846	516.8	37.2	554	-292	No
Nitrite as N	1 mg/L	0.010 mg/L	8.1	4.94	0.46	5.4	-2.7	No
Total Kjeidahl Nitrogen	n/a	1.10mg/L	193.7	118	5,929	6,047	5,853.3	No
Total N	1 mg/L	2.15 mg/L	1,048	640.5	5,966.2	6,606.7	5,558.7	No
Total Phosphorus	0.10 mg/L	0.93 mg/L	576	352	1,234	1,586	1010	No
Total Suspended Solids	58 mg/L	9.0 mg/L	8,525	5,210	190,932	196,142	187,617	No
Chlorpyrifos		ND	n/a	0	0	0	0	No
Diazinon	0.05 µ/L	0.02g/L	0.0121	0.0074	0	0.0074	-0.0047	No
Malathion		ND	n/a	0	0	0	0	No
Total Antimony	0.006 mg/L	0.0005 mg/L	0.4	0.23	3.40	3.63	3.23	No
Arsenic	0.05 mg/L	0.0060 mg/L	4.6	2	25	27	22.4	No
Total Cadmium	0.005 mg/L	0.1080 mg/L	82.6	50.49	1.40	51.89	-30.71	No

Table 4.8-6 (cont.)
EFFECT OF MAINTENANCE ON WATER POLLUTANT REMOVAL BEFORE AND AFTER MAINTENANCE ON ALVARDO CREEK (MAP NO. 64)

	Basin Standard	Measured Concentration	Estimated Annual Load Removal Capacity Over Three-year Period (pounds)				Net Change in Treatment Capacity over 3 year Period	Significant Impact?
			Without Maintenance	With Maintenance				
			Total Treatment Capacity of Vegetation and Sediment	Treatment Capacity of Vegetation and Sediment	Pollutants Removed with Excavated Sediment[1]	Total Treatment Capacity		
Total Chromium	0.05 mg/L	ND	n/a	0.5	34	34.5	34.5	No
Total Copper	1 mg/L	0.0040 mg/L	1.9	1	104	105	103.1	No
Total Lead	0.15 mg/L	0.0009 mg/L	0.7	0.2	74	74.2	73.5	No
Total Manganese	0.05mg/L	0.0363 mg/L	27.8	17	1,591	1,608	1,580.2	No
Total Nickel	0.1 mg/L	1.0010 mg/L	0.8	1	23	24	23.2	No
Total Selenium	0.005 mg/L	0.0020 mg/L	1.5	0.93	1.54	2.47	-97	No
Total Zinc	5 mg/L	0.0110 mg/L	7.1	4	706	710	702.9	No

Indicates that constituent exceeds or is within 25 percent of the Basin standard in watershed.
[1] Based on the removal of 1,200 cubic yards of sediment during maintenance.

Table 4.8-7
EFFECT OF MAINTENANCE ON WATER POLLUTANT REMOVAL BEFORE AND AFTER MAINTENANCE ON CHOLLAS CREEK (MAP NO. 93)

	Basin Standard	Measured Concentration	Estimated Annual Load Removal Capacity Over Five-year Period (pounds/year)				Net Change in Treatment Capacity over 5 year Period	Significant Impact?
			Without Maintenance	With Maintenance				
			Total Treatment Capacity of Vegetation and Sediment	Treatment Capacity of Vegetation and Sediment	Pollutants Removed with Excavated Sediment	Total Treatment Capacity		
Nitrate as N	10 mg/L	0.49 mg/L	456	257.81	1.19	259	-197	No
Nitrite as N	1 mg/L	.040 mg/L	37.2	21.12	0.48	21.6	-15.6	No
Total Kjeidahl Nitrogen	n/a	1.70 mg/L	342.1	194	455	649	112.9	No
Total N	1 mg/L	2.23 mg/L	835	473.2	456.5	929.7	94.7	No
Total Phosphorus	0.1 mg/L	0.43 mg/L	304.4	173	236	409	104.6	No
Total Suspended Solids	58 mg/L	14 mg/L	15,157	8,588	270,745	279,333	264,176	No
Chlorpyrifos		0.0046 µ/L	0.003	0.002	0	0.002	-0.001	No
Diazinon	0.045 µ/L	0.0047 µ/L	0.003	0.002	0	0.002	-0.001	No
Malathion		0.0048 µ/L	0.003	0.002	0	0.002	-0.001	No
Total Antimony	0.006 mg/L	0.0020 mg/L	1.75	0.99	0.57	1.56	-0.19	No
Arsenic	0.05 mg/L	0.0020 mg/L	1.75	0.99	5.71	6.70	4.95	No

Table 4.8-7 (cont.)
EFFECT OF MAINTENANCE ON WATER POLLUTANT REMOVAL BEFORE AND AFTER MAINTENANCE ON CHOLLAS CREEK (MAP NO. 93)

	Basin Standard	Measured Concentration	Estimated Annual Load Removal Capacity Over Five-year Period (pounds/year)				Net Change in Treatment Capacity over 5 year Period	Significant Impact?
			Without Maintenance	With Maintenance				
			Total Treatment Capacity of Vegetation and Sediment	Treatment Capacity of Vegetation and Sediment	Pollutants Removed with Excavated Sediment	Total Treatment Capacity		
Total Cadmium	.005 mg/L	0.0620 mg/L	54.2	30.72	0.41	31.13	23.1	No
Total Chromium	.05 mg/l	ND	n/a	0	23	23	23	No
Total Copper	1 mg/L	0.0090 mg/L	4.9	3	33	36	31.1	No
Total Lead	0.154 mg/L	0.0009 mg/L	0.8	1	27	28	27.2	No
Total Manganese	0.05 mg/L	n/s	n/s	0	231	231	231	No
Total Nickel	0.1 mg/L	0.0050 mg/L	4.4	2.48	9.15	11.63	7.23	No
Total Selenium	.005 mg/L	0.0008 mg/L	0.7	0.39	0.30	0.69	-0.01	No
Total Zinc	5 mg/L	0.0310 mg/L	23	13	189	202	179	No

Indicates that constituent exceeds or is within 25 percent of the Basin standard in watershed.

[1] Based on the removal of 1,100 cubic yards of sediment during maintenance.

Significance of Impact

The removal of vegetation and sediment as a result of maintenance may decrease the capacity of the storm water facilities to retain pollutants. The impact of maintenance depends on a number of key factors. As discussed earlier, facilities which exhibit the following characteristics have the highest value for pollutant removal: (1) dense coverage of freshwater marsh vegetation, (2) high levels of fines (clay particles) and organic material in the substrate, and (3) moderate water depth and slow flow rates.

Removal of vegetation as a result of maintenance may result in a significant impact on the capacity of natural drainage systems to adsorb and retain pollutants within the water column potentially allowing greater quantities of pollutants to reach impaired water bodies downstream of these facilities. Although removal of contaminated sediment would, in some cases, result in an overall benefit to the overall water quality within a specific watershed; in most cases, maintenance would be expected to have an overall negative impact with respect to pollutants which already are approaching or exceed standards established for the Basin Plan and are readily absorbed by plants that are present in the stormwater system. Whenever the negative impacts of maintenance outweigh the positive effects, based on the methodology identified earlier, the impact of maintenance with respect to water quality would be significant. However, with incorporation of the relevant mitigation and BMP measures identified below, impacts to water quality would be reduced to less than significant levels.

Mitigation Measures, Monitoring and Reporting

Mitigation for water quality impacts would be achieved through a variety of techniques which would range for watershed-wide measures to localized measures. Watershed-wide mitigation would be achieved through implementation of the City's Integrated Water Quality Plan. Watershed-wide mitigation would also be achieved as a result of enhanced water pollutant capture resulting from the enhancement, restoration and/or creation of wetland habitat required to offset biological impacts. Localized mitigation could be achieved by implementing short-term measures until the storm water facility's pollutant retention capability have re-established. Localized methods include street sweeping, catch basins, dry detention basins, check dams to increase retention time, and filtration devices for suspended solids.

The following table identifies mitigation measures which are available to offset losses in pollutant removal capacity resulting from maintenance. The final selection and design of mitigation measures will depend on the unique characteristics associated with each maintenance activity In order to estimate the appropriate mitigation, the following general process would be followed: (1) the type(s) of mitigation measures and/or BMPs available would be identified, (2) the approximate tributary watershed that each mitigation measure and BMP can treat would be estimated, (3) the average annual pollutant load removal for each mitigation measure and BMP would be estimated, and (4)the total number of mitigation measures and/or BMPs required to remove the pollutant loads required to offset an impact would be estimated. Completion of the IWQA and the IHHA will serve to define the appropriate mitigation strategy for individual maintenance activities. With implementation of the specified mitigation, protocols and/or BMPs, maintenance impacts to water quality would be reduced to below a level of significance.

***Mitigation Measure 4.8.1*:** Prior to commencement of any activity within a specific annual maintenance program, a qualified water quality specialist shall prepare an IWQA for each area proposed to be maintained. The IWQA shall be prepared in accordance with the specifications included in the Master Program. If the IWQA indicates that maintenance would impact a water pollutant where the existing level for that pollutant exceeds, or is within 25 percent of, the standard established by the San Diego Basin Plan, mitigation measures identified in Table 4.8-8 shall be incorporated into the IMP to reduce the impact to within the established standard for that pollutant.

Table 4.8-8
MITIGATION MEASURES FOR REDUCED POLLUTANT REMOVAL CAPACITY

Mitigation Measure	Pollutant Type						
	Bacteria	**Metals**	**Nutrients**	**Pesticides**	**Sediment**	**TDS/ Chloride Sulfates**	**Trash**
Remove kelp on beaches					●	●	
Sweep streets	●	●	●	●	●	●	●
Retrofit residential landscaping to reduce runoff	●	●	●		●		
Install artificial turf	●	●	●	●	●		●
Install inlet devices on storm drains		●	●		●		
Replace impermeable surfaces with permeable surfaces		●	●		●		●
Install modular storm water filtration systems		●	●	●	●	●	●
Install storm water retention basins		●	●	●	●	●	●
Install catch basin media filters		●	●		●	●	●
Create vegetated swales	●	●	●	●	●	●	●
Restore wetlands	●	●	●	●	●	●	●
Install check dams		●			●		●

Mitigation Measure 4.8.2: No maintenance activities within a proposed annual maintenance program shall be initiated before the City's ADD Environmental Designee and state and federal agencies with jurisdiction over maintenance activities have approved the IMPs and IWQAs including proposed mitigation and BMPs for each of the proposed activities. In their review, the ADD Environmental Designee and agencies shall also confirm that the appropriate maintenance protocols have been incorporated into each IMP.

Mitigation Measure 4.8.3: Prior to commencing any activity where the IWQA indicates significant water quality impacts may occur, a pre-maintenance meeting shall be held on site with following in attendance: City's SWD, MM, MMC, and MC. A qualified water quality specialist shall also be present. At this meeting, the water quality specialist shall identify and discuss mitigation measures, protocols and BMPs identified in the IWQA that must be carried out during maintenance. After the meeting, the water quality specialist shall provide DSD with a letter indicating that the applicable mitigation measures, protocols and BMPs identified in the IWQA have been appropriately implemented.

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CHAPTER 5.0

GROWTH INDUCEMENT

CHAPTER 5.0 – GROWTH INDUCEMENT

The purpose of this section is to discuss the ways in which the proposed Master Program could foster economic or population growth, or construction of additional housing. A project's growth inducing effects are generally considered indirect impacts because they do not directly result from the completion of a project, or a series of projects under a program; rather, they could result from its existence.

The proposed Master Program would not have the potential to induce growth. The maintenance program would maintain storm water facilities that already exist within the City. No new facilities would be created. The proposed removal of vegetation and sediment from storm water facilities would restore rather than increase their capacity to carry floodwaters. As such, no growth inducing impacts, direct or indirect, are anticipated to occur as a result of the implementation of the proposed project.

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CHAPTER 6.0

CUMULATIVE IMPACTS

CHAPTER 6.0 – CUMULATIVE IMPACTS

This section addresses the potential for impacts from the proposed Master Program to combine with impacts from future development within the study area, and result in cumulative impacts to the environment. Section 15355 of the State CEQA Guidelines defines "cumulative impacts" as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of a project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Section 15130(b) of the State CEQA Guidelines indicates that the discussion of cumulative impacts needs to include either of the following elements:

(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or

(B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.

The cumulative impacts discussion is based on the adopted Final PEIR for the City General Plan (2008) that evaluated region-wide conditions pertaining to cumulative impacts. In accordance with Section 15130(b)(1)(B), the General Plan Final PEIR's analysis of the cumulative effects relied on the regional growth projections provided by the San Diego Association of Governments' (SANDAG) *2030 Regional Growth Forecast Update* (Regional Growth Forecast). The Regional Growth Forecast provides estimates and forecasts of employment, population, and housing for the period between 2004 and 2030. The Regional Growth Forecast and Final PEIR for the General Plan are available for review at the City Planning and Community Investment Department.

According to the 2030 forecast, the population of the City is projected to increase by 361,110 persons or approximately 28 percent between 2004 and 2030 to approximately 1,656,257 persons (Table 6-1). The population of San Diego County (i.e., the unincorporated areas of the County and all of the incorporated cities) is projected to increase by 971,739 persons or approximately 32 percent between 2004 and 2030 to 3,984,753 persons. The number of housing units is projected to increase by approximately 24 percent within the City and 26 percent within the County during the 2004-2030 period.

In the time that has passed since the General Plan Update EIR was certified in 2008, the City of San Diego has approved 19 amendments to the various Community Plans which implement the City's General Plan (See Table 6-2). Although these amendments occurred after the General

Plan Update PEIR was certified, they do not substantially affect the basis upon which the cumulative analysis was based. The primary reason for this conclusion is the fact that none of the amendments identified in Table 6-2 require an amendment to the General Plan. This is indicative of the fact that the land uses associated with the Community Plan amendments are consistent with the land use designations established by the General Plan Update. Thus, approval of these amendments would not change the land use assumptions upon which the housing and population forecasts for 2030 were based and upon which the cumulative analysis in the General Plan Update PEIR relied.

Furthermore, the cumulative impacts associated with the proposed Master Program are not sensitive to changes which are associated with the Community Plan amendments. Impacts related to the proposed Master Program are primarily related to physical changes and the related impacts on biological and historical resources. Impacts of future development on biological and historical resources are a function of the physical area of disturbance rather than the nature of development. For example, the impacts to biological and historical resources would be essentially the same whether the resource is impacted by a residential or commercial development. Similarly, changing the density of residential development would not change the disturbance footprint.

Table 6-1
PROJECTIONS FOR THE CITY AND SAN DIEGO COUNTY (2004 AND 2030)

Jurisdiction	Total Population		Total Housing Units	
	2004	2030	2004	2030
City of San Diego	1,295,147	1,656,257	420,266	610,249
San Diego County	3,013,014	3,984,753	1,095,077	1,383,803

Source: SANDAG 2030 Regional Growth Forecast Update, September 2006

Table 6-2
COMMUNITY PLAN AMENDMENTS APPROVED AFTER CERTIFICATION OF THE GENERAL PLAN UPDATE PEIR

Project Name	Community Plan Area	Description	Council Approval Date
Scripps Mercy Hospital	Uptown	Redesignate 2.19 acres from Open Space to Institutional (Hospital), 0.40 from High Residential (44-74 du/ac) to Open Space and 0.04 acres from Institutional (Hospital) to Open Space.	5/20/08

Table 6-2 (cont.)
COMMUNITY PLAN AMENDMENTS APPROVED AFTER CERTIFICATION OF THE GENERAL PLAN UPDATE PEIR

Project Name	Community Plan Area	Description	Council Approval Date
Linda Vista/ Clairemont Mesa Open Space	Linda Vista and Clairemont Mesa	Boundary adjustment to shift 6.64 acres from Clairemont Mesa to Linda Vista Community Plan, and redesignate property from School/Open Space to Open Space. Shift 0.93 acres in Linda Vista to Clairemont Mesa and redesignate from Open Space to School.	5/30/08
University Town Center	University City	Change development intensity from 1,061,000 sf of Regional Commercial to 1,811,409 sf of Regional Commercial and 250 multi-family dwelling units.	7/29/08
Torrey Hills Unit 19, Lots 1-4	Torrey Hills	Redesignate 13.26 acres from Industrial to Medium Density Residential (30-44 du/ac) and transfer 950 ADTs from TAZ 931 to TAZ 937.	9/16/08
Point Loma Townhomes	Peninsula	Redesignate 1.65 acres from Industrial (Fishing-Marine Related) to Commercial[1]	10/7/08
Quarry Falls	Mission Valley	Specific Plan for 230-acre mixed use development including 4,780 residential dus, 480,000 sf of commercial retail, 420,000 sf of commercial office, 17.5 acres of parks, open space, trails and an optional school site.	10/21/08
Archstone	Navajo	Removal of mobile home overlay on 10.2 acres and retention of Medium High density residential.	11/18/08
Palladium	Kearny Mesa	Redesignate 7.5 acres from Industrial Business Park to High Density Residential (44-74 du/ac).	11/18/08

Table 6-2 (cont.)
COMMUNITY PLAN AMENDMENTS APPROVED AFTER CERTIFICATION OF THE GENERAL PLAN UPDATE PEIR

Project Name	Community Plan Area	Description	Council Approval Date
SEDC 5th Amendment	Southeastern SD/Skyline PH	Redesignate Imperial Avenue corridor to allow mixed use development and increase the maximum allowable residential density from 30 to 74 du/ac, increase residential capacity by 1,766 dus, reduce industrial acreage by 8.3 acres, and reduce commercial acreage by 6 acres. Redesignate portions of Skyline-Paradise Hills CP to increase residential units by 90 units and reduce commercial acreage by 1.2 acres.	4/28/09
Black Mountain Ranch Subarea Plan Amendment	Black Mountain Ranch	Reconfigure street patterns, adjust land use in northern village, convert golf course to Open Space, and allow Senior Housing on Hotel site.	5/19/09
Alvarado Apartments	College Area	Redesignate 9.99 acres from Institutional (Hospital and Related Medical Offices) to High Residential Density (45-75 du/ac).	7/28/09
Erma Road	Scripps Miramar Ranch	Redesignate 3.92 acres from Commercial (Professional Office) to High Medium Density Residential (15-29).	11/10/09
Aztec Court Apartments	College Area	Redesignate 0.19 acres from Low Medium Density Residential (10-15 du/ac) to High Residential Density (45-75 du/ac).	1/26/10
Community Wellness Campus	Rancho Penasquitos	Redesignate 4.45 acres from Religious Facilities to General Institutional – Healthcare Services.	2/23/10
Hazard Center	Mission Valley	Increase residential dwelling units from 145 to 618 and decrease commercial space from 205,510 sf to 185,000 sf.	5/18/10
Mission Brewery Mixed Use	Midway/PHC	Redesignate 3.12 acres from Commercial-Transportation to Multiple Use (up to 29 du/ac).	7/12/10
Vista Lane Villas	San Ysidro	Redesignate 2.88 acres from Low Density Residential (5-10 du/ac) to Low-Medium Residential Density (10-15 du/ac).	11/30/10

Table 6-2 (cont.)
COMMUNITY PLAN AMENDMENTS APPROVED AFTER CERTIFICATION OF THE GENERAL PLAN UPDATE PEIR

Project Name	Community Plan Area	Description	Council Approval Date
Blackshaw Lane Villas	San Ysidro	Redesignate 0.94 acres from Low Residential Density (5-10 du/ac) to Low-Medium Residential Density (10-15 du/ac).	11/30/10
Gables Carmel Valley[1]	Carmel Valley	Redesignate 3.17 acres from Open Space to Low Density Residential (15-29 du/ac).	3/29/11

[1] Pending City Council approval of California Coastal Commission modifications.
Source: CP&IP, May 2011

In addition, the cumulative analysis includes specific impacts that have resulted from emergency maintenance of storm water facilities in the past for which no mitigation has occurred, as identified in Table 6-3. Emergency maintenance conducted in 2010 is not included because mitigation for these maintenance activities is being addressed under a separate permitting process.

Table 6-3
IMPACTS FROM PAST EMERGENCY MAINTENANCE ACTIVITIES[1]

	Wetland Impact By Watershed (acres)				
Date of Activity	**San Diego**	**Tijuana**	**Pueblo**	**Peñasquitos**	**Total**
October-December 2004	0.99	0.0	0.01	0.0	1.00
January-March 2005	0.82	0.77	0.0	0.0	1.59
June 2005	0.0	0.0	0.0	0.12	0.12
October-November 2005	0.0	0.0	0.0	0.13	0.13
March 2006	0.0	0.0	0.0	0.0	0.0
Total	1.81	0.77	0.01	0.25	2.84

[1] Excludes emergency maintenance conducted in 2010 which included mitigation for wetland impacts, as required by permitting agencies.
Source: Daniel Lottermoser, 2008

Cumulative impacts are analyzed in light of the significance criteria presented in Chapter 4.0, Environmental Analysis, of this PEIR. Implementation of the mitigation measures identified in Chapter 4.0 would reduce the incremental contribution of the proposed maintenance activities to cumulative impacts to the maximum extent feasible.

6.1 AESTHETICS/NEIGHBORHOOD CHARACTER

General Plan PEIR

The General Plan PEIR concluded that future development within the City would result in a cumulative impact that may not be able to be reduced to below a level of significance. Although the General Plan includes policies designed to reduce the visual impacts of future development, the infill and redevelopment that would likely occur under the General Plan may result in significant project-level impacts associated with visual resources and neighborhood character. Project-level impacts related to substantial blocking of public views from designated open space areas or scenic highways, or to any significant visual landmarks or scenic vistas (e.g., mountains, bays, rivers, and ocean), substantial changes in topography, or to ground surface relief features, and negative and substantial alteration of the existing character of the plan area, would constitute significant and unavoidable cumulative visual impacts.

Master Program

As discussed in Subchapter 4.2, Aesthetics/Neighborhood Character, the Master Program would involve vegetation and debris removal and/or dredging, and possibly water diversion and dewatering. Well-developed vegetation associated with storm water facilities may represent an visual aesthetic resource as well as contribute to the character of the neighborhood. The initial removal of this vegetation by maintenance activities would contribute to the cumulatively significant aesthetic and neighborhood character impacts identified in the General Plan PEIR. Furthermore, subsequent vegetation removal would be necessary to accomplish the flood control goals for affected facilities. Thus, the proposed maintenance could result in a significant cumulative impact with respect to aesthetics/neighborhood character. Because vegetation removal would need to occur periodically in the future to maintain the flood control aspects of these facilities, the cumulative impact is considered cumulatively significant and unavoidable. This conclusion is consistent with the conclusion drawn in the City's General Plan PEIR relative to aesthetics and neighborhood character.

6.2 BIOLOGICAL RESOURCES

General Plan PEIR

The MSCP, MHCP, and the Multiple Habitat Conservation and Open Space Program collectively contribute to the conservation of vegetation communities and species in the City. As the City develops based on projected future population growth and housing units, however, biological resources not adequately protected by an adopted species or habitat conservation program or other regulations may be adversely affected. In addition, for some projects, it is possible that adherence to regulations protecting biological resources may not adequately avoid or reduce incremental impacts.

The City has a number of plans, policies, and regulations (e.g., MSCP and ESL) which require individual projects to mitigate for their impacts on biological resources. In accordance with these plans, policies, and regulations, mitigation also would be carried out to offset impacts

associated with the proposed maintenance of storm water facilities, as discussed in Subchapter 4.3, Biological Resources.

The degree of future impacts as well as the applicability, feasibility, and success of future mitigation measures cannot be adequately known for each specific future project at this program level of analysis. However, it is reasonable to assume that incremental biological resources impacts may occur which, when viewed in connection with regional impacts to unprotected species, habitats, and other resources, would represent a significant, unavoidable cumulative impact on biological resources.

Master Program

As discussed in Subchapter 4.3, the proposed project would result in the loss of wetland and upland habitat as well as associated sensitive plants and animals. In addition, as noted, impacts to wetlands have also occurred as a result of past maintenance activities conducted under emergency conditions. Although measures are proposed to mitigate for the impacts of past and future maintenance on these resources, as concluded in the General Plan PEIR, the proposed project would still contribute to the City-wide loss of biological resources anticipated by the General Plan PEIR. Thus, the cumulative impact to biological resources associated with the proposed project is considered cumulatively significant and unavoidable. This conclusion is consistent with the conclusion drawn in the City's General Plan PEIR relative to biological resources.

6.3 HISTORICAL RESOURCES

General Plan PEIR

Development that is expected to occur through the implementation of the General Plan could involve ground-disturbing activities and substantial alteration, relocation, or demolition of historic buildings, structures, objects, landscapes, and sites that would significantly impact historic and archaeological resources and/or prehistoric human remains. In general, however, implementation of General Plan policies and compliance with federal, state, and local regulations would preclude impacts to historic and archaeological resources and prehistoric human remains. Nonetheless, for some projects, it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts. Because the degree of future impacts and applicability, feasibility, and success of future mitigation measures cannot be adequately known for each specific future project at this program level of analysis, incremental impacts related to historic and archaeological resources and prehistoric human remains, when viewed in connection with historic resources impacts elsewhere in the City, are considered cumulatively significant and unavoidable.

Master Program

As discussed in Subchapter 4.4, Historical Resources, the proposed project could result in impacts to pre-historic resources located along or within natural drainage courses. Historic resources are not expected to occur within the storm water facilities. Although measures are

proposed to mitigate for the impacts to prehistoric resources encountered during maintenance, as concluded in the General Plan PEIR, the degree to which these measures would be able to reduce cultural resource impacts is unknown. Thus, the cumulative impact to cultural resources associated with the proposed project is considered cumulatively significant and unavoidable. This conclusion is consistent with the conclusion drawn in the City's General Plan PEIR relative to cultural resources.

6.4 HYDROLOGY

General Plan PEIR

Future development associated with projected population growth in the City would result in increased impervious surfaces within the City's watersheds, which would result in hydrologic impacts associated with absorption rates, drainage patterns, or rates of surface runoff. The introduction of new or expanded impermeable surface areas, such as paved highways, streets, rooftops, and parking lots, can potentially affect absorption rates, drainage patterns, and/or the rate of surface runoff. In general, implementation of General Plan policies and compliance with federal, state, and local regulations would mitigate hydrological impacts. However, some instances are anticipated where project-specific mitigation measures may not be sufficient to reduce a project's impact to below a level of significance. Thus, the General Plan PEIR concluded that cumulative hydrology impacts would be significant and unavoidable.

Master Program

Overall, the proposed project would not change the existing drainage patterns or substantially increase impermeable surface area. While maintenance would remove obstructions which are constricting the ability of drainage facilities to transport floodwaters through existing drainages, it would not change drainage patterns. Modification of the underlying drainage configuration would not be allowed under the proposed Master Program.

As a result of the absence of change in drainage patterns and storm water runoff volume, unlike implementation of the City's General Plan, implementation of the Master Program would not result in a significant cumulative hydrology impact.

6.5 LAND USE

General Plan PEIR

The General Plan PEIR concluded that cumulative development within the City would not lead to combined physical environmental effects associated with land use impacts that result in a greater cumulative impact than would occur for each specific location of a potential land use impact, with the potential exception of impacts related to land use incompatibilities. Protective measures within adopted regional, state, and federal environmental plans, including applicable habitat conservation plans and compliance with the mandatory policies and regulations of state or federal agencies were found to ensure that physical changes to the environment associated with the incremental effect of the General Plan on adopted regional, state, and federal

environmental plans, policies and regulations would not be cumulatively significant when viewed in connection with physical changes to the environment associated future regional development in surrounding jurisdictions. A substantial portion of future development within both the City and elsewhere in the County, however, is likely to consist of infill and redevelopment, which typically involves increased exposure of sensitive receptors to incompatible land uses, such as restaurants, bars, and night clubs, industrial uses, traffic noise, and other adverse physical impacts.

The City's process for the evaluation of discretionary projects includes environmental review and documentation pursuant to CEQA, as well as analysis of those projects for consistency with the goals, policies, and recommendations of the General Plan. In general, implementation of General Plan policies and compliance with federal, state, and local regulations were determined to minimize adverse physical changes to the environment associated with land use impacts. For some projects, however, it was considered possible that adherence to regulations may not adequately avoid or reduce incremental impacts. Because the degree of future impacts and applicability, feasibility, and success of future mitigation measures could not be adequately known for each specific future project at this program level of analysis, incremental adverse physical changes to the environment associated with land use impacts, when viewed in connection with such adverse physical changes associated with land use impacts elsewhere in the City were considered cumulatively significant and unavoidable.

Master Program

Maintenance activities occurring in accordance with the Master Program would not result in significant cumulative land use impacts. Any land use compatibility issues (e.g. dust or noise) would be temporary and, generally, not last more than four weeks over a 3- to 5-year period. Once completed, the storm water facilities would not generate any activities which would conflict with surrounding land uses. In fact, improved flood control resulting from maintenance would reduce the underlying conflict between storm water facilities and adjacent development that occurs when these facilities are not adequately maintain and result in flooding of adjacent development. As a result of the absence of change in activities associated with the storm water facilities and reduced flooding resulting from maintenance, unlike implementation of the City's General Plan, implementation of the Master Program would not result in a significant cumulative land use impact.

Mitigation implemented as part of individual maintenance activities would include measures that assure conformance with the MSCP as well as ESL.

6.6 NOISE

General Plan PEIR

As the City develops in response to projected population growth, future residential, commercial, industrial, transportation, and public facilities projects would not only result in short-term construction-related noise impacts, but the operation of these projects would cumulatively increase ambient noise levels in the City. The City has existing ordinances that dictate periods

of construction to avoid significant impacts. Cumulative noise impacts would generally be associated with improvements to major regional transportation corridors and stationary sources such as industrial land uses. Sensitive receptors within the noise impact zone of major transportation corridors and significant stationary sources of noise could be exposed to noise levels in excess of applicable standards as a result.

Improvements to major regional transportation corridors that are anticipated to occur during implementation of the General Plan could increase the number of trucks and buses operating on regional freeways and arterials and the number of trains operating on regional rail lines, which would result in increased ambient noise levels along these transportation corridors. In addition, improvements in major transportation corridors could increase the number of trucks, buses, and trains within such corridors, which generate more noise per vehicle than automobiles. Furthermore, there is a high propensity for infill and redevelopment near existing and planned transit facilities under the General Plan, which could decrease vehicular congestion and allow vehicular traffic on freeways and major arterials to move faster, potentially increasing the noise produced by vehicular traffic in certain corridors.

The addition of new stationary sources that are anticipated to occur during implementation of the General Plan could, when viewed in connection with new stationary sources elsewhere in the City, cumulatively expose sensitive receptors to elevated ambient noise levels. Thus, the General Plan PEIR concluded that cumulative noise impacts would be significant and unavoidable.

Master Program

Cumulative noise impacts would occur if construction activities associated with nearby projects occur simultaneously with the proposed maintenance work included within the Master Program. During performance of maintenance tasks, the Master Program would contribute to cumulative noise impacts. Cumulative noise impacts would depend on the proximity of noise sensitive receptors to construction/maintenance projects in the area, as well as the timing of equipment use. As stated in Subchapter 4.6, Noise, mandatory compliance with the City's Noise Abatement and Control Ordinance would reduce maintenance noise impacts to less than significant levels. In light of the limitations imposed by the Noise Abatement and Control Ordinance and the unlikelihood of construction activities occurring around maintenance activities, implementation of the Master Program would not result in significant cumulative noise impacts.

6.7 PALEONTOLOGICAL RESOURCES

General Plan PEIR

As the City continues to develop in response to projected population growth, mass grading, underground parking areas, roadway construction and other activities associated with future development may result in the loss of unique paleontological resources or geologic formations with medium to high fossil bearing potential. In general, implementation of General Plan policies and compliance with federal, state, and local regulations would preclude incremental

paleontological resources impacts. For some projects, however, it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts.

Master Program

As discussed in Subchapter 4.7, Paleontological Resources, implementation of the proposed Master Program is considered to pose a low potential for impacts to paleontological resources. It is anticipated that maintenance activities would not penetrate areas which exhibit a moderate to high potential for significant fossil deposits. Excavation activities within storm water facilities would be limited to sediment removal and would not encroach into undisturbed geologic formations. However, impacts may still occur that would contribute to City-wide impacts. Thus, the project could have cumulatively significant impacts that would be unavoidable.

6.8 SOLID WASTE

General Plan PEIR

Implementation of the General Plan will result in new development and an associated increase in the amount of solid waste generated within the City. The City's landfills are facing storage deficiencies in the future and would require capacity improvements to serve the additional population anticipated with buildout under the City's General Plan. The majority of the solid waste materials generated by maintenance are anticipated to be transported to the Miramar Landfill for disposal. According to the CIWMB website, as of April 18, 2008, the Miramar Landfill had a remaining capacity of approximately 87.76 million cubic yards of solid waste. It is anticipated that the Miramar Landfill will reach its maximum capacity by the year 2017. Although the City has an ongoing effort to encourage recycling, there are no reliable plans to expand the landfill capacity available to the City. Thus, future development within the City is expected to result in a cumulatively significant impact with respect to solid waste disposal which would be unavoidable.

Master Program

Storm water maintenance activities are anticipated to generate the following three primary types of materials requiring disposal: dredge spoil, vegetation, and rubbish. Dredge spoil would be comprised of sediment removed from the storm water facilities. This sediment is predominantly composed of soil materials but also contains urban runoff pollutants such as automobile by-products, and pesticides and herbicides associated with landscape maintenance. Vegetation would consist of groundcover, shrubs, and trees removed from storm water facilities. This vegetation may range from minimal groundcover to dense riparian woodland. Large areas of a highly invasive plant, known as arundo, or giant reed, also are anticipated to be removed in the course of channel maintenance or wetland mitigation. Rubbish is expected to be comprised of a variety of discarded items, including shopping carts, car batteries, furniture and automobile tires.

The Master Program includes the following maintenance protocols to minimize the amount of material transported to landfills for disposal:

- Compostable green waste material shall be taken to an approved composting facility, if available;

- Soil, sand, and silt shall be screened to remove waste debris and, wherever possible, re-used as fill material, aggregate, or other raw material usage; and

- Waste tires shall be separated and transported to an appropriate disposal facility. If more than nine tires are in a vehicle or waste bin at any one time, they shall be transported under a completed Comprehensive Trip Log (CTL) to document that the tires were taken to an appropriate disposal facility.

The SWD will attempt to achieve the goal of Section 802 of City's WHITEBOOK. The WHITEBOOK establishes a goal to divert 90 percent of inert solid waste away from the City's landfills. Although the~~se~~ protocols identified above would be anticipated to divert substantial portions of inert material generated during maintenance away from landfills, several factors make it difficult to assure that the 90 percent goal will be achieved. Most importantly, ~~reduce the impact of maintenance on landfill capacity~~the giant reed, which is expected to comprise a large share of vegetation removed during maintenance, ~~one of the major components of the vegetation expected to be removed during maintenance (giant reed)~~ is not easily recycled due its high fibrous content. This, in combination with the uncertainty regarding the availability of suitable reuse sites for dredge material, results in the determination that the proposed maintenance activities would have a potentially significant impact on solid waste disposal. Furthermore, the City has limited control over the ability to recycle or reuse waste generated by storm water maintenance. Because the degree of future impacts and applicability, feasibility, and success of future mitigation measures cannot be adequately known for each specific future project at this program level of analysis, incremental impacts associated with solid waste, when viewed in connection with the increased regional demand for landfill capacity, are considered cumulatively significant and unavoidable.

6.9 WATER QUALITY

General Plan PEIR

Future development under the General Plan could generate pollution that adversely affects water quality. As discussed in Subsection 4.8, Water Quality, a number of pollutant sources are associated with urban areas including both point and non-point sources. Urban runoff typically includes pollutants such as total suspended solids, sediment, trash, pesticides, animal waste, heavy metals, bacteria and nutrients. These contaminants can adversely affect receiving and coastal waters, as well as associated plant and animal life, and human health and safety. As development occurs in accordance with the General Plan, potential sources of these urban pollutants will increase.

The City's process for the evaluation of discretionary projects includes environmental review and documentation pursuant to CEQA, as well as analysis of those projects for consistency with

the goals, policies and recommendations of the General Plan. In general, implementation of the above policies and compliance with federal, state, and local regulations would preclude incremental water quality impacts. However, the degree of future impacts and applicability, feasibility, and success of future mitigation measures cannot be adequately known for each specific future project at this program level of analysis. Therefore, the General Plan PEIR concluded that incremental water quality impacts would be considered cumulatively significant and unavoidable.

Master Program

As discussed in Subchapter 4.8, Water Quality, storm water facility maintenance is expected to have both positive and negative impacts on water quality. Negative impacts on water quality would be associated with erosion and sedimentation during and following excavation activities, diminished pollutant removal capacity, introduction of hazardous materials related to the operation of mechanized equipment use (e.g., fuels, etc.), trash generation related to maintenance operations/crews, and the dewatering of dredged material. On the other hand, maintenance may have a positive effect on water quality. Removal of polluted sediment and plant material during maintenance would have a positive impact by removing pollutants that have bonded to these sediments. The net effect of maintenance on water quality would be dependent on whether the loss of pollutant treatment capacity would be outweighed by the reduction in pollutants that would occur from excavation of polluted sediment and plant material.

In light of the fact that cumulatively, potentially unavoidable, significant impacts on water quality were identified in the General Plan PEIR, the Master Program could result in significant cumulative water quality impacts that may be unavoidable.

6.10 AIR QUALITY

General Plan PEIR

The San Diego Air Basin (SDAB) is currently designated as a nonattainment area with respect to state and federal standards for ozone, and state standards for PM_{10}, and $PM_{2.5}$. Future development associated with the projected population growth in the City would generate increased air pollutant emissions associated with construction activities, transportation, and stationary sources. Construction activities anticipated during the course of implementation of the General Plan could result in substantial emissions of PM_{10} and $PM_{2.5}$. In addition, the high propensity for infill and redevelopment activities to occur in accordance with the General Plan could increase the volume of traffic flow at some intersections, which could potentially increase the number of vehicles that are idling at roadways intersections releasing emissions and causing localized concentrations of carbon monoxide or CO hot spots that can harm sensitive receptors near the affected intersection. Since CO hot spots involve concentration of CO and would not increase the total amount of CO in the SDAB, CO hot spots would not have greater cumulative impacts when considered together.

The City's process for the evaluation of discretionary projects includes environmental review and documentation pursuant to CEQA, as well as analysis of those projects for consistency with

the goals, policies and recommendations of the General Plan. In general, implementation of the above policies and compliance with federal, state, and local regulations would preclude incremental air quality impacts. However, for some projects it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts. Thus, future development may result in significant, unavoidable cumulative impacts with respect to air quality.

Master Program

As discussed in Subchapter 8.2, Effects Found Not to be Significant, the proposed Master Program would generate nominal emissions for criteria pollutants but the levels would not exceed the thresholds for criteria pollutants. However, given the importance of air quality, the project would contribute to the cumulatively significant impacts identified in the General Plan PEIR. Thus, the proposed project would have significant cumulative impacts with respect to air quality which would be unavoidable.

6.11 GREENHOUSE GAS EMISSIONS

General Plan PEIR

Population growth anticipated to occur during implementation of the City's General Plan is expected to result in increased emissions of GHG emissions, largely due to increased vehicle miles traveled as well as increased energy consumption and waste generation. By generating increased GHG emissions that contribute to global warming, development that occurs in accordance with the General Plan would incrementally contribute to the adverse economic, public health, natural resources, and other environmental impacts projected to occur in California and throughout the world as a result of global warming.

The City's process for the evaluation of discretionary projects includes environmental review and documentation pursuant to CEQA, as well as analysis of those projects for consistency with the goals, policies and recommendations of the General Plan. In general, implementation of the above policies and compliance with federal, state, and local regulations would preclude incremental GHG emissions impacts. However, for some projects it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts. Thus, future development may result in significant, unavoidable cumulative impacts with respect to GHG emissions.

Master Program

As discussed in Subchapter 8.2, Effects Found Not to be Significant, the proposed Master Program would generate nominal GHG emissions which would not exceed the 900-ton screening threshold established by the City. However, given the magnitude of the issues related to GHG emissions, the project would contribute to the cumulatively significant impacts identified in the General Plan PEIR. Thus, the proposed project would have significant cumulative impacts with respect to GHG emissions which would be unavoidable.

CHAPTER 7.0

ALTERNATIVES

CHAPTER 7.0 - ALTERNATIVES

In accordance with Section 15126.6(a) of the State CEQA Guidelines, an EIR must describe "a range of reasonable alternatives to the project, or to the location of the project, which would reasonably attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project," as well as "evaluate the comparative merits of the alternatives." An EIR need not consider every conceivable alternative to the project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making.

As discussed in Chapter 3.0, Project Description, the primary objectives of the proposed project are as follows:

- Fulfill the mandate of Section 26.1 of the San Diego City Charter to provide essential public works and public health services by maintaining the storm water conveyance system for the purpose of reducing flood risk;
- Develop a comprehensive program that will govern the future maintenance of the City's storm water system in an efficient, economic, environmentally and aesthetically acceptable manner for the protection of property and life, in accordance with Council Policy 800-04;
- Ensure implementation of Best Management Practices (BMPs) and maintenance protocols during maintenance activities to avoid and/or minimize effects to environmental resources, and incorporate the analysis of the operational and pollution prevention benefits of each proposed project; and
- Create an integrated comprehensive review process for annual maintenance activities that will facilitate authorizations from local, state and federal regulatory agencies.

Based on the analysis contained in Chapter 4.0, Environmental Analysis, and Chapter 6.0, Cumulative Impacts, the project would result in potentially significant impacts related to aesthetics/neighborhood character (cumulative), air quality (cumulative), biological resources (direct, indirect and cumulative), GHG emissions (cumulative), historical resources (direct and cumulative), land use (direct), paleontological resources (direct and cumulative), solid waste disposal (cumulative) and water quality (direct and cumulative). The alternatives identified in this analysis are intended to reduce or avoid these impacts of the project.

Based on the requirement that alternatives meet most of the basic objectives of the proposed project and reduce significant impacts associated with the proposed project, this EIR analyzes the following alternatives which would reduce the need for regular maintenance of storm water facilities. These alternatives include:

- Raising the channel banks by constructing walls or berms along the top of the channels;
- Diverting storm water in pipes around constrained segments;
- Widening channels to accommodate vegetation; and/or
- Reducing off-site runoff generation through use of low impact development measures.

Alternative locations are not considered given the nature of the proposed project. Proposed maintenance activities must occur within the channel segments included in the Master Program in

order to achieve the primary goal of protecting life and property from flooding. Conducting maintenance activities in other locations would not achieve this goal and would result in continued flooding of adjacent property.

In addition, as mandated by CEQA, the following discussion addresses two forms of a No Project alternative. The first, identified as the "No Project: No Maintenance Alternative", assumes that no maintenance is performed within the storm water facilities. The second, referred to as the "No Project: Maintenance With Separate Permits Alternative", assumes that maintenance would be carried out but under separate permits rather than a single ~~master~~ permit.

Based on the analysis which follows, the No Project: No Maintenance Alternative is considered the environmentally preferred alternative because it would eliminate all impacts associated with the proposed project. The Reducing Off-site Runoff Alternative would be the next environmentally preferred alternative but it is considered infeasible, as discussed below.

7.1 NO PROJECT: No Maintenance

7.1.1 Description

Under the No Maintenance Alternative, the City would not conduct any maintenance activities within the storm water system. Vegetation would grow unchecked within the channels and sediment would not be removed.

7.1.2 Impact Analysis

Aesthetics/Neighborhood Character (Cumulative)

Under the No Maintenance Alternative, visual impacts associated with the maintenance of storm water facilities (i.e., clearing of vegetation) would not occur. Thus, no cumulative impacts to aesthetics/neighborhood character would occur.

Air Quality (Cumulative)

Under the No Maintenance Alternative, no emissions related to criteria pollutants would be generated. Thus, no cumulative air quality impacts would occur.

Biological Resources (Direct, Indirect and Cumulative)

Under the No Maintenance Alternative, sensitive biological resources including wetlands and rare and endangered plants and animals would not be impacted as the habitat within the storm water facilities would not be cleared. Thus, the No Maintenance Alternative would avoid the direct, indirect and cumulative impacts associated with the proposed project.

GHG Emissions (Cumulative)

Under the No Maintenance Alternative, no GHG emissions would be generated. Thus, no cumulative GHG emissions impacts would occur.

Historical Resources (Direct and Cumulative)

Because no maintenance activities would occur under this alternative, no direct or cumulative impacts to historical resources would occur, as opposed to the proposed Master Program, which could potentially cause significant impacts to such resources.

Land Use (Direct)

This alternative would be consistent with the goal of preserving natural drainage systems and would reflect the goals of the ESL Regulations to retain sensitive biological and cultural resources. However, it would conflict with Section 26.1 of the San Diego City Charter to provide essential public works and public health services by maintaining the storm water conveyance system for the purpose of reducing flood risk. It would also conflict with other goals of the General Plan and the applicable community plans and LCPs to protect life and property from flooding.

Equipment noise and dust impacts on adjacent development, associated with the proposed Master Program, would be avoided by the No Maintenance Alternative.

Paleontological Resources (Direct and Cumulative)

The potential for significant impacts to paleontological resources from implementation of the proposed Master Program would be avoided with the No Maintenance Alternative because no disturbance to geologic formations underlying the storm water facilities would be disturbed.

Solid Waste Disposal (Cumulative)

This alternative would eliminate the impact on solid waste disposal because it would eliminate waste material associated with maintenance activities (e.g., dredge spoil, vegetation, and rubbish). Thus, this alternative would not have a significant cumulative impact on solid waste disposal.

Water Quality (Direct and Cumulative)

Under the No Maintenance Alternative, potential impacts of the maintenance on water quality related to the loss of pollutant filtration by plants and sediment removed in the course of maintenance would be avoided. In addition, the potential for erosion and sedimentation resulting from the removal of vegetation would be avoided. In the long-term, the natural pollutant filtration value of the vegetation within the channels would be maintained under this alternative, as no vegetation would be removed. However, sediment buildup could cause runoff to circumvent native vegetation thereby reducing natural pollutant filtration and accumulating

adsorbed pollutants. In addition, the benefit associated with periodic removal of polluted sediment and plant material that would occur with maintenance would not occur with the No Maintenance Alternative.

Without storage or operation of equipment within storm water facilities, this alternative would avoid impacts related to the on-site use and (potentially) storage of hazardous materials such as vehicle fuels or lubricants. The accidental discharge of maintenance-related hazardous materials or trash into the storm water system during maintenance would also be eliminated.

7.1.3 Basis for Rejection

Although the No Maintenance Alternative would be the environmentally-preferred alternative because it would avoid significant environmental impacts related to the proposed project, the City rejected the alternative because it would not fulfill the basic objective to protect life and property from flooding, as mandated by the City Charter. The overgrowth within the storm water facilities that would occur from lack of regular maintenance would impede flood waters and cause flooding. On average, the City receives approximately 35 risk management claims related to flooding each year. The primary cause of flooding and damages to property cited in these claims are attributed to the lack of maintenance in facilities that have accumulated sediment, trash/debris, and vegetation. In addition, the City's costs associated with claims may remain constant or increase by precluding preventative maintenance of channels that would restore as-built or natural conveyance capacities. Overgrowth and sedimentation also may facilitate ponding of water within the channels and increase the risk of mosquito infestation and other vector problems. Additionally, accumulation of sediment may not only cause floodwaters to escape from the channels more frequently, prolonged flooding may cause the drainage patterns to change.

7.2 NO PROJECT: MAINTENANCE WITH SEPARATE PERMITS

7.2.1 Description

Section 15126.6(e)(3)(A) of the CEQA Guidelines requires that a no project alternative discuss what is reasonably expected to occur if the proposed project is not approved. If the proposed Master Program is not adopted, storm water facility maintenance would be expected to continue in the manner in which it has occurred in the past. Historically, the City has maintained storm water facilities in a much less systematic way than would occur with the proposed Master Program. The City generally conducted regular maintenance activities largely on an "as needed" basis based on a perceived need and/or citizen complaints. Unlike the Master Program's proposal to base maintenance requirements on the results of site-specific hydrology studies, the amount of maintenance conducted within individual segments was based primarily on the premise that all existing vegetation and accumulated sediment must be removed to achieve the desired capacity to convey floodwater. Also, no universal list of maintenance protocols would be followed by the City crews in the course of maintenance under separate permits.

For purposes of this analysis, the maintenance required to achieve the goal of reducing the risk to life and property from flooding is assumed to involve the same type and amount of maintenance as would occur with the proposed Master Program.

7.2.2 Impact Analysis

Aesthetics/Neighborhood Character (Cumulative)

Similar to the proposed Master Program, the removal of mature trees in the course of maintenance under the Maintenance With Separate Permits Alternative would combine with impacts from other development to result in significant cumulative aesthetic/neighborhood character impacts City-wide.

Air Quality (Cumulative)

The amount of criteria pollutants generated by this alternative would be comparable to the proposed project. Thus, as with the proposed project, this alternative would result in cumulatively significant impacts with respect to air quality.

Biological Resources (Direct, Indirect and Cumulative)

Under the Maintenance With Separate Permits Alternative, the amount of biological resources impacted by maintenance of the storm water facilities would be comparable to maintenance pursuant to the Master Program. Thus, as with the proposed Master Program, this alternative would result in significant direct, indirect and cumulative impacts to sensitive biological resources.

GHG Emissions (Cumulative)

The amount of GHG emissions generated by this alternative would be comparable to the proposed project. Thus, as with the proposed project, this alternative would result in cumulatively significant impacts with respect to GHG emissions.

Historical Resources (Direct and Cumulative)

The potential for impacts to historical resources associated with storm water maintenance with separate permits would be the same as the proposed Master Program. Maintenance of storm water facilities with separate permits would pose the same potential threat to buried resources as the proposed Master Program. Thus, direct and cumulative impacts on historical resources, as with the proposed project, would be potentially significant.

Land Use (Direct)

As with the proposed project, removal of vegetation under the Maintenance With Separate Permits Alternative would result in potentially significant land use policy impacts due to the potential conflicts with the City's ESL Regulations. As with the proposed project, significant land use policy impacts with respect to ESL Regulations could also arise from noise impacts to

nesting/breeding sensitive birds. Lastly, as with the proposed project, the potential also exists that maintenance could impact historical resources which are protected by ESL Regulations.

Paleontological Resources (Direct and Cumulative)

As with the proposed project, maintenance with separate permits has the potential to have significant direct and cumulative impacts on paleontological resources.

Solid Waste Disposal (Cumulative)

As with the proposed project, this alternative would produce sediment and vegetation material that would require disposal at a City landfill. Given the anticipated lack of landfill capacity in the future, maintenance with separate permits could pose the same potentially significant cumulative impact to landfills as the proposed project.

Water Quality (Direct and Cumulative)

The potential for significant direct and cumulative water quality impacts under the Maintenance With Separate Permits Alternative would be essentially the same as with the Master Program. As with the proposed project, removal of vegetation and sediment during maintenance would eliminate the pollutant sequestering value of these components of the storm water facilities which could increase downstream pollutant levels. In addition, the Maintenance With Separate Permits Alternative could also generate erosion and sedimentation which could potentially affect downstream waters and associated wildlife habitats.

Similar water quality impacts could occur from the use of mechanized equipment and storage of hazardous materials (i.e., vehicle fuels or lubricants) associated with maintenance. Similar to the proposed Master Program, the accidental discharge of maintenance-related hazardous materials or trash into the drainage system could potentially result in significant impacts to local and downstream receiving waters.

7.2.3 Basis for Rejection

The Maintenance With Separate Permits Alternative was rejected because it would not provide the comprehensive approach to maintenance which characterizes the proposed Master Program. The CDFG, RWQCB and Corps have all expressed concern about the way the City has conducted storm water maintenance in the past. Historically, the City has conducted maintenance under separate Streambed Alteration Agreements and Section 404 Permits. As a result, mitigation has been on a case by case basis. State and federal Resource Agencies have also objected to the fact that separate permits do not allow consideration of cumulative effects of maintenance activities or the creation of larger more viable mitigation areas.

7.3 RAISED BANK ALTERNATIVE

7.3.1 Description

Under this alternative, structures (e.g., walls or levees) would be constructed along the top of channels to allow them to contain vegetation without compromising their ability to convey flood waters. The structures would offset the effect of vegetation and sediment by allowing water elevations to increase without spilling out into adjacent developed areas. However, accumulation of sediment and vegetation could ultimately eliminate the increased flood capacity created by the structures. Channel-specific engineering would be undertaken to determine the additional "bank" height needed.

7.3.2 Impact Analysis

Aesthetics/Neighborhood Character (Cumulative)

Clearing of drainages, including mature trees located within storm water facilities, would not occur with the Raised Bank Alternative. As a result, the aesthetic value of associated with channel vegetation would be maintained. An impact that would occur under this alternative that would not occur with implementation of the proposed Master Program would be associated with adding structures along channels, which would preclude views into the channels. These impacts are considered potentially significant from both a direct and cumulative perspective.

Air Quality (Cumulative)

Under the Raised Bank Alternative, minimal emissions related to criteria pollutants would be generated. However, as with the proposed project, these emissions, in combination with other development, could result in a significant cumulative impact with respect to air quality.

Biological Resources (Direct, Indirect and Cumulative)

Under the Raised Bank Alternative, impacts to vegetation communities would be limited to the construction of walls or levees. This alternative would not include the clearing of vegetation from storm water facilities. The Raised Bank Alternative also would substantially reduce required impacts to jurisdictional habitat in comparison to the proposed Master Program. Dewatering and processing of dredge spoils would not be necessary under this alternative, as sediment within the storm water facilities would not be affected.

Because this alternative would not include the removal of any vegetation within the affected storm water facilities, impacts to wildlife habitat would be substantially reduced and limited to impacts associated with construction of walls and/or levees. However, these structures would have an adverse impact on wildlife by making it more difficult for upland wildlife to access the channels for water, food, and cover. Sensitive plant species within the storm water facilities would not be affected by implementation of this alternative.

Indirect noise impacts to nesting or breeding coastal California gnatcatchers, least Bell's vireo, and/or raptors could still occur under this alternative, as well as the proposed Master Program, if construction activities create noise in excess of 60 dB(A) L_{eq} in occupied habitat during the breeding seasons of these species. Increased downstream urban pollutant levels caused by the removal of vegetation associated with the proposed Master Program would not occur as vegetation would be retained with this alternative.

In summary, implementation of the Raised Bank Alternative would reduce but not avoid significant direct, indirect and cumulative biological impacts in comparison with the proposed Master Program.

GHG Emissions (Cumulative)

Under the Raised Bank Alternative, minimal GHG emissions would be generated. However, as with the proposed project, these emissions, in combination with other development, could result in a significant cumulative impact with respect to GHG emissions.

Historical Resources (Direct and Cumulative)

Impacts to historical resources could still potentially occur under this alternative as a result of construction of walls and/or levees. Impacts to such resources would be significant under both the proposed Master Program and this alternative. Direct and cumulative impacts would not be reduced by implementation of this alternative over the proposed Master Program but not to a level of insignificance.

Land Use (Direct)

Retention of the natural drainage courses through this alternative would promote retention of natural drainage courses and minimize impacts to biological resources. With the addition of walls or levees, the existing habitat could remain. However, the construction of walls and levees could impact historical resources located along the channels. Without mitigation, direct land use policy impacts related to ESL Regulations could be significant.

Under this alternative, the potential for temporary disturbance to adjacent residential uses associated with noise and dust would be slightly less than under the proposed Master Program because no clearing activities associated with drainage maintenance would occur. However, noise impacts would occur from the construction of walls and/or levees.

Paleontological Resources (Direct and Cumulative)

The potential for significant impacts to paleontological resources from implementation of this alternative, like the proposed Master Program, would be generally low, although significant impacts could occur depending on site-specific geologic conditions and proposed ground disturbance to construct the levees or walls.

Solid Waste Disposal (Cumulative)

This alternative would eliminate the impact on solid waste disposal because it would eliminate waste material associated with maintenance activities (e.g., dredge spoil, vegetation, and rubbish). Thus, this alternative would not have a significant, cumulative impact on solid waste disposal.

Water Quality (Direct and Cumulative)

Potentially significant erosion and sedimentation impacts would be associated with this alternative. As with the proposed project, initial construction of the levees and walls could generate erosion and sedimentation which could potentially affect downstream waters and associated wildlife habitats. In the long-term, the potential effects of maintenance on the ability of vegetation and sediments to sequester pollutants associated with the proposed Master Program would not occur with this alternative. However, the removal of polluted vegetation and plant material associated with the proposed Master Program would not occur.

Similar water quality impacts could potentially occur due to the use of mechanized equipment and storage of hazardous materials (i.e., vehicle fuels or lubricants). Similar to the proposed Master Program, the accidental discharge of construction-related hazardous materials or trash into the drainage system could potentially result in significant direct and cumulative impacts to local and downstream receiving waters.

7.3.3 Basis for Rejection

Although this alternative could potentially result in less impacts related to wetlands, water quality and solid waste disposal, the City rejected the alternative for factors related to wildlife habitat impacts, cost, visual quality, public safety and the temporary nature of the solution.

With respect to wildlife habitat, the structures along storm water facilities would have an adverse impact on wildlife by making it more difficult for upland wildlife to access the channels for water, food, and cover. Walling off the storm water facilities also would have an adverse visual impact. Drainage courses which support varying degrees of vegetation are considered a visual amenity in urban areas. Hiding storm water facilities behind structures would eliminate their visual value.

With respect to public safety, allowing the channels to fill with sediment could block side drains that empty into the channels which could cause water to back up and flood adjacent public and/or private properties.

The cost of designing and constructing structures along existing drainage facilities would be substantial. In addition, the cost would be increased by the need to acquire private property to construct the structures. Given the number of miles of drainage channels within the City, the cost of increasing flood capacity by constructing flood control structures is considered infeasible. Funding would be required to design and construct levees and/or walls. Council Policy 800-04 (Drainage Facilities) states that all projects with significant or total funding by the City shall be

specifically identified and scheduled in the Capital Improvement Program (CIP). Council Policy 800-14 (Prioritizing CIP Projects) outlines the prioritization and funding policy for which projects compete. The prioritization process allows for the analytical comparison of the costs and benefits of individual projects, as well as an opportunity to evaluate projects against one another on their relative merits. This alternative would therefore compete with other CIP projects for funding and implementation. Construction could be delayed indefinitely until funding is available while the need to maintain facilities would still exist. Thus, also due to the uncertainty of whether a particular CIP would be approved through separate discretionary actions for all or part of the construction of flood control structures, this alternative is considered infeasible. Conversely, annual maintenance activities associated with the Master Program would be appropriated and reviewed annually in the SWD budget.

Lastly, this alternative would not be effective in the long-term because accumulation of sediment would likely eventually offset the additional capacity created by the structures. Therefore, regular maintenance within storm water facilities as well as these structures, should they fail or break, would still be required.

7.4 CHANNEL BY-PASS ALTERNATIVE

7.4.1 Description

This alternative would involve construction of underground pipes that would divert some or all of the runoff around a channel segment to allow the channel to be naturally vegetated. Channel-specific modeling would be undertaken to determine the location and sizing of by-pass pipes to assure that vegetated channel segments can continue to support vegetation without resulting in flooding.

7.4.2 Impact Analysis

Aesthetics/Neighborhood Character (Cumulative)

The aesthetic impacts associated with the Channel By-pass Alternative would be less than the proposed Master Program because it would avoid clearing of drainages, including mature trees located within some of the subject drainages. While some vegetation would need to be cleared for placement of the by-pass pipes, it would be less extensive than with the proposed Master Program. Thus, significant cumulative impacts to aesthetics and neighborhood character would be avoided by this alternative.

Air Quality (Cumulative)

Under the Channel By-pass Alternative, minimal emissions related to criteria pollutants would be generated. However, these emissions, in combination with other development, would result in a significant cumulative impact with respect to air quality.

Biological Resources (Direct, Indirect and Cumulative)

Under the Channel By-pass Alternative, impacts to vegetation communities would be limited to the construction of underground pipes. This alternative would not include the clearing of vegetation from storm water facilities. This alternative also would substantially reduce impacts to jurisdictional habitat in comparison to the proposed Master Program.

Because this alternative would not include the removal of vegetation within the affected storm water facilities, impacts to wildlife habitat would be substantially reduced and limited to impacts associated with underground pipes. In addition, sensitive plant species within the storm water facilities would not be affected by implementation of this alternative.

Potentially significant indirect impacts from construction activities associated with pipelines would still occur from implementation of this alternative, including indirect impacts to noise and exotic plant species. Indirect noise impacts to nesting or breeding coastal California gnatcatchers, least Bell's vireo, and/or raptors could still occur under this alternative, as well as the proposed Master Program, if maintenance activities create noise in excess of 60 dB(A) L_{eq} in occupied habitat during these species' breeding seasons. Increased downstream urban pollutant levels caused by the removal of vegetation associated with the proposed Master Program would not occur as vegetation would be retained with this alternative.

In summary, implementation of the Channel By-pass Alternative could result in a significant direct, indirect and cumulative impact on biological resources but the impact would be less than the proposed project.

GHG Emissions (Cumulative)

Under the Channel By-pass Alternative, minimal GHG emissions would be generated. However, these emissions, in combination with other development, would result in a significant cumulative impact with respect to GHG emissions.

Historical Resources (Direct and Cumulative)

Impacts to historical resources may still potentially occur under this alternative as a result of construction of underground pipes. Direct and cumulative impacts to such resources would be significant under both the proposed Master Program and this alternative.

Land Use (Direct)

This alternative would have less impact on natural drainages in the long-term because the associated wetland habitat would not have to be periodically removed to improve flood water conveyance. As with the proposed Master Program, implementation of this alternative would be consistent with the goals and objectives of the General Plan, as well as the ESL Regulations, MSCP Subarea Plan, and City HRG.

Under the Channel By-pass Alternative, the potential for temporary disturbance to adjacent residential uses associated with noise and dust would be slightly less than under the proposed Master Program, because no clearing activities associated with drainage maintenance would occur. However, this alternative would require the construction of underground pipelines, which would contribute to dust and noise impacts.

The Channel By-pass Alternative also would require additional encroachment into adjacent property for the placement of pipelines.

Thus, the Channel By-pass Alternative would have potentially significant direct land use impacts.

Paleontological Resources (Direct and Cumulative)

The potential for significant impacts to paleontological resources from implementation of this alternative, like the proposed Master Program, is considered to be generally low, although significant impacts could occur depending on site-specific geologic conditions and proposed ground disturbance. In addition, there is a potential for encroachment into paleontological resources to install the by-pass pipes.

Solid Waste Disposal (Cumulative)

This alternative would eliminate the impact on solid waste disposal because it would eliminate waste material associated with maintenance activities (e.g., dredge spoil, vegetation, and rubbish). Thus, this alternative would not have a significant, cumulative impact on solid waste disposal.

Water Quality (Direct and Cumulative)

Potentially significant erosion and sedimentation impacts would be associated with the use of mechanized equipment to construct underground pipes. The short-term water quality effects from proposed construction activities related to erosion and sedimentation could potentially affect downstream waters and associated wildlife habitats, with such impacts considered potentially significant. In the long-term, the natural pollutant filtration value of the vegetation within the channels would be maintained under this alternative, as no vegetation would be removed.

Similar water quality impacts could potentially occur due to the use of mechanized equipment and storage of hazardous materials (i.e., vehicle fuels or lubricants). Similar to the proposed Master Program, the accidental discharge of construction-related hazardous materials or trash into the drainage system could potentially result in significant direct and cumulative impacts to local and downstream receiving waters.

7.4.3 Basis for Rejection

Although this alternative would be the next environmentally-preferred alternative (after the No Maintenance Alternative) because it could potentially result in reduced impacts related to wetlands, water quality and solid waste disposal, the City rejected the alternative as financially infeasible. In addition, by-pass pipes could physically impact or burden adjacent property owners related to construction of pipelines and/or easement acquisition. In addition to the cost of pipeline construction, the City would incur additional costs related to acquiring private property through which the pipes would pass.

While by-pass facilities located within or adjacent to property owned by the City could be less costly, since land acquisition costs would be avoided, funding would be required to design and construct such projects. Council Policy 800-04 (Drainage Facilities) states that all projects with significant or total funding by the City shall be specifically identified and scheduled in the Capital Improvement Program (CIP). Council Policy 800-14 (Prioritizing CIP Projects) outlines the prioritization and funding policy for which projects compete. The prioritization process allows for the analytical comparison of the costs and benefits of individual projects, as well as an opportunity to evaluate projects against one another on their relative merits. Having to compete with other CIP projects may extend the implementation and construction schedule until funding would be available; while the need to a maintain channel would still exist until the by-pass pipes are constructed. Thus, also due to the uncertainty of whether a particular CIP would be approved through separate discretionary actions for all or part of the construction of by-pass pipes, this alternative is considered infeasible. Conversely, annual maintenance activities associated with the Master Program would be appropriated and reviewed annually in the SWD budget.

Beyond the cost of acquiring easements, adjacent development and infrastructure would make it difficult to construct by-pass pipes without impacting existing structures including homes and businesses. Condemning structures would further add to the cost of the Channel By-pass Alternative. In addition, this alternative would not be effective in the long-term because accumulation of sediment in an open channel that was not undergrounded would likely offset the additional capacity created by the by-pass. Given these cost factors, accommodating flood waters with by-pass pipes is considered infeasible.

7.5 WIDENED CHANNEL ALTERNATIVE

7.5.1 Description

Under this alternative, the configuration of channels would be modified to increase the volume capacity of the channel. The goal of increasing the channel volume would be to enable vegetation to exist in the channel without causing flooding. In order to promote wetland habitat, the modified channels would be completely earthen, and any pre-existing concrete or other impermeable forms of channel protection would be removed.

Channel-specific modeling would be undertaken to determine the additional width needed. In most cases, the capacity would be increased by widening the cross-section of the channel. Increasing the depth of the channel would also increase capacity but is expected to be difficult to achieve in most

cases due to constraints imposed by the slope limitations on the channel banks and maintaining downstream gradients.

Implementation of this alternative would require a substantial grading operation within the existing channels as well as encroachment into adjacent areas to accommodate the widened cross-section. As the City typically has little, if any, right-of-way beyond the existing channels, it is anticipated that implementation of this alternative would require the City to purchase property and/or secure easements from landowners adjacent to the affected channel.

7.5.2 Impact Analysis

Aesthetics/Neighborhood Character (Cumulative)

In the short-term, the widened channels would detract from the visual character of the surrounding areas. However, once the vegetation becomes re-established, this alternative would not have a significant impact on the aesthetics and neighborhood character because the storm water facilities would continue to represent an aesthetically-pleasing feature in the local landscape. In addition, any removal of concrete drainage structures that would result from the widening would also improve the visual character of the surrounding area. Maintenance activities in the widened channels would be anticipated to be considerably less than the proposed project. While periodic removal of sediment and debris would continue to be necessary, large-scale removal of vegetation would not be required. As such, the aesthetic value of wildlife associated with channel vegetation would better with this alternative in comparison with the proposed project.

Air Quality (Cumulative)

Under the Widened Channel Alternative, minimal criteria pollutant emissions would be generated. However, these emissions, in combination with other development, would result in a significant cumulative impact with respect to air quality.

Biological Resources (Direct, Indirect and Cumulative)

Unlike the proposed maintenance, channel widening would impact the vegetation on the upper banks. However, in many cases, widening could be done without impacting the original channel bottom and associated vegetation. Thus, this alternative would be less impactive on wetland vegetation in the short-term. In the long-term, this alternative would avoid the need for repeated removal of channel vegetation because the channel would be wide enough to eliminate the adverse impact of vegetation on conveyance of storm water.~~With the Widened Channel Alternative, short-term impacts to vegetation communities within the affected channels may be greater than the proposed Master Program because the banks as well as the channel bottom would be impacted initially. However, unlike the proposed project, at least some portion of the vegetation would be able to re-establish within the channel without subsequent removal.~~

~~Potentially significant short-term indirect impacts from channel widening would be greater than the proposed project due to the amount of disturbance that would be required within the channels~~

~~themselves. However, t~~The long-term water quality impacts related to the loss of urban pollutant removal by in-channel vegetation would be avoided, as much of the vegetation would be expected to remain in the widened channels. Uncontrolled erosion and sedimentation during channel widening could impact downstream wildlife habitat. Construction activities in channels could impede the movement of animals through natural drainage corridors while channel widening is occurring. Indirect noise impacts to nesting or breeding coastal California gnatcatchers, least Bell's vireo, and/or raptors could still occur under this alternative, as well as the proposed Master Program, if maintenance activities create noise in excess of 60 dB(A) L_{eq} in occupied habitat during these species' breeding seasons.

In summary, implementation of the Widened Channel Alternative would substantially reduce the long-term biological impacts in comparison with the proposed Master Program.~~, but would have similar short-term impacts.~~ If vegetation within the channel bottom can be retained during widening, this alternative would also reduce the short-term biological impacts.

GHG Emissions (Cumulative)

Under the Widened Channel Alternative, minimal GHG emissions would be generated. However, these emissions, in combination with other development, would result in a significant cumulative impact with respect to GHG emissions.

Historical Resources (Direct and Cumulative)

Impacts to historical resources may occur under this alternative as a result of encroachment into adjacent property from the widened channel. In fact, historical impacts would have a high probability of occurring due to the expectation that existing buildings would likely have to be torn down to accommodate the widened channels. Given the fact that many of these channels occur in older urban sections of the City of San Diego, the chances are high that structures greater than 45 years old would be affected.

The potential for affecting significant historic structures is considered substantially higher with the Widened Channel Alternative than the proposed Master Program. Thus, the Widened Channel Alternative would have significant direct and cumulative impacts which could be greater than the proposed Master Program.

Land Use (Direct)

Increasing the width and allowing wetland vegetation to persist in natural drainage courses would reflect land use policy goals to retain natural drainage courses and minimize impacts to biological resources. With the widened cross-section, some portion of the existing habitat could remain. However, increasing the width of existing channels could impact historical resources located along the channels. As with the proposed project, implementation of this alternative, with appropriate mitigation, would be consistent with the goals and objectives of the General Plan, as well as the ESL Regulations, MSCP Subarea Plan, and City HRG.

The Widened Channel Alternative is expected to have a substantial impact on adjacent development. Given the limited City right-of-way, and the fact that the majority of the affected channels are immediately bordered by residential or commercial development, a large number of homes and businesses would likely need to be eliminated to accommodate the widened channels. This would have significant land use impacts related to the loss of housing and imposition of financial hardship on affected businesses. In addition, for the adjacent development that would remain, this alternative would substantially increase the potential for temporary disturbance to adjacent residential uses over that of the proposed Master Program because the grading required to widen channels would involve considerably greater equipment noise and dust generation. The ability of financial compensation to offset the land use impact cannot be determined at this time, but, it is possible that the impacts would not be fully mitigated by financial compensation. Thus, the land use impacts are considered significant and potentially unmitigated.

Paleontological Resources (Direct and Cumulative)

The Widened Channel Alternative could result in significant impacts to paleontological resources. Unlike the proposed project, this alternative would involve substantial grading. Where widened channels cross through geologic formations known to exhibit a moderate to high potential for fossils, the excavation needed to increase the width of those channels would potentially impact significant paleontological resources.

Solid Waste Disposal (Cumulative)

While the initial reconstruction of the channel would generate sediment and vegetation that may require disposal at City landfills, this alternative would reduce the long-term impact on solid waste disposal because it would eliminate or reduce the need to dispose of vegetation waste created during maintenance. Under this alternative, some portion of the vegetation within the channel is expected to be able to remain in the channel without impacting its ability to accommodate flood water. Thus, this alternative would not have a significant, cumulative impact on solid waste disposal.

Water Quality (Direct and Cumulative)

Potential significant erosion and sedimentation impacts would be associated with the use of mechanized equipment to reconstruct the channels. The short-term water quality effects from proposed construction activities related to erosion and sedimentation could potentially affect downstream waters and associated wildlife habitats, with such impacts considered potentially significant. However, the effect of removing sediment and vegetation multiple times, as would occur with the proposed project would be reduced. Thus, the long-term water quality impact would be avoided.

Similar water quality impacts could potentially occur due to the use of mechanized equipment and storage of hazardous materials (i.e., vehicle fuels or lubricants). Similar to the proposed Master Program, the accidental discharge of construction-related hazardous materials or trash into the drainage system could potentially result in significant impacts to local and downstream receiving waters.

7.5.3 Basis for Rejection

Although this alternative would potentially result in a substantial reduction in ~~long-term~~ impacts related to wetlands and solid waste disposal, the City rejected the alternative for factors related to cost and potential impacts to adjacent development.

The cost of designing and constructing wider channels along existing drainage facilities would be substantial. In addition, the cost would be increased by the need to acquire private property to accommodate the widening. Given the number of miles of drainage channels within the City, the cost of increasing flood capacity through channel widening is considered infeasible. Lastly, this alternative would not necessarily eliminate the cost of periodic maintenance. Although maintenance frequency and extent would be considerably reduced, no natural drainage course can be maintenance-free. Periodic removal of sediment, debris and, possibly, invasive plant material (e.g. arundo) would still be required to maintain the effectiveness of the channel to safely convey flood water.

Widening channels could impact adjacent property owners who would be required to relocate their existing homes, businesses, and infrastructure. Even though the City would be required to provide compensation based on fair market value, relocation could disrupt residents and business owners' way of life and income. By acquiring property in densely urbanized areas to widen channels, the loss of housing could also adversely affect the City's ability to provide adequate housing. In addition, because many of the affected homes are expected to have property values below the City-wide median home price, the loss of these homes would adversely affect the affordable housing stock in the City. Goal 1 of the City's Housing Element seeks to "Ensure the provision of sufficient housing for all income groups to accommodate San Diego's anticipated share of regional growth over the next Housing Element Cycle, FY 2005-2010".

The cost of widening facilities located within or adjacent to City-controlled property could be less of a financial burden, however funding would still be required to implement and construct such projects. Council Policy 800-04 (Drainage Facilities) states that all projects with significant or total funding by the City shall be specifically identified and scheduled in the Capital Improvement Program (CIP). Council Policy 800-14 (Prioritizing CIP Projects) outlines the prioritization and funding policy for which projects compete. The prioritization process allows for the analytical comparison of the costs and benefits of individual projects, as well as an opportunity to evaluate projects against one another on their relative merits. In the long-term, channel widening could reduce flooding risks and be self-mitigating, as described below. However, having to compete with other CIP projects for funding may delay implementation and construction indefinitely; while the need to maintain existing storm water facilities would still exist until channels are widened. Conversely, annual maintenance activities associated with the Master Program would be appropriated and reviewed annually in the SWD budget.

Although channel widening is not considered a feasible alternative for general channel maintenance, this technique is recognized in Subchapter 4.3, Biological Resources, as a potential approach to mitigation provided the vegetation does not have to be periodically maintained to retain the flood control function of the widened channel. The Master Program would not prevent

SWD from pursuing channel widening as a CIP project for specific channels, when feasible. Where appropriate conditions exist (e.g., vacant land and favorable hydrologic conditions), channel widening could create direct and indirect benefits with respect to biological resources. Where sufficient hydrology conditions exist to support additional wetland vegetation, channel widening could result in a net increase in the amount of wetland habitat. This would constitute wetland creation which is the most valued form of mitigation. The ability to re-establish wetland vegetation within its original location after channel widening would eliminate the repeated temporary loss of habitat that would occur from maintenance under the proposed project.

7.6 OFF-SITE RUNOFF REDUCTION ALTERNATIVE

7.6.1 Description

This alternative would involve implementing low impact development (LID) measures within off-site watershed areas to reduce runoff generation and resulting flows into storm water facilities located within the Master Program. The LID process is intended to mimic predevelopment hydrologic conditions by using design practices and measures to effectively capture, filter, store, evaporate, detain and infiltrate runoff close to its source. LID measures could involve efforts such as: (1) reducing impervious surfaces through the use of vegetation or permeable pavement, and reducing impervious surfaces and compaction in landscaped and open space areas; (2) directing runoff into pervious areas (e.g., landscaping); (3) directing runoff into engineered IMP sites (e.g., bioretention facilities, planter boxes, cisterns or infiltration facilities); and/or (4) creating self-contained/self-treating drainage management areas such as green roofs or basins. LID design principals and measures would also help to reduce the potential for erosion and sedimentation associated with maintenance.

This alternative would be, by nature, be implemented in areas outside the storm water facilities. In addition, the Off-site Runoff Reduction Alternative would target retrofitting LID measures in applicable existing developed areas as well as sites with new development or redevelopment projects. Specifically, the City Storm Water Management and Discharge Control Ordinance (San Diego Municipal Code Section 43.03, et seq.) requires that all new development and redevelopment activities comply with the storm water pollution prevention requirements in Chapter 14, Article 2, Division 1 (Grading); and Chapter 14, Article 2, Division 2 (Storm Water Runoff Control and Drainage) of the Land Development Code. These requirements are outlined in the Storm Water Standards Manual (Storm Water Manual) and associated LID Design Guide, with LID principals required to be included in the design of all applicable projects proposed as of the March 2008 (City of San Diego 2011). Accordingly, this alternative would target existing (pre March 2008) development (i.e., areas with no existing LID measures) to avoid any duplication of effort with activities conducted pursuant to the Storm Water Manual and related regulatory requirements.

7.6.2 Impact Analysis

Aesthetics/Neighborhood Character (Cumulative)

The cumulative aesthetic impacts associated with the Off-site Runoff Reduction Alternative would be expected to be less than for the proposed Master Program. This conclusion is based on the anticipated reduction of vegetation clearing in local drainages as well as the fact that most LID facilities/efforts would not entail substantial effects to aesthetics or neighborhood character (i.e., most facilities would be vegetated and/or low-profile).

Air Quality (Cumulative)

Under the Off-site Runoff Reduction Alternative, minimal emissions related to criteria pollutants would be generated. However, these emissions, in combination with other development, could result in a significant cumulative impact with respect to air quality.

Biological Resources (Direct, Indirect and Cumulative)

Potential impacts to biological resources (including vegetation and jurisdictional habitats) under the Off-site Runoff Reduction Alternative would be expected to be less than those identified for the proposed Master Program. Specifically, the construction and maintenance of potential LID measures under this alternative would likely be limited to previously developed areas, with a corresponding reduction of vegetation clearing in local drainages. Related potential impacts to wildlife habitat and sensitive plant and animal species would also be reduced, although potentially significant indirect impacts from construction activities would still occur under this alternative. Specifically, indirect noise impacts to nesting or breeding coastal California gnatcatchers, least Bell's vireo, and/or raptors could still occur under this alternative if LID measures and/or channel maintenance activities create noise in excess of 60 dB(A) L_{eq} in or near occupied habitat during the associated breeding seasons. Increased downstream urban pollutant levels caused by the removal of vegetation associated with the proposed Master Program would be reduced somewhat under this alternative due to the previously noted reduction in vegetation clearing and the fact that LID measures would result in some reduction of pollutant (as well as runoff) levels.

In summary, implementation of the Off-site Runoff Reduction Alternative would likely reduce overall biological impacts in comparison with the proposed Master Program, although the level and extent of this reduction would depend on the nature and location of specific LID measures (and the corresponding reduction in vegetation clearing).

GHG Emissions (Cumulative)

Under the Off-site Runoff Reduction Alternative, minimal GHG emissions would be generated. However, these emissions, in combination with other development, would result in a significant cumulative impact with respect to GHG Emissions.

Historical Resources (Direct and Cumulative)

Impacts to historical resources may still potentially occur under this alternative as a result of required (albeit reduced) channel maintenance, and implementation of LID measures. Potential impacts to historical resources would be significant under both the proposed Master Program and the Off-site Runoff Reduction Alternative.

Land Use (Direct)

Unlike the proposed Master Program, this alternative would allow native vegetation to remain within natural drainages. That is, the use of LID measures in off-site watershed areas could reduce flows into Master Program facilities, and correspondingly reduce maintenance requirements in riparian areas. In addition, as with the proposed Master Program, implementation of this alternative would be expected to be consistent with the goals and objectives of the General Plan, as well as the ESL Regulations, MSCP Subarea Plan, and City HRG. Specifically, this alternative would target previously developed sites, and would be focused on areas such as existing landscaping and drainage facilities.

Under the Off-site Runoff Reduction Alternative, the overall potential for temporary disturbance to adjacent residential uses associated with noise and dust would be slightly higher than under the proposed Master Program. That is, while clearing activities associated with drainage maintenance would be locally reduced or (potentially) avoided, construction operations related to implementing LID measures would likely occur in closer proximity to existing residential uses. Correspondingly, this alternative also would also require additional encroachment into adjacent properties for the permanent placement and maintenance of LID measures. Thus, as with the proposed project, this alternative could result in significant direct land use impacts.

Paleontological Resources (Direct and Cumulative)

The potential for significant impacts to paleontological resources from implementation of this alternative, like the proposed Master Program, is considered to be generally low. Significant direct and cumulative impacts could potentially occur, however, depending on site-specific geologic conditions and ground disturbance related to required (albeit reduced) vegetation removal and excavation/grading associated with installation of LID measures.

Solid Waste Disposal (Cumulative)

This alternative would reduce the overall impact on solid waste disposal identified for the proposed Master Program, due to the reduction of materials such as dredge spoil, vegetation, and rubbish associated with maintenance activities. Some additional materials would be generated during installation and maintenance of LID measures, however, with associated cumulative impacts to solid waste disposal considered potentially cumulatively significant.

Water Quality (Direct and Cumulative)

Potentially significant erosion and sedimentation impacts would be associated with activities conducted under this alternative, including the use of mechanized equipment for vegetation removal, staging areas, and/or LID measures. The short-term water quality effects from proposed construction activities related to erosion and sedimentation could potentially affect downstream waters and associated wildlife habitats, with such impacts considered potentially significant. In the long-term, the natural pollutant filtration value of the vegetation within the channels would be partially retained under this alternative, as vegetation removal would be scaled back and the LID measures would also provide runoff filtering and pollutant removal (in addition to reducing flow levels).

Similar water quality impacts could potentially occur due to the use of mechanized equipment and storage of hazardous materials (i.e., vehicle fuels or lubricants). Similar to the proposed Master Program, the accidental discharge of construction-related hazardous materials or trash into the drainage system could potentially result in significant impacts to local and downstream receiving waters.

7.6.3 Basis for Rejection

Although the Off-site Runoff Reduction Alternative could potentially result in fewer impacts to aesthetic/neighborhood character and biological resources, it was rejected by the City since it would have no substantial impact on the probability of flooding and would, therefore, fail to meet the project's main objectives. LID targets the frequent but low intensity storms and have very little to no effect on storms beyond the 10-year storm event. The regulations that require municipalities to implement LID do not require these concepts be analyzed for storm events greater than the 10-year storm. In addition, it was rejected by the City as being financially infeasible and posing a burden on adjacent property owners. The cost of constructing and maintaining adequate LID measures to generate a meaningful reduction in runoff, while unknown, would likely be high due to the anticipated extensive nature of LID measures that would be required under this alternative. In addition to construction and long-term maintenance costs, the City would incur additional costs related to acquiring private property/easements for the placement of LID measures. Based on these considerations, the Off-site Runoff Reduction Alternative is considered infeasible as a stand-alone alternative to the proposed Master Program. It should be noted, however, that based on the evaluation of this alternative, the City has modified the proposed Master Program to encompass the use of LID measures in applicable areas. The inclusion of these types of measures in the proposed design would result in a more integrated approach involving efforts to limit vegetation removal in associated drainages to the maximum extent feasible, while still obtaining the identified Master Program objectives.

In addition to cost and acquisition issues, the timing associated with a substantial reduction of off-site surface water generation is problematic. Although future development projects are required to incorporate LID measures, the rate at which new development is expected to occur in these areas is likely to be extremely protracted, given today's economic conditions. Thus, it may take decades for enough new development to incorporate LID measures to result in a substantial reduction in storm water runoff and the associated maintenance activities.

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CHAPTER 8.0

EFFECTS FOUND NOT TO BE SIGNIFICANT

CHAPTER 8.0 – EFFECTS FOUND NOT TO BE SIGNIFICANT

Based on an Initial Study, NOP scoping process and analysis in Chapter 4.0, Environmental Analysis, it was determined that the proposed Master Program would not have a significant environmental impact in the following areas: agriculture (direct or cumulative); air quality (direct); energy (direct or cumulative); geology and soils (direct or cumulative); GHG emissions (direct); light, glare, and shading (direct or cumulative); mineral resources (direct or cumulative); population and housing (direct or cumulative); public services and utilities (direct or cumulative); recreational resources (direct or cumulative); transportation/ circulation (direct or cumulative); and water conservation (direct or cumulative). The reasons for the non-significance conclusion are provided below with a discussion of each issue.

8.1 AGRICULTURE

The vast majority of the storm water facilities are not located within existing or designated agricultural areas. A few portions of some of the facilities are within areas that are designated as Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Grazing Land. However, only a few agricultural operations, particularly in the south bay area, currently exist. Maintenance of storm water facilities would not preclude future agricultural use in areas that could, in the future, be potentially put into agricultural production. Thus, the proposed Master Program would not result in significant direct or cumulative impacts to agricultural resources.

8.2 AIR QUALITY

Air quality impacts associated with the proposed Master Program would be limited primarily to short-term exhaust and dust emissions from equipment operations as well as odors emitted from temporary stockpiling of dredged soil and vegetation. To help minimize impacts to sensitive environmental resources, most of the equipment to be used would be smaller (i.e., more portable and agile) than the larger, more conventional equipment typically associated with infrastructure projects. Additionally, the nature of activities associated with the proposed Master Program is relatively limited, as described in Chapter 3.0, Project Description. The proposed Master Program would involve the maintenance of storm water facilities (i.e., removal of trash, sediment, vegetation, debris, etc.). Grading and excavation activities associated with drainage clearing or maintenance would generally occur in damp soils, which would preclude the creation of substantial amounts of dust. In addition, project activities would be conducted in accordance with San Diego County Air Pollution Control District standards, which require dust suppression methods such as the use of water trucks. Therefore, direct impacts associated with air quality would be less than significant. As discussed in subchapter 6.10, Air Quality, the project would have significant cumulative air quality change impacts.

Stockpiling would be temporary, as would any odor associated with the dredged material or vegetation. Thus, no significant odor impacts would be generated by stockpiling. In addition, maintenance of storm water facilities would include the removal of any standing water and trash that may create objectionable odors. As such, implementation of the proposed Master Program would help eliminate any such odors associated with the existing status of the storm water

facilities to be maintained under the proposed Master Program. Accordingly, no negative impacts associated with odors would occur.

8.3 GREENHOUSE GAS EMISSIONS

GHG emissions are a local, federal and global concern because of the climate change effects associated with increasing levels of GHG emissions worldwide. Global climate change refers to changes in average climatic conditions on Earth as a whole, including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). These gases allow solar radiation (sunlight) into the Earth's atmosphere, but prevent radiating heat from escaping, thus warming the Earth's atmosphere. GHG traps heat in the atmosphere. GHG emissions result from both natural processes and human activities. Emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of GHG in the atmosphere. Global climate change attributable to human activities (mainly CO_2, CH_4, and N_2O) is currently one of the most important and widely debated scientific, economic, and political issues in the United States.

According to the San Diego County GHG Inventory, which was prepared by the School of Law Energy Policy Initiative Center (EPIC) at the University of San Diego in 2008, a total of 34.4 million metric tons (MMT) CO_2e were generated within the County of San Diego in the year 2006. The largest contributor of GHG was from on-road transportation, which comprised 46 percent (16 MMT CO_2e) of the total amount. The second highest contributor was generation of electricity, which contributed 9 MMT CO_2e, or 25 percent of the total. Together the on-road transportation and electrical generation comprised 71 percent of the total GHG emissions in the County. The remaining amount was contributed by natural gas consumption, civil aviation, industrial processes, off-road equipment, waste, agriculture, rail, water-borne navigation, and other fuels.

In order to serve as a guide for determining when a project triggers the need for a GHG significance determination, the City of San Diego has established an interim screening threshold for GHG emission analysis. Based on guidance in a report prepared by the California Air Pollution Control Officers Association (CAPCOA) entitled CEQA & Climate Change, dated January 2008, the City utilizes a threshold of 900 metric tons of CO_2e to evaluate whether a project could have a significant impact on global climate. Projects with emissions above the 900-metric ton threshold are required to evaluate whether emissions can be reduced below "business as usual" levels. The City has proposed a target of 28.35 percent below "business as usual" as its significance threshold, based on the California ARB's Scoping Plan and year 2020 "business as usual" forecast model, which represents the GHG emissions that would be expected to occur without any GHG project reducing features or mitigation as mandated under AB 32.

GHG emissions would be associated with the proposed maintenance activities as a result of equipment used to carry out maintenance. In order to estimate the average annual GHG emissions related to maintenance, an analysis was conducted that assumed that up to 10 miles of storm water facilities would be maintained each year. Assuming that daily maintenance could cover up to 450 linear feet, a total of 120 working days were assumed in a year. Based on these

assumptions, maintenance could generate up to 270 tons of CO_2e emission per year, as presented in Table 8.3-1.

Table 8.3-1
ESTIMATED ANNUAL GHG EMISSIONS

Equipment	CO_2 (Tons per Year)	N_2O (Tons per Year)	CH_4 (Tons per Year)	CO_2e (Tons per Year)
Backhoes	26.7657	0.0013	0.0029	
Cranes	23.1492	0.0010	0.0023	
Dozers	51.9627	0.0032	0.0071	
Dump Trucks	74.5093	0.0028	0.0062	
Excavators	30.7033	0.0016	0.0036	
Loaders	15.2701	0.0013	0.0028	
Skid Steer	42.1059	0.0052	0.0117	
Total	**264.47**	**0.016**	**0.037**	**270.32**

As shown in Table 8.3-1, the average annual GHG emissions associated with the Master Program are estimated to be up to 270 metric tons of CO_2e emissions per year, which would not exceed the interim threshold of 900 metric tons of CO_2e per year. In comparison with the 34.4 million metric tons (MMT) CO_2 equivalent that were generated within the County in 2006, GHG emissions related to the proposed maintenance activities would be minimal, and would not constitute a significant direct relative to climate change. However, as discussed in Subchapter 6.11, Greenhouse Gas Emissions, the proposed Master Program would result in a cumulatively significant impact with respect to GHG emissions.

8.4 ENERGY

Other than relatively minor amounts of fossil fuel consumption associated with the operation of maintenance equipment, implementation of the proposed Master Program would not have any energy demands. The use associated with such equipment would not be excessive and would be temporary in nature. Implementation of the proposed Master Program would not preclude recovery of fossil fuel resources and no known economic fossil fuel resources are present within the vicinity of the storm water facilities to be maintained. Accordingly, direct or cumulative impacts associated with energy would be less than significant.

8.5 GEOLOGY AND SOILS

The proposed Master Program would generally not involve any maintenance efforts that would generate issues related to geology and soils, with the exception of erosion/sedimentation, which is addressed in Subchapter 4.8, Water Quality. Specifically, as described in Chapter 3.0, Project Description, proposed operations would consist largely of removing and disposing of sediment, debris, and associated vegetation that accumulate in storm water facilities over time. In those cases where facilities or operations such as by-pass structures (e.g., coffer dams to divert flows around maintenance areas), or stockpiling of materials or spoils are required, they would be

designed or conducted in accordance with applicable seismic standards and/or geotechnical engineering practices, and no associated significant direct or cumulative impacts would result.

8.6 LIGHT, GLARE, AND SHADING

Clearing and maintenance activities associated with the proposed Master Program would be temporary and would occur during daylight hours (except under emergency situations). The proposed Master Program would not result in the creation of anything that would result in glare. No buildings or other such structures would be constructed during clearing and maintenance activities. As such, no light, glare, or shading direct or cumulative impacts would occur.

8.7 MINERAL RESOURCES

Some portions of the subject storm water facilities may cross areas classified by the State Geologist as MRZ-2 (areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists). However, implementation of the proposed Master Program would not preclude the recovery of any on-site mineral resources. As such, no direct or cumulative mineral resource impacts would occur.

8.8 POPULATION AND HOUSING

Maintenance activities under the proposed Master Program would take place within existing storm water facilities in canyons, other environmentally sensitive lands and along existing streets and other rights-of-way. The proposed Master Program would not impact population growth or displace existing housing or people. The proposed Master Program also would not foster population growth, either directly or indirectly, or necessitate the construction of new housing. No direct or cumulative impacts to population or housing would occur.

8.9 PUBLIC SERVICES AND UTILITIES

Failure to properly maintain storm water facilities could result in flooding of adjacent properties, increasing the risk of loss of life and property. The proposed Master Program would help improve and maintain water quality within affected storm water facilities by removing illegally dumped materials such as trash, appliances, furniture, shopping carts, and tires, as well as debris, sediment, and vegetation. As such, the proposed Master Program would be beneficial to storm water drainage within the City. Police, fire, schools, or parks would not be affected by implementation of the proposed Master Program. Utilities related to communications, energy, wastewater, and water would not be significantly impacted because maintenance activities would not result in any new excavation or structures which could impact these existing utilities. Thus, no direct or cumulative impacts to these facilities would occur with the proposed project.

As discussed in Subchapter 6.8, Solid Waste, solid waste generated by channel maintenance (e.g., green waste and hazardous materials) would not constitute a significant direct impact on solid waste disposal capacity within the City but would contribute to the anticipated challenges in the future associated with solid waste disposal.

8.10 RECREATIONAL RESOURCES

The proposed Master Program would not include the construction of any recreational facilities or require the construction or expansion of such facilities. The proposed Master Program area includes canyons and other environmentally sensitive lands located throughout the City, some of which may currently be used for passive recreational uses. If maintenance activities preclude access to and/or through recreational areas associated with storm water facilities, the disruption would be temporary and, thus, less than significant.

8.11 TRANSPORTATION/CIRCULATION

Implementation of individual projects under the proposed Master Program would temporarily result in minimal traffic to roadways associated with maintenance workers' personal vehicles and the transportation of equipment to and from the work sites. This temporary and minor increase in traffic would not substantially add to the existing traffic volumes on roadways, nor would it affect existing or planned transportation systems.

Activities associated with implementation of the proposed Master Program would generally be limited to off-road areas, and would not have a significant impact on transportation/circulation. In some cases, staging and/or work areas for individual projects would be within streets and/or rights-of-way. This would require temporary partial or full lane closures and the diversion of traffic around work areas. If such is required, a construction traffic control plan would be prepared and implemented to minimize potential traffic impacts.

Implementation of the proposed Master Program would have a minimal effect on parking, as a limited number of maintenance workers would be required for each project. When able to do so, workers would park off the street; however, in some cases they may need to park on the street or within parking lots.

Thus, direct or cumulative impacts to transportation/circulation and parking would be less than significant.

8.12 WATER CONSERVATION

Activities associated with implementation of the proposed Master Program would not require the use of notable quantities of water. Minor amounts of water may be necessary for dust control during maintenance but, due to the temporary nature of the demand for water supply associated with the proposed Master Program and the limited quantities typically consumed during the maintenance, direct or cumulative impacts on water supply would be less than significant.

Some individual projects may require revegetation of staging areas, if the staging areas would impact sensitive vegetation communities. Temporary irrigation may be required until plants are established. Because the disturbance areas would be relatively small, and therefore would require little water for irrigation, and irrigation would be short term, direct or cumulative impacts associated with water conservation would be less than significant.

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CHAPTER 9.0

SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION, SHOULD IT BE IMPLEMENTED

CHAPTER 9.0 – SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION, SHOULD IT BE IMPLEMENTED

Implementation of the Master Program would not result in any irreversible environmental changes. Maintenance associated with the Master Program would not alter the configuration of natural drainage courses. Although maintenance would remove vegetation within drainage courses, the loss of vegetation would not be irreversible. Wetland vegetation is adapted to recovery after major storm events. As a result, wetland vegetation within the drainages would become re-established with cessation of maintenance. The need for routine clearing of channels is evidence of the fact that maintenance effects on vegetation would not be irreversible.

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CHAPTER 10.0

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

CHAPTER 10.0 - SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

Section 15126(b) of the State CEQA Guidelines requires an EIR to "describe any significant impacts, including those that can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described."

Chapters 4.0, Environmental Analysis, and 6.0, Cumulative Impacts, of this PEIR provide a description of the potential environmental impacts of the proposed Master Program and recommends mitigation measures to reduce impacts to a less than significant level, where possible. In some cases, however, the potential for significant impacts to occur and/or the ability to fully mitigate such impacts will depend on the specific setting for, and characteristics of, an individual maintenance activity. Based on the analysis contained in Chapters 4.0 and 6.0, the project would have unavoidable impacts with respect to the following: aesthetics/neighborhood character (cumulative), air quality (cumulative), biological resources (cumulative), GHG emissions (cumulative), historical resources (cumulative), paleontological resources (cumulative), solid waste (cumulative), and water quality (cumulative).

As discussed in Subchapter 6.1, Aesthetics/Neighborhood Character, the removal of wetland vegetation would combine with other future development in the City to cumulatively impact aesthetics and neighborhood character.

As discussed in Subchapters 6.10, Air Quality, and 6.11, GHG Emissions, significant cumulative air quality and GHG emissions impacts would also be unavoidable. Although nominal, any increase in criteria pollutant and GHG emissions would be considered cumulatively significant, unavoidable impact relate to the proposed maintenance activities.

As discussed in Subchapter 6.2, Biological Resources, given the historic reduction in biological resources and the anticipated reductions in the future, the significant cumulative biological resource impacts associated with the proposed storm water maintenance would be unavoidable.

As discussed in Subchapter 6.3, Historic Resources and 6.7, Paleontological Resources, any loss of historic or paleontological resources from maintenance would result in a significant, unavoidable cumulative impact on these resources within the City.

Lastly, as discussed in Subchapter 6.8, Solid Waste, any contribution to solid waste within the City would represent a significant, cumulative impact which cannot be avoided.

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CHAPTER 11.0

MITIGATION MONITORING AND REPORTING PROGRAM

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Section 21081.6 of the State of California Public Resources Code requires a Lead or Responsible Agency that approves or carries out a project where an environmental impact report (EIR) has identified significant environmental effects to adopt a "reporting or monitoring program for adopted or required changes to mitigate or avoid significant environmental effects." The City of San Diego is the lead Agency for the Master Program PEIR, and, therefore, is responsible for implementation of the MMRP. Because the PEIR recommends measures to mitigate these impacts, an MMRP is required to ensure that adopted mitigation measures are implemented.

As Lead Agency for the proposed project under CEQA, the City of San Diego will administer the MMRP for the following environmental issue areas: biological resources, historical resources, land use policies, paleontological resources, and water quality.

GENERAL

General Mitigation 1: Prior to commencement of work, the ADD Environmental Designee of the Entitlements Division shall verify that mitigation measures for impacts to biological resources (Mitigation Measures 4.3.1 through 4.3.20), historical resources (Mitigation Measures 4.4.1 and 4.4.2), land use policy (Mitigation Measures 4.1.1 through 4.1.13), paleontological resources (Mitigation Measure 4.7.1), and water quality (Mitigation Measures 4.8.1 through 4.8.3) have been included in entirety on the submitted maintenance documents and contract specifications, and included under the heading, "Environmental Mitigation Requirements." In addition, the requirements for a Pre-maintenance Meeting shall be noted on all maintenance documents.

General Mitigation 2: Prior to the commencement of work, a Pre-maintenance Meeting shall be conducted and include, as appropriate, the MMC, SWD Project Manager, Biological Monitor, Historical Monitor, Paleontological Monitor, Water Quality Specialist, and Maintenance Contractor, and other parties of interest.

General Mitigation 3: Prior to the commencement of work, evidence of compliance with other permitting authorities is required, if applicable. Evidence shall include either copies of permits issued, letters of resolution issued by the Responsible Agency documenting compliance, or other evidence documenting compliance and deemed acceptable by the ADD Environmental Designee.

General Mitigation 4: Prior to commencement of work and pursuant to Section 1600 et seq. of the State of California Fish & Game Code, evidence of compliance with Section 1605 is required, if applicable. Evidence shall include either copies of permits issued, letters of resolution issued by the Responsible Agency documenting compliance, or other evidence documenting compliance and deemed acceptable by the ADD Environmental Designee.

BIOLOGICAL RESOURCES

Potential impacts to biological resources would be reduced to below a level of significance through implementation of the following mitigation measures as well as Mitigation Measures 4.1-1 through 4.1-25.

Mitigation Measure 4.3.1: Prior to commencement of any activity within a specific annual maintenance program, a qualified biologist shall prepare an IBA for each area proposed to be maintained. The IBA shall be prepared in accordance with the specifications included in the Master Program.

Mitigation Measure 4.3.2: No maintenance activities within a proposed annual maintenance program shall be initiated before the City's Assistant Deputy Director (ADD) Environmental Designee and state and federal agencies with jurisdiction over maintenance activities have approved the IMPs and IBAs including proposed mitigation for each of the proposed activities. In their review, the ADD Environmental Designee and agencies shall confirm that the appropriate maintenance protocols have been incorporated into each IMP.

Mitigation Measure 4.3.3: No maintenance activities within a proposed annual maintenance program shall be initiated until the City's ADD Environmental Designee and Mitigation Monitoring Coordinator (MMC) have approved the qualifications for biologist(s) who shall be responsible for monitoring maintenance activities which may impact sensitive biological resources.

Mitigation Measure 4.3.4: Prior to undertaking any maintenance activity included in an annual maintenance program, a mitigation account shall be established to provide sufficient funds to implement all biological mitigation associated with the proposed maintenance activities. The fund amount shall be determined by the ADD Environmental Designee. The account shall be managed by the City's SWD, with quarterly status reports submitted to DSD. The status reports shall separately identify upland and wetland account activity. Based upon the impacts identified in the IBAs, money shall be deposited into the account, as part of the project submittal, to ensure available funds for mitigation.

Mitigation Measure 4.3.5*:* Prior to commencing any activity that could impact wetlands, evidence of compliance with other permitting authorities is required, if applicable. Evidence shall include copies of permits issued, letters of resolution issued by the Responsible Agency documenting compliance, or other evidence documenting compliance and deemed acceptable by the ADD Environmental Designee.

Mitigation Measure 4.3.6: Prior to commencing any activity where the IBA indicates significant impacts to biological resources may occur, a pre-maintenance meeting shall be held on site with the following in attendance: City's SWD Maintenance Manager (MM), MMC, and Maintenance Contractor (MC). The biologist selected to monitor the activities shall be present. At this meeting, the monitoring biologist shall identify and discuss the maintenance protocols that apply to the maintenance activities.

At the pre-maintenance meeting, the monitoring biologist shall submit to the MMC and MC a copy of the maintenance plan (reduced to 11”x17”) that identifies areas to be protected, fenced, and monitored. This data shall include all planned locations and design of noise attenuation walls or other devices. The monitoring biologist also shall submit a maintenance schedule to the MMC and MC indicating when and where monitoring is to begin and shall notify the MMC of the start date for monitoring.

Mitigation Measure 4.3.7: Within three months following the completion of mitigation monitoring, two copies of a written draft report summarizing the monitoring shall be prepared by the monitoring biologist and submitted to the MMC for approval. The draft monitoring report shall describe the results including any remedial measures that were required. Within 90 days of receiving comments from the MMC on the draft monitoring report, the biologist shall submit one copy of the final monitoring report to the MMC.

Mitigation Measure 4.3.8: Within six months of the end of an annual storm water facility maintenance program, the monitoring biologist shall complete an annual report which shall be distributed to the following agencies: the City of San Diego DSD, CDFG, RWQCB, USFWS, and Corps. At a minimum, the report shall contain the following information:

- Tabular summary of the biological resources impacted during maintenance and the mitigation;
- Master table containing the following information for each individual storm water facility or segment which is regularly maintained;
- Date and type of most recent maintenance;
- Description of mitigation which has occurred; and
- Description of the status of mitigation which has been implemented for past maintenance activities.

Mitigation Measure 4.3.9: Wetland impacts resulting from maintenance shall be mitigated in one of the following ~~three~~ two ways: (1) habitat creation, restoration, and/or enhancement~~ concurrent with maintenance~~, ~~(2) habitat creation, restoration, and/or enhancement prior to maintenance,~~ or (~~3~~2) mitigation credits. The amount of mitigation ~~When mitigation is proposed to be accomplished through concurrent creation, restoration or enhancement, the amount of planting~~ shall be in accordance with ratios in Table 4.3-10 unless different mitigation ratios are required by state or federal agencies with jurisdiction over the impacted wetlands. In this event, the mitigation ratios required by these agencies will supersede, and not be in addition to, the ratios defined in Table 4.3-10. ~~When previously created, restored or enhanced wetland habitat is proposed to be used for mitigation, the ratio shall be 1:1, provided the habitat has been determined to be successfully established by the ADD Environmental Designee in consultation with the Resource Agencies prior to commencing the maintenance activity. Mitigation credits may be used at a ratio of 1:1, provided the mitigation credits are from a mitigation bank which has been approved by the Resource Agencies.~~ No maintenance shall commence until the ADD Environmental Designee has

determined that mitigation proposed for a specific maintenance activity meets one of these ~~three~~ two options.

Table 4.3-10
WETLAND MITIGATION RATIOS

WETLAND TYPE	MITIGATION RATIO~~1~~
Southern riparian forest	3:1
Southern sycamore riparian woodland	3:1
Riparian woodland	3:1
Coastal saltmarsh	4:1
Coastal brackish marsh	4:1
Southern willow scrub	2:1
Mule fat scrub	2:1
Riparian scrub[1]	2:1
Freshwater marsh[2]	~~1~~2:1
Cismontane alkali marsh	4:1
Disturbed wetland	~~1~~2:1
Streambed/natural flood channel	~~NA~~2:1

[1] Mitigation ratio within the Coastal Zone will be 3:1
[2] Mitigation ratio within the Coastal Zone will be 4:1~~[1] Mitigation done in advance or through purchase of mitigation credits would be at a 1:1 ratio.~~

Mitigation locations for wetland impacts shall be selected using the following order of preference, based on the best mitigation value to be achieved.

1. Within impacted watershed, within City limits.
2. Within impacted watershed, outside City limits on City-owned or other publicly-owned land.
3. Outside impacted watershed, within City limits.
4. Outside impacted watershed, outside City limits on City-owned or other publically-owned land.

In order to mitigate for impacts in an area outside the limits of the watershed within which the impacts occur, the SWD must demonstrate to the satisfaction of the ADD Environmental Designee in consultation with the Resource Agencies that no suitable location exists within the impacted watershed.

Mitigation Measure 4.3.10: Whenever maintenance will impact wetland vegetation, a wetland mitigation plan shall be prepared in accordance with the Conceptual Wetland Restoration Plan contained in Appendix H of the Biological Technical Report, included as Appendix D.3 of the PEIR.

Mitigation which involves habitat enhancement, restoration or creation shall include a wetland mitigation plan containing the following information:

- Conceptual planting plan including planting zones, grading, and irrigation;
- Seed mix/planting palette;
- Planting specifications;
- Monitoring program including success criteria; and
- Long-term maintenance and preservation plan.

Mitigation which involves habitat acquisition and preservation shall include the following:

- Location of proposed acquisition;
- Description of the biological resources to be acquired including support for the conclusion that the acquired habitat mitigates for the specific maintenance impact; and
- Documentation that the mitigation area would be adequately preserved and maintained in perpetuity.

Mitigation which involves the use of mitigation credits shall include the following:

- Location of the mitigation bank;
- Description of the credits to be acquired including support for the conclusion that the acquired habitat mitigates for the specific maintenance impact; and
- Documentation that the credits are associated with a mitigation bank which has been approved by the appropriate Resource Agencies.

Mitigation Measure 4.3.11: Upland impacts shall be mitigated through payment into the City's Habitat Acquisition Fund, acquisition and preservation of specific land, or purchase of mitigation credits in accordance with the ratios identified in Table 4.3-11. Upland mitigation shall be completed within six months of the date the related maintenance has been completed.

Table 4.3-11
UPLAND HABITAT MITIGATION RATIOS[1]

Vegetation Type	Tier	Location of Impact with Respect to the MHPA	
		Inside	Outside
Coast live oak woodland	I	2:1	1:1
Scrub oak chaparral	I	2:1	1:1
Southern foredunes	I	2:1	1:1
Beach	I	2:1	1:1
Diegan coastal sage scrub	II	1:1	1:1
Coastal sage-chaparral scrub	II	1:1	1:1
Broom baccharis scrub	II	1:1	1:1
Southern mixed chaparral	IIA	1:1	0.5:1
Non-native grassland	IIIB	1:1	0.5:1
Eucalyptus woodland	IV	--	--
Non-native vegetation/ornamental	IV	--	--
Disturbed habitat/ruderal	IV	--	--
Developed	IV	--	--

[1]Assumes mitigation occurs within an MHPA

Mitigation Measure 4.3.12: Loss of habitat for the coastal California gnatcatcher shall be mitigated through the acquisition of suitable habitat or mitigation credits at a ratio of 1:1. Mitigation shall take place within the MHPA, and shall be accomplished within six months of the date maintenance is completed.

Mitigation Measure 4.3.13: Prior to commencing any maintenance activity which may impact sensitive biological resources, the monitoring biologist shall verify that the following actions have been taken, as appropriate:

- Fencing, flagging, signage, or other means to protect sensitive resources to remain after maintenance have been implemented;

- Noise attenuation measures needed to protect sensitive wildlife are in place and effective; and/or

- Nesting raptors have been identified and necessary maintenance setbacks have been established if maintenance is to occur between January 15 and August 31.

The designated biological monitor shall be present throughout the first full day of maintenance, whenever mandated by the associated IBA. Thereafter, through the duration of the maintenance activity, the monitoring biologist shall visit the site weekly to confirm that measures required to protect sensitive resources (e.g., flagging, fencing, noise barriers) continue to be effective. The monitoring biologist shall document monitoring events via a Consultant Site Visit Record. This record shall be sent to the MM each month. The MM will forward copies to MMC.

Mitigation Measure 4.3.14: Whenever off-site mitigation would result in a physical disturbance to the proposed mitigation area, the City will conduct an environmental review of the proposed mitigation plan in accordance with CEQA. If the off-site mitigation would have a significant impact on biological resources associated with the mitigation site, mitigation measures will be identified and implemented in accordance with the MMRP resulting from that CEQA analysis.

Mitigation Measure 4.3.15: Impacts to listed or endemic sensitive plant species shall be offset through implementation of one or a combination of the following actions:

- Impacted plants would be salvaged and relocated;
- Seeds from impacted plants would be collected for use at an off-site location;
- Off-site habitat that supports the species impacted shall be enhanced and/or supplemented with seed collected on site; and/or
- Comparable habitat at an off-site location shall be preserved.

Mitigation which involves relocation, enhancement or transplanting sensitive plants shall include the following:

- Conceptual planting plan including grading and, if appropriate, temporary irrigation;
- Planting specifications;
- Monitoring Program including success criteria; and
- Long-term maintenance and preservation plan.

Mitigation Measure 4.3.16: Maintenance activities shall not occur within the following areas:

- 300 feet from any nesting site of Cooper's hawk (*Accipiter cooperii*);
- 1,500 feet from known locations of the southern pond turtle (*Clemmys marmorata pallida*);
- 900 feet from any nesting sites of northern harriers (*Circus cyaneus*);
- 4,000 feet from any nesting sites of golden eagles (*Aquila chrysaetos*); or
- 300 feet from any occupied burrow or burrowing owls (*Athene cunicularia*).

Mitigation Measure 4.3.17: If evidence indicates the potential is high for a listed species to be present, based on historical records or site conditions, then clearing, grubbing, or grading (inside and outside the MHPA) shall be restricted during the breeding season where development may impact the following species:

- Light-footed clapper rail (between February 15 and August 15);
- Western snowy plover (between March 1 and September 15);
- Least tern (between April 1 and September 15);
- Cactus wren (between February 15 and August 15); or
- Tricolored black bird (between March 1 and August 1.

When other sensitive species, including, but not limited to, the arroyo toad, burrowing owl, or Quino checkerspot butterfly are known or suspected to be present all appropriate protocol surveys and mitigation measures shall be implemented.

Mitigation Measure 4.3.18*:* If a subject species is not detected during the protocol survey, the qualified biologist shall submit substantial evidence to the ADD Environmental Designee and an applicable resource agency which demonstrates whether or not mitigation measures such as noise walls are necessary between the dates stated above for each species. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.

Mitigation Measure 4.3.19: If the SWD chooses not to do the required surveys, then it shall be assumed that the appropriate avian species are present and all necessary protection and mitigation measures shall be required as described in Mitigation Measure 4.3.21

Mitigation Measure 4.3.20: If no surveys are completed and no sound attenuation devices are installed, it will be assumed that the habitat in question is occupied by the appropriate species and that maintenance activities would generate more than 60dB(A) L_{eq} within the habitat requiring protection. All such activities adjacent to the protected habitat shall cease for the duration of the breeding season of the appropriate species and a qualified biologist shall establish a limit of work.

Mitigation Measure 4.3.21: If maintenance occurs during the raptor breeding season (January 15 to August 31), a pre-maintenance survey for active raptor nests shall be conducted in areas supporting suitable habitat. If active raptor nests are found, maintenance shall not occur within 300 feet of a Cooper's hawk nest, 900 feet of a northern harrier's nest, or 500 feet of any other raptor's nest until any fledglings have left the nest.

Mitigation Measure 4.3.22: If removal of any eucalyptus trees or other trees used by raptors for nesting within a maintenance area is proposed during the raptor breeding season (January 15 through August 31), a qualified biologist shall ensure that no raptors are nesting in such trees. If

maintenance occurs during the raptor breeding season, a pre-maintenance survey shall be conducted and no maintenance shall occur within 300 feet of any nesting site of Cooper's hawk or other nesting raptor until the young fledge. Should the biologist determine that raptors are nesting, the trees shall not be removed until after the breeding season. In addition, if removal of grassland or other habitat appropriate for nesting by northern harriers, a qualified biologist shall ensure that no harriers are nesting in such areas. If maintenance occurs during the raptor breeding season, a pre-maintenance survey shall be conducted and no maintenance shall occur within 900 feet of any nesting site of northern harrier until the young fledge.

Mitigation Measure 4.3.23: If maintenance activities would occur at known localities for listed fish species or within suitable habitat for other highly sensitive aquatic species (i.e., southwestern pond turtle), avoidance or minimization measures (i.e., exclusionary fencing, dewatering of the activity area, live-trapping, and translocation to suitable habitat) must be implemented.

Mitigation Measure 4.3.24*:* If maintenance activities will occur within areas supporting listed and/or narrow endemic plants, the boundaries of the plant populations designated sensitive by the resource agencies will be clearly delineated with flagging or temporary fencing that must remain in place for the duration of the activity.

Mitigation Measure 4.3.25*:* In order to avoid impacts to nesting avian species, including those species not covered by the MSCP, maintenance within or adjacent to avian nesting habitat shall occur outside of the avian breeding season (January 15 to August 31) unless postponing maintenance would result in a threat to human life or property.

HISTORICAL RESOURCES

Potential impacts to historical resources would be reduced to below a level of significance through implementation of the following mitigation measures.

Mitigation Measure 4.4.1: Prior to commencement of the first occurrence of maintenance activity within a drainage facility included in the Master Program, an archaeologist, meeting the qualifications specified by the City's HRG, shall determine the potential for significant historical resources to occur in the maintenance area. If the archaeologist determines that the potential is moderate to high, an IHA shall be prepared. Based on the IMP for the proposed maintenance activity, the archaeologist shall determine the APE, which shall include access, staging, and maintenance areas. The IHA shall include a field survey of the APE with a Native American monitor, using the standards of the City's HRG. In addition, the archaeologist shall request a record search from the SCIC. Based on the results of the field survey and record search, the archaeologist shall conduct an archaeological testing program for any identified historical resources, using the standards of the City's HRG. If significant historical resources are identified, they shall be taken to the Historical Resources Board for designation as Historic Sites. Avoidance or implementation of an Archaeological Data Recovery Program (ADRP) and Archaeological Monitoring Program shall be required to mitigate project impacts to significant historical resources. The archaeologist shall prepare a report in accordance with City guidelines. At a minimum, the IHA report shall include:

- Description of maintenance to be performed, including length, width, and depth;

- Prehistory and History Background Discussion;
- Results of Record Search;
- Survey Methods;
- Archaeological Testing Methods;
- Impact Analysis; and
- Mitigation Recommendations, including avoidance or implementation of an ADRP and archaeological monitoring program.

In the event that the IHA indicates that no significant historical resources occur within the APE, or have the potential to occur within the APE, no further action shall be required.

Mitigation Measure 4.4.2: Prior to initiating any maintenance activity where the IHA identifies existing significant historical resources within the APE, the following actions shall be taken.

4.4.2.1 The Storm Water Department shall select a Principal Investigator (PI), who shall be approved by the ADD Environmental Designee. The PI must meet the requirements of the City's HRG.

4.4.2.2 Mitigation recommendations from the IHA shall be incorporated into the IMP to the satisfaction of the PI and the ADD Environmental Designee. Typical mitigation measures shall include but not be limited to: delineating resource boundaries on maintenance plans; implementing protective measures such as fencing, signage or capping; and selective monitoring during maintenance activities.

4.4.2.3 If impacts to significant historical resources cannot be avoided, the PI shall prepare an Archaeological Research Design and Data Recovery Program (ARDDRP) for the affected resources, with input from a Native American consultant, and the ARDDRP shall be approved by the ADD Environmental Designee. Based on the approved research design, a phased excavation program shall be conducted, which will include the participation of a Native American. The sample size to be excavated shall be determined by the PI, in consultation with City staff. The sample size shall vary with the nature and size of the archaeological site, but need not exceed 15 percent of the overall resource area. The area involved in the ARDDRP shall be surveyed, staked and flagged by the archaeological monitor, prior to commencing maintenance activities which could affect the identified resources.

4.4.2.4 A pre-maintenance meeting shall be held on-site prior to commencing any maintenance that may impact a significant historical resource. The meeting shall include representatives from the PI, the Native American consultant, Storm Water Department, Mitigation Monitoring Coordinator (MMC), Resident Engineer (RE), and Maintenance

Contractor (MC). The PI shall explain mitigation measures which must be implemented during maintenance. The PI shall also confirm that all protective measures (e.g. fencing, signage or capping) are in place.

4.4.2.5 If human remains are discovered in the course of conducting the ARDDRP, work shall be halted in that area and the following procedures set forth in the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) will be taken:

- The PI shall notify the RE, and the MMC. The MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS).

- The PI shall notify the Medical Examiner, after consultation with the RE, either in person or via telephone.

- Work will be redirected away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner, in consultation with the PI, concerning the provenience of the remains.

- The Medical Examiner, in consultation with the PI, shall determine the need for a field examination to determine the provenience.

- If a field examination is not warranted, the Medical Examiner shall determine, with input from the PI, if the remains are or are most likely to be of Native American origin.

- If Human Remains are determined to be Native American, the Medical Examiner shall notify the Native American Heritage Commission (NAHC). The NAHC shall contact the PI within 24 hours after the Medical Examiner has completed coordination. The NAHC will identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information. The PI will coordinate with the MLD for additional coordination. If (1) the NAHC is unable to identify the MLD, or the MLD fails to make a recommendation within 24 hours after being notified by the Commission; or (2) the landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, then the landowner or their authorized representative shall re-inter the human remains and all associated grave goods with appropriate dignity, on the property in a location not subject to subsurface disturbance. Information on this process will be provided to the NAHC.

- If Human Remains are not Native American, the PI shall contact the Medical Examiner and notify them of the historic era context of the burial. The Medical Examiner shall determine the appropriate course of action with the PI and City staff (PRC 5097.98). If the remains are of historic origin, they shall be appropriately removed and conveyed to the Museum of Man for analysis. The decision for reinterment of the human remains shall be made in consultation with MMC, EAS, the landowner, and the Museum.

4.4.2.6 The PI shall be responsible for ensuring: (1) that all cultural materials collected are cleaned, catalogued and permanently curated with an appropriate institution; (2) that a letter of acceptance from the curation institution has been submitted to MMC; (3) that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; (4) that faunal material is identified as to species; and (5) that specialty studies are completed, as appropriate. Curation of artifacts associated with the survey, testing and/or data recovery for this project shall be completed in consultation with LDR and the Native American representative, as applicable.

4.4.2.7 The Archaeologist shall be responsible for updating the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B associated with the ARDDRP in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the SCIC with the Final Results Report.

4.4.2.8 The PI shall prepare a Draft Results Report (even if negative) that describes the results, analysis and conclusions of the ARDDRP (with appropriate graphics). The MMC shall return the Draft Results Report to the PI for revision or for preparation of the Final Report. The PI shall submit the revised Draft Results Report to MMC for approval. The MMC shall provide written verification to the PI of the approved report. The MMC shall notify the RE of receipt of all Draft Result Report submittals and approvals. The MMC shall notify the RE of receipt of the Final Results Report.

Mitigation Measure 4.4.3: Prior to initiating any maintenance activity where the IHA identifies a moderate to high potential for the occurrence of significant historical resources within the APE, the following actions shall be taken:

4.4.3.1 Prior to Permit Issuance or Bid Opening/Bid Award

A. Entitlements Plan Check
   1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the applicable maintenance documents through the plan check process.

B. Letters of Qualification have been submitted to ADD
   1. Prior to Bid Award, the applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour HAZWOPER training with certification documentation.
   2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project meet the qualifications established in the HRG.

3. Prior to the start of work, the applicant must obtain written approval from MMC for any personnel changes associated with the monitoring program.

4.4.3.2 Prior to Start of Maintenance

A. Verification of Records Search
   1. The PI shall provide verification to MMC that a site specific records search (1/4 mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coastal Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
   2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.
   3. The PI may submit a detailed letter to MMC requesting a reduction to the ¼ mile radius.

B. PI Shall Attend Pre-maintenance Meetings
   1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Pre-maintenance Meeting that shall include the PI, Native American consultant/monitor (where Native American resources may be impacted), Maintenance Manager (MM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American Monitor shall attend any grading/excavation related Pre-maintenance Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Maintenance Manager and/or Grading Contractor.
      a. If the PI is unable to attend the Pre-maintenance Meeting, the Applicant shall schedule a focused Pre-maintenance Meeting with MMC, the PI, RE, MM or BI, if appropriate, prior to the start of any work that requires monitoring.
   2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects)
      The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the archaeological monitoring program.
   3. Identify Areas to be Monitored
      Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) (with verification that the AME has been reviewed and approved by the Native American consultant/monitor when Native American resources may be impacted) based on the appropriate maintenance documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.
      The AME shall be based on the results of a site specific records search as well as information regarding the age of existing pipelines, laterals and associated appurtenances and/or any known soil conditions (native or formation).
      MMC shall notify the PI that the AME has been approved.

4. When Monitoring Will Occur
   a. Prior to the start of any work, the PI shall also submit a maintenance schedule to MMC through the RE indicating when and where monitoring will occur.
   b. The PI may submit a detailed letter to MMC prior to the start of work or during maintenance requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final maintenance documents which indicate conditions such as age of existing pipe to be replaced, depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.
5. Approval of AME and Maintenance Schedule
   After approval of the AME by MMC, the PI shall submit to MMC written authorization of the AME and Maintenance Schedule from the MM.

4.4.3.3 During Maintenance

A. Monitor Shall be Present During Grading/Excavation/Trenching
   1. The Archaeological Monitor shall be present full-time during all soil disturbing and grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. **The Maintenance Manager is responsible for notifying the RE, PI, and MMC of changes to any maintenance activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the AME.**
   2. The Native American consultant/monitor shall determine the extent of their presence during soil disturbing and grading/excavation/trenching activities based on the AME and provide that information to the PI and MMC. If prehistoric resources are encountered during the Native American consultant/monitor's absence, work shall stop and the Discovery Notification Process detailed in Sections 4.4.3.3.B-C and 4.4.3.4-A-D shall commence.
   3. The PI may submit a detailed letter to MMC during maintenance requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered that may reduce or increase the potential for resources to be present.
   4. The archaeological and Native American consultant/monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR's shall be faxed by the MM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process
   1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert all soil disturbing activities, including but not limited to digging, trenching, excavating or grading activities in the area of discovery and in the area reasonably suspected to overlay adjacent resources and immediately notify the RE or BI, as appropriate.
   2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
   3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.
   4. No soil shall be exported off-site until a determination can be made regarding the significance of the resource specifically if Native American resources are encountered.

C. Determination of Significance
   1. The PI and Native American consultant/monitor, where Native American resources are discovered shall evaluate the significance of the resource. If Human Remains are involved, follow protocol in Section 4.4.3.4 below.
      a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.
      b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) and obtain written approval of the program from MMC, MM and RE. ADRP and any mitigation must be approved by MMC, RE and/or MM before ground disturbing activities in the area of discovery will be allowed to resume. **Note: If a unique archaeological site is also an historical resource as defined in CEQA Section 15064.5, then the limits on the amount(s) that a project applicant may be required to pay to cover mitigation costs as indicated in CEQA Section 21083.2 shall not apply.**
         (1). Note: For pipeline trenching and other linear projects in the public Right-of-Way, the PI shall implement the Discovery Process for Pipeline Trenching projects identified below under "D."
      c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.
         (1). Note: For Pipeline Trenching and other linear projects in the public Right-of-Way, if the deposit is limited in size, both in length and depth; the information value is limited and is not associated with any other resource; and there are no unique features/artifacts associated with the deposit, the discovery should be considered not significant.
         (2). Note, for Pipeline Trenching and other linear projects in the public Right-of-Way, if significance cannot be determined, the Final Monitoring Report and Site Record (DPR Form 523A/B) shall identify the discovery as Potentially Significant.

D. Discovery Process for Significant Resources - Pipeline Trenching and other Linear Projects in the Public Right-of-Way
The following procedure constitutes adequate mitigation of a significant discovery encountered during pipeline trenching activities or for other linear project types within the Public Right-of-Way including but not limited to excavation for jacking pits, receiving pits, laterals, and manholes to reduce impacts to below a level of significance:
1. Procedures for documentation, curation and reporting
   a. One hundred percent of the artifacts within the trench alignment and width shall be documented in-situ, to include photographic records, plan view of the trench and profiles of side walls, recovered, photographed after cleaning and analyzed and curated. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact.
   b. The PI shall prepare a Draft Monitoring Report and submit to MMC via the RE as indicated in Section 4.4.3.6-A.
   c. The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) the resource(s) encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines. The DPR forms shall be submitted to the South Coastal Information Center for either a Primary Record or SDI Number and included in the Final Monitoring Report.
   d. The Final Monitoring Report shall include a recommendation for monitoring of any future work in the vicinity of the resource.

4.4.3.4 Discovery of Human Remains

If human remains are discovered, work shall halt in that area and no soil shall be exported off-site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:

A. Notification
1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS) of the Development Services Department to assist with the discovery notification process.
2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.

B. Isolate discovery site
1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenience of the remains.
2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenience.

3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.

C. If Human Remains **ARE** determined to be Native American
1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, **ONLY** the Medical Examiner can make this call.
2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.
3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health & Safety Codes.
4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.
5. Disposition of Native American Human Remains will be determined between the MLD and the PI, and, if:
   a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission, OR;
   b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, THEN
   c. To protect these sites, the landowner shall do one or more of the following:
      (1) Record the site with the NAHC;
      (2) Record an open space or conservation easement; or
      (3) Record a document with the County.
   d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Section 4.4.3.5.c., above.

D. If Human Remains are **NOT** Native American
1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.
2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).
3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the San Diego Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant/landowner, any known descendant group, and the San Diego Museum of Man.

4.4.3.5 Night and/or Weekend Work

A. If night and/or weekend work is included in the contract
   1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Pre-maintenance meeting.
   2. The following procedures shall be followed.
      a. No Discoveries
         In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVR and submit to MMC via fax by 8AM of the next business day.
      b. Discoveries
         All discoveries shall be processed and documented using the existing procedures detailed in Sections 4.4.3.3 - During Maintenance, and 4.4.3.4 – Discovery of Human Remains. Discovery of human remains shall always be treated as a significant discovery.
      c. Potentially Significant Discoveries
         If the PI determines that a potentially significant discovery has been made, the procedures detailed under Sections 4.4.3.3 During Maintenance and 4.4.3.4-Discovery of Human Remains shall be followed.
      d. The PI shall immediately contact the RE and MMC, or by 8AM of the next business day to report and discuss the findings as indicated in Section 4.4.3.3-B, unless other specific arrangements have been made.

B. If night and/or weekend work becomes necessary during the course of maintenance
   1. The Maintenance Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
   2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

4.4.3.6 Post Maintenance

A. Submittal of Draft Monitoring Report
   1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Historical Resources Guidelines (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring. **It should be noted that if the PI is unable to submit the Draft Monitoring Report within the allotted 90-day timeframe as a result of delays with analysis, special study results or other complex issues, a schedule shall be submitted to MMC establishing agreed due dates and the provision for submittal of monthly status reports until this measure can be met.**

a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program or Pipeline Trenching Discovery Process shall be included in the Draft Monitoring Report.
b. Recording Sites with State of California Department of Parks and Recreation The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report.

2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report.
3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval.
4. MMC shall provide written verification to the PI of the approved report.
5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Artifacts
1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued.
2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.

C. Curation of artifacts: Accession Agreement and Acceptance Verification
1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.
2. When applicable to the situation, the PI shall include written verification from the Native American consultant/monitor indicating that Native American resources were treated in accordance with state law and/or applicable agreements. If the resources were reinterred, verification shall be provided to show what protective measures were taken to ensure no further disturbance occurs in accordance with Section 4.4.3.4 – Discovery of Human Remains, Subsection C.
3. The PI shall submit the Accession Agreement and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC.
4. The RE or BI, as appropriate shall obtain signature on the Accession Agreement and shall return to PI with copy submitted to MMC.
5. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)
   1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC of the approved report.
   2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

LAND USE

Potential impacts to land use policies in the City's General Plan would be reduced to below a level of significance through implementation of the following mitigation measures.

Mitigation Measure 4.1.1: Prior to commencing maintenance on any storm water facility within, or immediately adjacent to, a Multi-Habitat Planning Area (MHPA), the ADD Environmental Designee shall verify that all MHPA boundaries and limits of work have been delineated on all maintenance documents.

Mitigation Measure 4.1.2: A qualified biologist (possessing a valid Endangered Species Act Section 10(a)(1)(a) recovery permit) shall survey those habitat areas inside and outside the MHPA suspected to serve as habitat (based on historical records or site conditions) for the coastal California gnatcatcher, least Bell's vireo and/or other listed species. Surveys for the appropriate species shall be conducted pursuant to the protocol survey guidelines established by the U.S. Fish and Wildlife Service. When other sensitive species, including, but not limited to, the arroyo toad, burrowing owl, or Quino checkerspot butterfly are known or suspected to be present all appropriate protocol surveys and mitigation measures identified in Subchapter 4.3, Biological Resources, required shall be implemented.

Mitigation Measure 4.1.3: If a listed species is located within 500 feet of a proposed maintenance activity and maintenance would occur during the associated breeding season, an analysis of the noise generated by maintenance activities shall be completed by a qualified acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the ADD Environmental Designee. The analysis shall identify the location of the 60 dB(A) L_{eq} noise contour on the maintenance plan. The report shall also identify measures to be undertaken during maintenance to reduce noise levels.

Mitigation Measure 4.1.4: Based on the location of the 60 dB(A) L_{eq} noise contour and the results of the protocol surveys, the Project Biologist shall determine if maintenance has the potential to impact breeding activities of listed species. If one or more of the following species are determined to be significantly impacted by maintenance, then maintenance (inside and outside the MHPA) shall avoid the following breeding seasons unless it is determined that maintenance is needed to protect life or property.

- Coastal California gnatcatcher (between March 1 and August 15 inside the MHPA only; no restrictions outside MHPA);

- Least Bell's vireo (between March 15 and September 15); and

- Southwestern willow flycatcher (between May 1 and September 1).

Mitigation Measure 4.1.5: If maintenance is required during the breeding season for a listed bird to protect life or property, then the following conditions must be met:

- At least two weeks prior to the commencement of maintenance activities, under the direction of a qualified acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from maintenance activities shall not exceed 60 dB(A) hourly average at the edge of occupied habitat. Concurrent with the commencement of maintenance activities and the maintenance of necessary noise attenuation facilities, noise monitoring shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician or biologist, then the associated maintenance activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season of the subject species, as noted above.

- Maintenance noise shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the maintenance activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the ADD, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of maintenance equipment and the simultaneous use of equipment.

- Prior to the commencement of maintenance activities that would disturb sensitive resources during the breeding season, the biologist shall ensure that all fencing, staking and flagging identified as necessary on the ground have been installed properly in the areas restricted from such activities.

- If noise attenuation walls or other devices are required to assure protection to identified wildlife, then the biologist shall make sure such devices have been properly constructed, located and installed.

Mitigation Measure 4.1.6: A pre-maintenance meeting shall be held with the Maintenance Contractor, City representative and the Project Biologist. The Project Biologist shall discuss the sensitive nature of the adjacent habitat with the crew and subcontractor. Prior to the pre-maintenance meeting, the following shall be completed:

- The Storm Water Division (SWD) shall provide a letter of verification to the Mitigation Monitoring Coordination Section stating that a qualified biologist, as defined in the City of San Diego Biological Resources Guidelines, has been retained to implement the

projects MSCP monitoring Program. The letter shall include the names and contact information of all persons involved in the Biological Monitoring of the project. At least thirty days prior to the pre-maintenance meeting, the qualified biologist shall submit all required documentation to MMC, verifying that any special reports, maps, plans and time lines, such as but not limited to, revegetation plans, plant relocation requirements and timing, MSCP requirements, avian or other wildlife protocol surveys, impact avoidance areas or other such information has been completed and updated.

- The limits of work shall be clearly delineated. The limits of work, as shown on the approved maintenance plan, shall be defined with orange maintenance fencing and checked by the biological monitor before initiation of maintenance. All native plants or species of special concern, as identified in the biological assessment, shall be staked, flagged and avoided within Brush Management Zone 2, if applicable.

Mitigation Measure 4.1.7: Maintenance plans shall be designed to accomplish the following.

- Invasive non-native plant species shall not be introduced into areas adjacent to the MHPA. Landscape plans shall contain non-invasive native species adjacent to sensitive biological areas, as shown on the approved maintenance plan.

- All lighting adjacent to, or within, the MHPA shall be shielded, unidirectional, low pressure sodium illumination (or similar) and directed away from sensitive areas using appropriate placement and shields. If lighting is required for nighttime maintenance, it shall be directed away from the preserve and the tops of adjacent trees with potentially nesting raptors, using appropriate placement and shielding.

- All maintenance activities (including staging areas and/or storage areas) shall be restricted to the disturbance areas shown on the approved maintenance plan. The project biologist shall monitor maintenance activities, as needed, to ensure that maintenance activities do not encroach into biologically sensitive areas beyond the limits of work as shown on the approved maintenance plan.

- No trash, oil, parking or other maintenance-related activities shall be allowed outside the established maintenance areas including staging areas and/or storage areas, as shown on the approved maintenance plan. All maintenance related debris shall be removed off-site to an approved disposal facility.

- <u>Access roads through MHPA-designated areas shall comply with the applicable policies contained in the "Roads and Utilities Construction and Maintenance Policies" identified in Section 1.4.2 of the City's Subarea Plan.</u>

Mitigation Measure 4.1.8: Prior to commencing any maintenance in, or within 500 feet of any area determined to support coastal California gnatcatchers, the ADD Environmental Designee shall verify that the MHPA boundaries and the following project requirements regarding the coastal California gnatcatcher are shown on the maintenance plans:

NO MAINTENANCE ACTIVITIES SHALL OCCUR BETWEEN MARCH 1 AND AUGUST 15, THE BREEDING SEASON OF THE COASTAL CALIFORNIA GNATCATCHER, UNTIL THE FOLLOWING REQUIREMENTS HAVE BEEN MET TO THE SATISFACTION OF THE ADD ENVIRONMENTAL DESIGNEE:

a. A QUALIFIED BIOLOGIST (POSSESSING A VALID ENDANGERED SPECIES ACT SECTION 10(a)(1)(A) RECOVERY PERMIT) SHALL SURVEY THOSE HABITAT AREAS WITHIN THE MHPA THAT WOULD BE SUBJECT TO MAINTENANCE NOISE LEVELS EXCEEDING 60 DECIBELS [dB(A)] HOURLY AVERAGE FOR THE PRESENCE OF THE COASTAL CALIFORNIA GNATCATCHER. SURVEYS FOR THE COASTAL CALIFORNIA GNATCATCHER SHALL BE CONDUCTED PURSUANT TO THE PROTOCOL SURVEY GUIDELINES ESTABLISHED BY THE U.S. FISH AND WILDLIFE SERVICE WITHIN THE BREEDING SEASON PRIOR TO THE COMMENCEMENT OF ANY MAINTENANCE. IF GNATCATCHERS ARE PRESENT, THEN THE FOLLOWING CONDITIONS MUST BE MET:

   1. BETWEEN MARCH 1 AND AUGUST 15, MAINTENANCE OF OCCUPIED GNATCATCHER HABITAT SHALL BE PERMITTED. AREAS RESTRICTED FROM SUCH ACTIVITIES SHALL BE STAKED OR FENCED UNDER THE SUPERVISION OF A QUALIFIED BIOLOGIST; AND

   2. BETWEEN MARCH 1 AND AUGUST 15, NO MAINTENANCE ACTIVITIES SHALL OCCUR WITHIN ANY PORTION OF THE SITE WHERE MAINTENANCE ACTIVITIES WOULD RESULT IN NOISE LEVELS EXCEEDING 60 dB(A) HOURLY AVERAGE AT THE EDGE OF OCCUPIED GNATCATCHER HABITAT. AN ANALYSIS SHOWING THAT NOISE GENERATED BY MAINTENANCE ACTIVITIES WOULD NOT EXCEED 60 dB(A) HOURLY AVERAGE AT THE EDGE OF OCCUPIED HABITAT MUST BE COMPLETED BY A QUALIFIED ACOUSTICIAN (POSSESSING CURRENT NOISE ENGINEER LICENSE OR REGISTRATION WITH MONITORING NOISE LEVEL EXPERIENCE WITH LISTED ANIMAL SPECIES) AND APPROVED BY THE CITY MANAGER AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT OF MAINTENANCE ACTIVITIES. PRIOR TO THE COMMENCEMENT OF MAINTENANCE ACTIVITIES DURING THE BREEDING SEASON, AREAS RESTRICTED FROM SUCH ACTIVITIES SHALL BE STAKED OR FENCED UNDER THE SUPERVISION OF A QUALIFIED BIOLOGIST; OR

   3. AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT OF MAINTENANCE ACTIVITIES, UNDER THE DIRECTION OF A QUALIFIED ACOUSTICIAN, NOISE ATTENUATION MEASURES (e.g.,

BERMS, WALLS) SHALL BE IMPLEMENTED TO ENSURE THAT NOISE LEVELS RESULTING FROM MAINTENANCE ACTIVITIES WILL NOT EXCEED 60 dB(A) HOURLY AVERAGE AT THE EDGE OF HABITAT OCCUPIED BY THE COASTAL CALIFORNIA GNATCATCHER. CONCURRENT WITH THE COMMENCEMENT OF MAINTENANCE ACTIVITIES AND THE MAINTENANCE OF NECESSARY NOISE ATTENUATION FACILITIES, NOISE MONITORING* SHALL BE CONDUCTED AT THE EDGE OF THE OCCUPIED HABITAT AREA TO ENSURE THAT NOISE LEVELS DO NOT EXCEED 60 dB(A) HOURLY AVERAGE. IF THE NOISE ATTENUATION TECHNIQUES IMPLEMENTED ARE DETERMINED TO BE INADEQUATE BY THE QUALIFIED ACOUSTICIAN OR BIOLOGIST, THEN THE ASSOCIATED MAINTENANCE ACTIVITIES SHALL CEASE UNTIL SUCH TIME THAT ADEQUATE NOISE ATTENUATION IS ACHIEVED OR UNTIL THE END OF THE BREEDING SEASON (AUGUST 16).

* Maintenance noise shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the maintenance activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the ADD environmental designee, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of maintenance equipment and the simultaneous use of equipment.

b. IF COASTAL CALIFORNIA GNATCATCHERS ARE NOT DETECTED DURING THE PROTOCOL SURVEY, THE QUALIFIED BIOLOGIST SHALL SUBMIT SUBSTANTIAL EVIDENCE TO THE CITY MANAGER AND APPLICABLE RESOURCE AGENCIES WHICH DEMONSTRATES WHETHER OR NOT MITIGATION MEASURES SUCH AS NOISE WALLS ARE NECESSARY BETWEEN MARCH 1 AND AUGUST 15 AS FOLLOWS:

1. IF THIS EVIDENCE INDICATES THE POTENTIAL IS HIGH FOR COASTAL CALIFORNIA GNATCATCHER TO BE PRESENT BASED ON HISTORICAL RECORDS OR SITE CONDITIONS, THEN CONDITION A.III SHALL BE ADHERED TO AS SPECIFIED ABOVE.

2. IF THIS EVIDENCE CONCLUDES THAT NO IMPACTS TO THIS SPECIES ARE ANTICIPATED, NO MITIGATION MEASURES WOULD BE NECESSARY.

PALEONTOLOGICAL RESOURCES

Potential impacts to paleontological resources would be reduced to below a level of significance through implementation of the following mitigation measures.

***Mitigation Measure* 4.7.1**: Prior to initiating any maintenance activity where significant paleontological resources may occur within the APE, the following actions shall be taken.

4.7.1.1 Prior to Permit Issuance or Bid Opening/Bid Award

A. Entitlements Plan Check
   1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate maintenance documents.

B. Letters of Qualification have been submitted to ADD
   1. Prior to Bid Award, the applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines.
   2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the project.
   3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program.

4.7.1.2 Prior to Start of Maintenance

A. Verification of Records Search
   1. The PI shall provide verification to MMC that a site specific records search has been completed. Verification includes, but is not limited to a copy of a confirmation letter from San Diego Natural History Museum, other institution or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
   2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.

B. PI Shall Attend Pre-maintenance Meetings
   1. Prior to beginning any work that requires monitoring, the Applicant shall arrange a Pre-maintenance Meeting that shall include the PI, Maintenance Manager (MM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Pre-maintenance Meetings to make comments and/or

suggestions concerning the Paleontological Monitoring program with the Maintenance Manager and/or Grading Contractor.

a. If the PI is unable to attend the Pre-maintenance Meeting, the Applicant shall schedule a focused Pre-maintenance Meeting with MMC, the PI, RE, MM or BI, if appropriate, prior to the start of any work that requires monitoring.

2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects)
The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the paleontological monitoring program.
3. Identify Areas to be Monitored
   a. Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate maintenance documents (reduced to 11x17) to MMC for approval identifying the areas to be monitored including the delineation of grading/excavation limits. Monitoring shall begin at depths below 10 feet from existing grade or as determined by the PI in consultation with MMC. The determination shall be based on site specific records search data which supports monitoring at depths less than ten feet.
   b. The PME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).
   c. MMC shall notify the PI that the PME has been approved.
4. When Monitoring Will Occur
   a. Prior to the start of any work, the PI shall also submit a maintenance schedule to MMC through the RE indicating when and where monitoring will occur.
   b. The PI may submit a detailed letter to MMC prior to the start of work or during maintenance requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final maintenance documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.
5. Approval of PME and Maintenance Schedule
After approval of the PME by MMC, the PI shall submit to MMC written authorization of the PME and Maintenance Schedule from the MM.

4.7.1.3 During Maintenance

A. Monitor Shall be Present During Grading/Excavation/Trenching
   1. The monitor shall be present full-time during grading/excavation/trenching activities including, but not limited to mainline, laterals, jacking and receiving pits, services and all other appurtenances associated with underground utilities as identified on the PME that could result in impacts to formations with high and/or moderate resource sensitivity. **The Maintenance Manager is responsible for notifying the RE, PI, and MMC of changes to any maintenance activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the PME.**

2. The PI may submit a detailed letter to MMC during maintenance requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.
3. The monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR's shall be faxed by the MM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process
1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

C. Determination of Significance
1. The PI shall evaluate the significance of the resource.
   a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.
   b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval of the program from MMC, MC and/or RE. PRP and any mitigation must be approved by MMC, RE and/or MM before ground disturbing activities in the area of discovery will be allowed to resume.
      (1). Note: For pipeline trenching projects only, the PI shall implement the Discovery Process for Pipeline Trenching projects identified below under "D."
   c. If resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.
   d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.
      (1). Note: For Pipeline Trenching Projects Only. If the fossil discovery is limited in size, both in length and depth; the information value is limited and there are no unique fossil features associated with the discovery area, then the discovery should be considered not significant.

(2). Note, for Pipeline Trenching Projects Only: If significance cannot be determined, the Final Monitoring Report and Site Record shall identify the discovery as Potentially Significant.

D. Discovery Process for Significant Resources - Pipeline Trenching Projects
The following procedure constitutes adequate mitigation of a significant discovery encountered during pipeline trenching activities including but not limited to excavation for jacking pits, receiving pits, laterals, and manholes to reduce impacts to below a level of significance.
1. Procedures for documentation, curation and reporting
   a. One hundred percent of the fossil resources within the trench alignment and width shall be documented in-situ photographically, drawn in plan view (trench and profiles of side walls), recovered from the trench and photographed after cleaning, then analyzed and curated consistent with Society of Invertebrate Paleontology Standards. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact and so documented.
   b. The PI shall prepare a Draft Monitoring Report and submit to MMC via the RE as indicated in Section 4.7.1.1-A.
   c. The PI shall be responsible for recording (on the appropriate forms for the San Diego Natural History Museum) the resource(s) encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines. The forms shall be submitted to the San Diego Natural History Museum and included in the Final Monitoring Report.
   d. The Final Monitoring Report shall include a recommendation for monitoring of any future work in the vicinity of the resource.

4.*7.1.4 Night and/or Weekend Work*

A. If night and/or weekend work is included in the contract
1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Pre-maintenance meeting.
2. The following procedures shall be followed.
   a. No Discoveries
   In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSVR and submit to MMC via the RE via fax by 8AM on the next business day.
   b. Discoveries
   All discoveries shall be processed and documented using the existing procedures detailed in Section 4.7.1.3 - During Maintenance.
   c. Potentially Significant Discoveries
   If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section 4.7.1.3 - During Maintenance shall be followed.
   d. The PI shall immediately contact the RE and MMC, or by 8AM on the next business day to report and discuss the findings as indicated in Section 4.7.1.3-

B, unless other specific arrangements have been made.

B. If night and/or weekend work becomes necessary during the course of maintenance
   1. The Maintenance Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
   2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

4.7.1.5 Post Maintenance

A. Preparation and Submittal of Draft Monitoring Report
   1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring,
      a. For significant paleontological resources encountered during monitoring, the Paleontological Recovery Program or Pipeline Trenching Discovery Process shall be included in the Draft Monitoring Report.
      b. Recording Sites with the San Diego Natural History Museum
         The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.
   2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report.
   3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval.
   4. MMC shall provide written verification to the PI of the approved report.
   5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Fossil Remains
   1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and catalogued.

C. Curation of artifacts: Deed of Gift and Acceptance Verification
   1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this project are permanently curated with an appropriate institution.
   2. The PI shall submit the Deed of Gift and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC.
   3. The RE or BI, as appropriate shall obtain signature on the Deed of Gift and shall

return to PI with copy submitted to MMC.

4. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)

1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC of the approved report.
2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

WATER QUALITY

Potential impacts to water quality would be reduced to below a level of significance through implementation of the following mitigation measures.

***Mitigation Measure 4.8.1*:** Prior to commencement of any activity within a specific annual maintenance program, a qualified water quality specialist shall prepare an IWQA for each area proposed to be maintained. The IWQA shall be prepared in accordance with the specifications included in the Master Program. If the IWQA indicates that maintenance would impact a water pollutant where the existing level for that pollutant exceeds or is within 25 percent of the standard established by the San Diego Basin Plan, mitigation measures identified in Table 4.8-8 shall be incorporated into the IMP to reduce the impact to within the established standard for that pollutant.

Table 4.8-8
MITIGATION MEASURES FOR REDUCED POLLUTANT REMOVAL CAPACITY

Mitigation Measure	Pollutant Type						
	Bacteria	Metals	Nutrients	Pesticides	Sediment	TDS/ Chloride Sulfates	Trash
Remove kelp on beaches					●	●	
Sweep streets	●	●	●	●	●	●	●
Retrofit residential landscaping to reduce runoff	●	●	●		●		
Install artificial turf	●	●	●	●	●		●
Install inlet devices on storm drains		●	●		●		
Replace impermeable surfaces with permeable surfaces		●	●		●		●

Table 4.8-8 (cont.)
MITIGATION MEASURES FOR REDUCED POLLUTANT REMOVAL CAPACITY

Mitigation Measure	Pollutant Type						
	Bacteria	Metals	Nutrients	Pesticides	Sediment	TDS/ Chloride Sulfates	Trash
Install modular storm water filtration systems		●	●	●	●	●	●
Install storm water retention basins		●	●	●	●	●	●
Install catch basin media filters		●	●		●	●	●
Create vegetated swales	●	●	●	●	●	●	●
Restore wetlands	●	●	●	●	●	●	●
Install check dams		●			●		●

Mitigation Measure 4.8.2: No maintenance activities within a proposed annual maintenance program shall be initiated before the City's ADD Environmental Designee and state and federal agencies with jurisdiction over maintenance activities have approved the IMPs and IWQAs including proposed mitigation and BMPs for each of the proposed activities. In their review, the ADD Environmental Designee and agencies shall also confirm that the appropriate maintenance protocols have been incorporated into each IMP.

Mitigation Measure 4.8.3: Prior to commencing any activity where the IWQA indicates significant water quality impacts may occur, a pre-maintenance meeting shall be held on site with following in attendance: City's SWD, MM, MMC, and MC. A qualified water quality specialist shall also be present. At this meeting, the water quality specialist shall identify and discuss mitigation measures, protocols and BMPs identified in the IWQA that must be carried out during maintenance. After the meeting, the water quality specialist shall provide DSD with a letter indicating that the applicable mitigation measures, protocols and BMPs identified in the IWQA have been appropriately implemented.

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CHAPTER 12.0

REFERENCES

CHAPTER 12.0 - REFERENCES

Affinis

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Section 7050.5

California Public Resources Code

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City of San Diego

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1995 Pacific Beach Community Plan and Local Coastal Program (LCP) Land Use Plan. February 28.

1994 Balboa Park, East Mesa Precise Plan.

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City of San Diego (cont.)

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City of San Diego (cont.)

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CHAPTER 13.0

INDIVIDUALS AND AGENCIES CONSULTED

CHAPTER 13.0 – INDIVIDUALS AND AGENCIES CONSULTED

California Coastal Commission

Lee McEachern, District Regulatory Supervisor, San Diego District

California Department of Fish and Game

Kelly Fisher, Environmental Scientist

California, San Diego Regional Water Quality Control Board

Chiara Clemente, Senior Environmental Scientist, Central Watershed Unit
Mike Porter, Engineering Geologist, Central Watershed Unit

U.S. Environmental Protection Agency

Elizabeth Goldmann, Environmental Scientist (WTR-8)

U.S. Fish and Wildlife Service

David Zoutendyk, Division Chief, Carlsbad Fish and Wildlife Office
Patrick Gower, Wildlife Biologist, Carlsbad Fish and Wildlife Office

U.S. Army Corps of Engineers

Terry Dean, Project Manager/Ecologist
Robert Smith, Regulatory Project Manager
Meris Bantilan-Smith, Project Manager

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CHAPTER 14.0

CERTIFICATION PAGE

CHAPTER 14.0 – CERTIFICATION PAGE

This PEIR was prepared by the City of San Diego Development Services Division, located at 1222 First Avenue, 5th Floor, San Diego, California 92101. The following professional staff participated in its preparation:

City of San Diego

Development Services Department
- Cecilia Gallardo, Assistant Deputy Director
- Myra Herrmann, Senior Planner
- Patricia Grabski, Development Project Manager
- Gary Geiler, Senior Planner

Engineering and Capital Projects Department
- Kerry Santoro, Section Manager, EPS

City Planning and Community Investment Department
- Jeanne Krosch, Senior Planner, MSCP
- Kristy Forburger, Associate Planner, MSCP

Transportation and Storm Water Department
- Kris McFadden, Deputy Director
- Gus Brown, Assistant Deputy Director
- Daniel Lottermoser, Associate Civil Engineer
- Jake Valencia, Assistant Civil Engineer
- Anne Jarque, Senior Planner
- Bill Tamargo, Public Works Supervisor
- Patty Ten boom Burns, Biologist II
- Ruth Kolb, Program Manager
- Drew Kleis, Program Manager

City Attorney's Office
- Nina Fain, Deputy City Attorney
- Fritz Ortlieb, Deputy City Attorney

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Greg Mason, Principal Biologist
Tammy Ching, Project Director
Bruce McIntyre, Project Manager
Charles Terry, Senior Acoustician
Dawna De Mars, Project Analyst
Julie McCall, Project Analyst

HELIX Environmental Planning (cont.)

Stacy Nigro, Biologist
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Michele Edmonds, Document Specialist
Rene Beight, Document Coordinator

Technical Consultants

Affinis
Mary Robbins-Wade, Principal Archaeologist

Rick Engineering Company
Dennis Bowling, Principal Engineer
Roberta Cronquist, Principal Project Engineer

Weston Solutions, Inc.
David Pohl, Principal Project Manager
William Isham, Senior Scientist

Appendix A.1

NOTICE OF PREPARATION AND RESPONSES

City of San Diego
Development Services Department
LAND DEVELOPMENT REVIEW DIVISION
1222 First Avenue
Mail Station 501
San Diego, CA 92101
(619) 446-5460

Date: **July 15, 2005**

REVISED **NOTICE OF PREPARATION OF A DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT**

THE CITY OF SAN DIEGO will be the Lead Agency and will prepare a draft Program Environmental Impact Report (EIR) for the following project:

PROJECT: **Master Drainage Maintenance Program**. SITE DEVELOPMENT PERMIT AND COASTAL DEVELOPMENT PERMIT to establish a program to systematically maintain concrete and earthen bottom drainage segments City-wide. The Project would have three objectives: 1) Establish a program to maintain, repair, and replace over 70,000 jurisdictional drainage structures, including but not limited to, ditches, pipes, headwalls, curb inlets and outlets, detention and sedimentation basins, and manholes, in a systematic and comprehensive manner.
2) Recognizing a significant number of drainage structures contain wetlands or other environmentally sensitive habitat; identify the most efficient and environmentally sensitive means to implement the program. 3) Obtain all appropriate permits, authorizations, agreements, and clearances from other local, state, and federal regulatory agencies to implement the proposed program. Applicant: Mario Sierra, Deputy Director, City of San Diego, General Services Department.

Project Number: 42891 **SCH No.: Pending**

Based on an Initial Study, it appears that the project may result in significant environmental impacts in the following areas: Land Use, Aesthetics/ Neighborhood Character, Biological Resources, Geology/Soils, Historic Resources, Human Health/ Public Safety/Hazardous Materials, Hydrology/Water Quality, Noise, and Paleontological Resources. In addition, potential significant cumulative impacts may result in the following subject areas: Biological Resources, Historical Resources, Hydrology/Water Quality, and Paleontological Resources.

For more information, or to provide comments on the scope and content of the draft PEIR, contact the following person at the address above: Holly Smit Kicklighter, Associate Planner, (619) 446-5378.

Written comments on the scope and content of the draft PEIR must be sent to the above address by no later than 30 days after receipt of this notice.

Responsible agencies are requested to indicate their statutory responsibilities in connection with this project when responding.

Attachments: Storm Drain Channel Locations and City Council Districts
Storm Drain Channel Locations and Community Planning Areas
Storm Drain Channel Locations and Multiple Habitat Planning Areas
Scoping Letter

Distribution:

Federal Government

U.S. Environmental Protection Agency (19)
U.S. Fish & Wildlife Service (23)
U.S. Army Corps of Engineers (26)
MCAS Miramar (13)

State of California

State Clearinghouse (87)
Air Resources Board (49)
California Environmental Protection Agency (37A)
Regional Water Quality Control Board: Region 9 (44)
California Coastal Commission (47)
California Department of Transportation-Planning (31)
California Department of Fish & Game (32)
California Regional Water Quality Control Board (44)
Resources Agency (43)
Native American Heritage Commission (56)

City of San Diego

Acting Mayor Zucchet/District 2
Councilmember Peters, District 1
Councilmember Atkins, District 3
Councilmember Representative for District 4
Councilmember Maienschein, District 5
Councilmember Frey, District 6
Councilmember Madaffer, District 7
Councilmember Inzunza, District 8
City Attorney's Office, Karen Heumann
General Services (MS 9B)
Engineering & Capital Projects (86)
Fire Department (79)
Library Department (81)
Tom Story – Senior Policy Advisor, Mayors Office (MS 11B)
Historic Resources Board (87)
Wetlands Advisory Board (91A)
Planning Department-MSCP (MS 4A and 5A)
Park and Recreation - Ann Hix (89)
Patricia Grabski, Project Management (MS 301)
Terri Bumgardner, EAS, (MS 501)
Holly Smit Kicklighter, EAS, (MS 501)

Other Organizations and Interested Individuals

San Diego Gas and Electric (MS 114)
Union Tribune City Desk (MS13A)
Dr. Jerry Schaefer (209)
San Diego State University, South Coastal Information Center (210)
San Diego Historical Society (211)

San Diego Archaeological Center (212)
Save Our Heritage Organisation (214)
Ron Christman (215)
Louie Guassac (215A)
San Diego County Archaeological Society (218)
Native American Heritage Commission (222)
Kumeyaay Cultural Repatriation (225)
Native American Distribution (Public Notice Only 225A- R)
Sierra Club (165/165A)
Audubon Society (167)
California Native Plant Society (170)
Center for Biological Diversity (176)
Endangered Habitats League (182)
Metropolitan Transit Development Board (115)
San Diego Transit Corporation (112)
San Diego Chamber of Commerce (157)
San Diego Association of Governments (108)
Environmental Health Coalition (169)
Air Pollution Control District (65)
Ann Van Leer – Land Conservation Brokerage, 4079 Governor Drive, #330, San Diego, CA 92122

From: Holly Smit-Kicklighter
To: Greene, Marianne
Date: 8/31/2005 4:37:14 PM
Subject: Fwd: Master Drainage Maintenance Program - CALTRANS LETTER ON EMAIL

>>> "Virgal Woolfolk" <virgal_woolfolk@dot.ca.gov> 8/30/2005 2:15 PM >>>

Holly:
Below are the comments on the Master Drainage Maintenance Program

August 10, 2005

11-SD VAR
Revised NOP/DEIR for the
Master Drainage Maintenance
Program
SCH # 2004101032

Mr. Scott Morgan
State Clearinghouse
1400 Tenth Street
Sacramento, CA 92583

Dear Mr. Morgan:

The California Department of Transportation (Caltrans) has reviewed the "Revised Notice of Preparation of a Draft Program Environmental Impact Report (RNOP/PEIR) for the Master Drainage Maintenance Program". However, the document was vacant of any amplifying information that related to Transportation/Circulation impacts to allow direct comment by this agency.

It is understood the purpose of the project includes:
Establishing a program to maintain, repair, and replace over 70,000 jurisdictional drainage structures, including but not limited to, ditches, pipes, headwalls, curb and inlets and outlets, detention and sedimentation basins, and manholes.
Recognize significant number of drainage structures that may contain wetlands or other environmental sensitive habitat.
Obtain all appropriate permits, authorizations, agreements and clearances from other local, state, and federal regulatory agencies to implement the proposed program.

Caltrans has no doubt the City of San Diego will prepare the necessary environmental documents for the proposed project. Nonetheless, in order for the Caltrans encroachment permit process to proceed as smoothly as possible, the environmental documents should specifically address the potential impacts and proposed mitigation from those impacts that could occur within Caltrans right-of-way.

① ENCROACHMENT PERMITS + IMPACTS

Those potential impacts that will require review will include, but are not limited to, visual impacts, possible biological impacts and cultural impacts.

It should be noted that the following comments are preliminary, and are subject to change once we receive a complete project description that takes in account potential, significant or cumulative impacts associated with the Transportation/Circulation elements for this proposed draft PEIR. However, based on the above-mentioned scope-of-work, and the fact the project boundary is so considerable, we have the following comments:

Caltrans' goal is to make certain potential direct impacts to the state highway system be eliminated or reduced to a level of insignificance pursuant to the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) standards. Mitigation measures must be included in all environmental studies and or feasibility reports.

The Master Drainage Maintenance Program may require a traffic impact study (TIS). If so, it should be in accordance with Caltrans Guide for the Preparation of Traffic Impact Studies, dated January 2001 (TIS guide). Minimum contents of the traffic impact study are listed in Appendix "A" of the TIS guide.

(2) TRAFFIC IMPACT STUDY

The scope of the TIS, if required, would have to be very comprehensive. This will entail analyzing State and City of San Diego transportation facilities for potential traffic impacts and should include analyzing associated State Route intersections and Interstate interchanges.

The TIS must include an intersection sight distance analysis for the streets and driveways that would intersect State facilities that are proposed for drainage structural improvements.

It should be determined if grading would modify the existing drainage that would otherwise cause increased runoff to state facilities.

All lighting (including reflected sunlight) for this proposed project should be placed and/or shielded so as not to be hazardous to vehicles traveling.

Improvement plans for construction within the State right of way must include: typical cross sections, adequate structural section, traffic handling plans and signing and striping plans stamped by a professional engineer.

All roadway features (e.g., signs, pavement delineation, roadway surface, etc.) within the State right-of-way must be protected, maintained in a temporary condition, and/or restored.

Traffic Control Plans are required prior to construction. The plans shall be in accordance with the Department's Manual of Traffic Controls for Construction and Maintenance Work Zones [1996 (revision 2) edition]. Traffic restrictions and pedestrian / bicycle detours may also need to be addressed.

The City of San Diego, as lead agency, should review air quality impacts based on regional impact levels. Any related highway project associated with this project must be included in the next cycle of the Regional Transportation Plan (RTP) and the Regional Transportation Improvement Plan (RTIP).

Any work performed within the Caltrans (R/W) will require an encroachment permit. For the portion of the project within the Caltrans R/W, the permit application must be stated in both

English and Metric units (Metric first, with English in parentheses). Additional information regarding encroachment permits can be obtained by contacting our Permits Office at (619) 688-6158. Early coordination with our agency is strongly advised for all encroachment permits.
If the project entails any work or improvements within the Caltrans R/W, the projects environmental studies must include such work. The project proponent is responsible for quantifying the environmental impacts of the improvements (project level analysis) and completing all appropriate mitigation measures for the impacts. The indirect effects of any mitigation within Caltrans R/W must also be addressed. The project proponent will also be responsible for obtaining any necessary permits or approvals from the regulatory and resource agencies for the improvements.

If you have any questions, please contact Mr. Virgal Woolfolk, Development Review Branch, at (619) 688-2510.

Sincerely,

MARIO H. ORSO, Chief
Development Review Branch

Cc: MPowers
EGojuangco
JMarkey
BMcDonald
ACox
DLoh
Ms. Smit-Kicklighter – City of San Diego

From: Holly Smit-Kicklighter
To: Gaubatz, Carol
Date: 8/31/2005 4:49:43 PM
Subject: Re: SCH# 2005101032

Thanks Carol - It worked! Could you also possibly email me the list of contact people so we have that in our system as well. Thank you, Holly

Holly A. (Smit) Kicklighter, M.A.
Associate Environmental Planner
City of San Diego, DSD, LDR, EAS
1222 First Ave, SD, CA 92101, MS 501
619-446-5378 ph
619-446-5499 fx
hsmit@sandiego.gov

>>> "Carol Gaubatz" <cg_nahc@pacbell.net> 8/31/2005 4:34 PM >>>
Per your request...

August 3, 2005

Holly Smit-Kicklighter
City of San Diego
1222 First Ave., MS-501
San Diego, CA 92101

Re: Master Drainage Maintenance Program
SCH# 2005101032

Dear Ms. Smit-Kicklighter:

Thank you for the opportunity to comment on the above referenced project. The Commission was able to perform a record search of its Sacred Lands File for the project area. The record search indicates the potential presence of Native American cultural resources that may be impacted by the proposed project. The locations of the Sacred Lands File sites are confidential. However, the individuals listed below may be able to provide you with information concerning sacred sites in the project area and assist in the development of mitigation measures.

(El Cajon/San Vicente quadrangles)
James Robertson, Ewiiaapaayp EPA Office
4208 Willows Road, Alpine, CA 91903 (619) 445-6315

(Escondido quadrangle)
Mark Mojado, San Luis Rey Band of Luiseno Indians
1889 Sunset Drive, Vista, CA 92081 (760) 724-4468

I have also enclosed a list of Native American individuals/organizations that may have knowledge of additional cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. The Commission makes no recommendation of a single individual or group over another. Please contact all those listed; if they cannot supply you with specific information, they may be able to recommend others with specific knowledge. By contacting all

those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If you have not received a response within two weeks' time, we recommend that you follow-up with a telephone call to make sure that the information was received.

If you learn of any change of address or telephone number from any of these individuals or groups, please notify me. With your assistance we will be able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-6251.

Sincerely,

Carol Gaubatz
Program Analyst

Cc: James Robertson
Mark Mojado