

California Regional Water Quality Control Board, San Diego Region

November 20, 2013

Certified Mail – Return Receipt Requested
Article Number: 7011 0470 0002 8961 6091

Mr. Mike Handal
City of San Diego
Engineering and Capital Projects
600 B Street, Suite 800, MS 908
San Diego, CA 92101

In reply refer to:
752221: amonji

Subject: Clean Water Act Section 401 Water Quality Certification No. 10C-033; Alta La Jolla Drive Drainage Repair Project, Phase 2

Mr. Handal:

Enclosed find Clean Water Act Section 401 Water Quality Certification No. 10C-033 (Certification) and acknowledgment of enrollment under State Water Resources Control Board Order No. 2003-017-DWQ for the **Alta La Jolla Drive Drainage Repair Project, Phase 2** (Project). A description of the Project and Project location can be found in the Certification, location map, and site maps which are included as attachments to the Certification.

Any petition for reconsideration of this Certification must be filed with the State Water Resources Control Board within 30 days of certification action (23 CCR § 3867). If no petition is received, it will be assumed that you have accepted and will comply with all the conditions of this Certification.

Failure to comply with all conditions of this Certification may subject the City of San Diego to enforcement actions by the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), including: administrative enforcement orders requiring you to cease and desist from violations, or to clean up waste and abate existing or threatened conditions of pollution or nuisance; administrative civil liability in amounts of up to \$10,000 per day per violation; referral to the State Attorney General for injunctive relief; and, referral to the District Attorney for criminal prosecution.

TOMÁS MORALES, CHAIR | DAVID GIBSON, EXECUTIVE OFFICER

2375 Northside Drive, Suite 100, San Diego, CA 92108-2700 | (619) 516-1990 | www.waterboards.ca.gov/sandiego



In the subject line of any response, please include the reference number 752221:amonji. For questions or comments, please contact Alan Monji by phone at (619) 521-3968 or by email at Alan.Monji@waterboards.ca.gov.

Respectfully,



DAVID W. GIBSON
Executive Officer
San Diego Water Board

DG:js:db:kd:atm

Enclosure:

Clean Water Act Section 401 Water Quality Certification No. 10C-033 for Alta La Jolla Drive Drainage Project, with 4 attachments.

E-copies: Refer to Attachment 1 of Certification 10C-033 for Distribution List.

Tech Staff Info & Use	
File No.	10C-033
WDID	9000002066
Reg. Measure ID	374080
Place ID	752221
Party ID	522321



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

California Regional Water Quality Control Board, San Diego Region

Action on Request for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Discharge of Dredged and/or Fill Materials

PROJECT: Alta La Jolla Drive Drainage Repair Project, Phase 2
Certification Number 10C-033
WDID: 9 000002066

Reg. Meas. ID: 374080
Place ID: 752221
Party ID: 522321

APPLICANT: City of San Diego
600 B Street, Suite 800
San Diego, CA 92101

ACTION:

<input type="checkbox"/> Order for Low Impact Certification	<input type="checkbox"/> Order for Denial of Certification
<input checked="" type="checkbox"/> Order for Technically-conditioned Certification	<input type="checkbox"/> Waiver of Waste Discharge Requirements
<input checked="" type="checkbox"/> Enrollment in SWRCB GWDR Order No. 2003-017 DWQ	<input type="checkbox"/> Enrollment in Isolated Waters Order No. 2004-004 DWQ

PROJECT DESCRIPTION

The City of San Diego (hereinafter Applicant) submitted an application for Water Quality Certification pursuant to section 401 of the Clean Water Act for the Alta La Jolla Canyon Drainage Repair Project, Phase 2 (hereinafter referred to as Project) to the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) on April 25, 2010. The Applicant proposes to discharge fill material to waters of the United States and/or State associated with construction activity at the Project site.

The Project is a 7.9 acre site located in the southern portion of Alta La Jolla Canyon in the City of San Diego, California. The Project is bordered by Alta La Jolla Drive to the north and Vicki Drive to the south. The Project consists of grading and fill activities to stabilize canyon slopes to protect adjacent homes, activities to repair and restore a severely incised drainage channel, construction of a storm drain system to restore the hydraulics in the restored channel, and construction of a detention basin to improve water quality and attenuate 100-year peak flood events, to the extent possible.

The Project is being constructed in two phases:

Phase 1

Phase 1 was conducted as an emergency construction project between October 2007 and March 2008 under a United States Army Corps of Engineers (USACE) Regional General Permit 63 (RGP 63) action. The purpose of Phase 1 was to stabilize the northwestern canyon slope and to divert runoff entering the Project from three of the storm drain outlets into three separate drain pipes. Phase 1 included grading activities to create an earthen buttress in the northern portion of the Project and to construct a temporary construction access road from Vickie Drive to the northern Project limits on the western slope. In excess of 45 feet of fill was placed within the deepest portions of the eroded channel to reconstruct the earth buttress along the northwestern slope toes. Three corrugated metal pipe (CMP) storm drains were installed to collect and channelize runoff from Calle Alta, Calle Candela, Alta La Jolla Drive, and the canyons north of Alta La Jolla Drive. The ephemeral channel was diverted into a 660 foot long 42-inch diameter CMP storm drain designed with an energy dissipater, clean out, and concentrate collar at the outlet.

Upon completion of Phase 1 construction activities, the soil surface in the disturbed areas was furrowed in preparation for stabilization and hydroseeding. Coco-matting was installed over 2.43 acres to stabilize disturbed soil and approximately 4.27 acres, including the construction road and temporary staging areas, were hydroseeded with a Coastal Sage Scrub mix. Phase 1 resulted in a permanent loss of 0.17 acres (1,060 linear feet (LF)) of waters of the State and 0.06 acres (1,060 LF) of jurisdictional waters of the United States. As part of the RGP 63 Special Condition 4, mitigation for impacts in Phase 1 was deferred to an after the fact mitigation plan which is part of Phase 2.

Phase 2

Phase 2 construction, which is the current Project, includes final stabilization of the channel and other disturbed areas within the Project foot print and mitigation of environmental damage associated with both phases of the Project. Phase 2 earthwork activities include grading to improve the surface drainage in the Phase 1 area and grading to restore the Phase 2 drainage channel. To minimize scour of the earthen buttress, runoff from Calle Alta, Calle Candela, Alta La Jolla Drive, and the watershed north of Alta La Jolla Drive will continue to be conveyed through storm drain lines in the northern portion of the Project area (Phase 1). The 660-foot long 42-inch CMP storm drain line installed in the main channel during Phase 1 will be replaced with a 42-inch reinforced concrete pipe (RCP) to meet City of San Diego specifications. The two tributary storm drain lines on the western slope will be replaced with a 24-inch RCP and an 18-inch RCP. A fourth 24-inch RCP storm drain line will be installed on the eastern slope to capture runoff from Alta La Jolla Drive in the central portion of the Project area. The three tributary storm drain lines will be discharged into the Phase 2, 42-inch RCP storm drain line. Two permanent unimproved maintenance roads will be installed in the southern and northern portions of the Project, totaling 0.54 acres. A temporary staging area (0.16 acres) will be constructed in the southern portion of the Project site within the footprint of the proposed detention basin.

The 42-inch RCP installed in the main channel will discharge to a concrete energy dissipater (CED) which is the starting point for the Phase 2 channel design. The CED will be designed with a weir to split the discharge flows to two drainage systems within the canyon; one underground and one above ground. The first drainage system consists of a 36-inch RCP storm drain that will transition to a 42-inch RCP storm drain at the confluence with the two tributary RCP drainages downstream of the CED installed on the eastern and west slopes of the canyon. This pipe will convey excess flows resulting from the urbanized watershed during high flow events, from the CED at the toe of the buttress to a 4.64 acre foot capacity (0.67 acre) detention basin located at the southeastern portion of the Project. The detention basin will be designed to capture and treat as much of the 85th percentile storm flows as possible and will help attenuate the increase in the 100-year flood peak. The detention basin is designed to drain within 48 hours to avoid vector control issues from mosquitos. The second drainage system will consist of dry weather flows diverted to the restored natural channel within the canyon by the weir built into the CED. The flows from the restored channel will flow into an existing storm water inlet at the base of Vickie Drive. During high storm flow events, excess flows not diverted to the 42-inch RCP will flow into the natural channel. All flows from the Project will drain into an existing City of San Diego storm drain which discharges into the Pacific Ocean at Tourmaline Beach, approximately 1.5 miles southwest of the Project location. The Phase 2 project also includes the implementation of compensatory mitigation for both Phases 1 and 2 as part of the Project to be undertaken.

The Project application includes a description of the design objective, operation, and degree of treatment expected to be attained from equipment, facilities, or activities (including construction and post-construction best management practices) to treat waste and reduce runoff or other effluents which may be discharged. Compliance with the Certification conditions will help ensure that construction and post-construction discharges from the Project site do not cause onsite or offsite downstream erosion, damage to downstream properties, or otherwise damage to stream habitats in violation of water quality standards in the *Water Quality Control Plan for the San Diego Region (9)* (Basin Plan).

The Applicant reports that the construction of the Phase 2 portion of the Project will temporarily impact 0.36 acres of waters of the State and 0.12 acres (1,340 LF total) of waters of the United States, and will permanently impact 0.06 acres (190 LF) of waters of the State and 0.02 acres (190 LF total) of waters of the United States. The Applicant reports that the Project purpose cannot be practically accomplished in a manner which would avoid or result in less adverse impacts to aquatic resources considering all potential practicable alternatives, such as the potential for alternate available locations, designs, reductions in size, configuration or density.

Compensatory mitigation for the permanent loss of 0.17 acres (1,060 LF) in Phase 1 and 0.06 acres (190 LF) in Phase 2 and temporary impacts of 0.36 acres (1,340 LF total) will be achieved through the rehabilitation of 0.32 acres (1,270 LF) of waters of the United States and/or State that will occur in the bed and banks of the Project site. In addition, enhancement, in the form of pampas grass eradication, will take place along 0.22 acres (1,250 LF) of jurisdictional waters of the United States and/or State in the natural channel in Kate Sessions

Memorial Park, an area protected within the City of San Diego's Multiple Habitat Preservation Areas (MHPA) under the City of San Diego's Multiple Species Conservation Plan (MSCP). These areas are subject to perpetual stewardship agreements between the California Department of Fish and Wildlife (CDFW), United States Fish and Wildlife (USFWS), and City of San Diego under permits issued through section 10a of the Endangered Species Act, and section 2835 of the California Department of Fish and Game Code.

Site grading, including the initial clearing and grubbing, is anticipated to begin in fall of 2013 and will take approximately eight months to complete.

TABLE OF CONTENTS

I. STANDARD CONDITIONS.....	6
II. GENERAL CONDITIONS	6
III. CONSTRUCTION BEST MANAGEMENT PRACTICES	8
IV. POST-CONSTRUCTION BEST MANAGEMENT PRACTICES.....	9
V. COMPENSATORY MITIGATION	10
VI. NOTIFICATION REQUIREMENTS.....	13
VII. REPORTING REQUIREMENTS.....	15
VIII. CEQA FINDINGS	18
IX. PUBLIC NOTIFICATION OF PROJECT APPLICATION.....	18
X. SAN DIEGO WATER BOARD CONTACT PERSON.....	19

1. Distribution List
2. Location Maps
3. Site Plans
4. Alternative Analysis

I. STANDARD CONDITIONS

Pursuant to section 3860 of Title 23 of the California Code of Regulations (23 CCR), the following three standard conditions apply to all water quality certification actions:

- A. This Certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the Water Code and Article 6 (commencing with section 3867 of 23 CCR).
- B. This Certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility and requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent Certification application was filed pursuant to 23 CCR subsection 3855(b), and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
- C. This Certification action is conditioned upon total payment of any fee required under chapter 28 (commencing with section 3830) of 23 CCR and owed by the applicant.

II. GENERAL CONDITIONS

- A. Water Quality Certification No. 10C-033 (Certification) is only valid if the Project begins no later than 5 (five) years from the date of issuance. If the Project has not begun within 5 years from the date of issuance, then this Certification shall expire five (5) years from the date of issuance.
- B. The Applicant must comply with the requirements of State Water Resources Control Board Water Quality Order No. 2003-0017-DWQ, *Statewide General Waste Discharge Requirements for Discharges of Dredged or Fill Material that have Received State Water Quality Certification*. These General Waste Discharge Requirements are accessible at:
http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/generalorders/gowdr401regulated_projects.pdf.
- C. The Applicant must, at all times, fully comply with the engineering plans, specifications and technical reports submitted to the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), to support this Certification and all subsequent submittals required as part of this Certification. The conditions within this Certification must supersede conflicting provisions within such plans submitted prior to the Certification action. Any modifications thereto, shall require notification to the San Diego Water Board and reevaluation for individual Waste Discharge Requirements and/or Certification amendment.

- D. During construction, the Applicant shall maintain a copy of this Certification at the project site. This Certification must be available at all times to site personnel and agencies.
- E. The Applicant must allow the San Diego Water Board or the State Water Resources Control Board, and/or their authorized representative(s) (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents as may be required under law, to:
1. Enter upon the Project premises where a regulated facility or activity is located or conducted, or in which records are kept under the conditions of this Certification.
 2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this Certification.
 3. Inspect and photograph, at reasonable times, any facilities (including monitoring and control equipment), practices or operations required or regulated under this Certification.
 4. Sample or monitor, at reasonable times, for the purposes of assuring Certification compliance, or as otherwise authorized by the Clean Water Act or California Water Code (Water Code), any substances or parameters at any location.
- F. In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation must be subject to any remedies, penalties, process or sanctions as provided for under State law. For purposes of section 401(d) of the Clean Water Act, the applicability of any State law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Certification.
- G. In response to a suspected violation of any condition of this Certification, the San Diego Water Board may, pursuant to Water Code sections 13267 and 13383, require the holder of any permit or license subject to this Certification to investigate, monitor, and report information on the violation. The only restriction is that the burden, including costs of preparing the reports, must bear a reasonable relationship to the need for and the benefits to be obtained from the reports.
- H. In response to any violation of the conditions of this Certification, or if the results of the Project have unintended impacts to water quality, the San Diego Water Board may modify the conditions of this Certification as appropriate to ensure compliance.

III. CONSTRUCTION BEST MANAGEMENT PRACTICES

- A. Prior to the start of the Project, and annually thereafter, the Applicant must educate all personnel on the requirements in this Certification, pollution prevention measures, spill response measures, and Best Management Practices (BMPs) implementation and maintenance.
- B. The Applicant must, at all times, maintain appropriate types and sufficient quantities of materials on-site to contain any spill or inadvertent release of materials that may cause a condition of pollution or nuisance if the materials reach waters of the United States and/or State.
- C. The Applicant must obtain coverage under, and comply with, the requirements of State Water Resources Control Board Water Quality Order No. 2009-0009-DWQ, the *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activity*, (General Construction Storm Water Permit) and any reissuance as applicable. If the Project construction activities are not covered under the General Construction Storm Water Permit, the Applicant must develop and implement a runoff management plan (or equivalent construction BMP plan) to prevent the discharge of sediment and other pollutants during construction activities.
- D. The Applicant must properly manage, store, treat, and dispose of wastes in accordance with applicable federal, state, and local laws and regulations. The storage, handling, treatment, or disposal of waste shall not create conditions of pollution, contamination or nuisance as defined in Water Code section 13050.
- E. Discharges of concentrated flow during construction or after completion must not cause downstream erosion or damage to properties or stream habitat.
- F. Water containing mud, silt, or other pollutants from equipment washing or other activities, must not be discharged to waters of the United States and/or State or placed in locations that may be subjected to storm flows. Pollutants discharged to areas within a stream diversion area must be removed at the end of each work day or sooner if rain is predicted.
- G. All surface waters, including ponded waters, must be diverted away from areas undergoing grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water. Diversion activities must not result in the degradation of beneficial uses or exceedance of water quality objectives of the receiving waters. Any temporary dam or other artificial obstruction constructed must only be built from materials such as clean gravel which will cause little or no siltation. Normal flows must be restored to the affected stream immediately upon completion of work at that location.

- H. All areas that have 14 or more days of inactivity must be stabilized within 14 days of the last activity. The Applicant is responsible for implementing and maintaining BMPs to prevent erosion of the rough graded areas. After completion of grading, all areas must be revegetated with native species appropriate for the area. The revegetation palette must not contain any plants listed on the California Invasive Plant Council Invasive Plant Inventory, which can be found online at <http://www.cal-ipc.org/ip/inventory/weedlist.php>.
- I. Except as authorized by this Certification, substances hazardous to aquatic life including, but not limited to, petroleum products, raw cement/concrete, asphalt, and coating materials, must be prevented from contaminating the soil and/or entering waters of the United States and/or State. BMPs must be implemented to prevent such discharges during each project activity involving hazardous materials.
- J. Removal of vegetation must occur by hand, mechanically, or using United States Environmental Protection Agency (USEPA) approved herbicides deployed using applicable BMPs to prevent impacts to beneficial uses of waters of the United States and/or State. Use of aquatic pesticides must be done in accordance with State Water Resources Control Board Water Quality Order No. 2004-0009-DWQ, the *Statewide General National Pollution Discharge Elimination System Permit for the Discharge of Aquatic Weed Control in Waters of the United States*, and any subsequent reissuance as applicable. Removal of vegetation must occur outside of the avian nesting season (March 15- August 31), unless prior biological surveys are conducted in accordance with authorizations issued by the CDFW and consistent with the MSCP requirements that demonstrate absence of breeding within the clearing area.

IV. POST-CONSTRUCTION BEST MANAGEMENT PRACTICES

- A. The Applicant shall not allow post-construction discharges from the Project site to cause onsite or offsite downstream erosion or damage to properties or stream habitats.
- B. All storm drain inlet structures within the Project boundaries must be stamped and/or stenciled (or equivalent) with appropriate language prohibiting non-storm water discharges.
- C. The Project must be designed to comply with the City of San Diego *Storm Water Standards*¹, dated January 20, 2012.
- D. All post-construction BMPs must be implemented, installed, and functional prior to construction completion and planned use; and maintained in perpetuity in accordance

¹ The City of San Diego *Storm Water Standards* can be accessed at: <http://www.sandiego.gov/development-services/news/pdf/stormwatermanual.pdf>

with the City of San Diego or most recent California Stormwater Quality Association (CASQA)² guidance.

V. PROJECT IMPACTS AND COMPENSATORY MITIGATION

- A. The Project must avoid and minimize adverse impacts to the aquatic environment to the maximum extent practicable.
- B. Unavoidable impacts to the unnamed tributary in Alta La Jolla Canyon, within the Los Penasquitos Watershed, must not exceed the type of impacts and amounts described in the table below. At a minimum, compensatory mitigation required to offset unavoidable Project impacts to waters of the United States and/or State must be achieved as follows:

	Impacts (acres)	Impacts (linear ft.)	Mitigation for Impacts (acres)	Mitigation for Impacts (linear ft.)	Mitigation Ratio (area mitigated :area impacted)
Permanent Impacts					
Streambed Phase 1	0.17 ¹	1,060 ⁴	Rehabilitation ⁵ 0.32	Rehabilitation ⁵ 1,270	1.9:1
Streambed Phase 2	0.06 ²	190 ⁴	Enhancement ^{6,7} 0.22	Enhancement ^{6,7} 1,250	3.7:1
Temporary Impacts					
Streambed Phase 2	0.36 ³	1,340 ⁴	0.36	1,340	1:1

1. Waters of the United States = 0.06 acres
2. Waters of the United States = 0.02 acres
3. Waters of the United States = 0.12 acres
4. Waters of the United States and State
5. Rehabilitation of the unnamed drainage in Alta La Jolla Canyon
6. Enhancement in the form of pampas grass removal at Kate Sessions Park
7. Assume 4-ft wide channel (waters of the United States)

- C. Compensatory mitigation for permanent discharges to 0.23 acres (1,250 LF total) of waters of the United States and State must be achieved as described in the *Alta La Jolla Drive Drainage Repair Project, Phase 2 Compensatory Mitigation and Monitoring Plan* (Mitigation Plan), prepared by Rocks Biological Consulting, dated June 2011 (and any subsequent versions reviewed and accepted by the San Diego Water Board). The Applicant must fully and completely implement the Mitigation Plan; any deviations from, or revisions to, the Mitigation Plan must be pre-approved by the San Diego Water

² California Storm Water Quality Association (*California Storm Water BMP Handbook, New Development and Redevelopment 2003*), available on-line at: <http://www.cabmphandbooks.org/> [Accessed on January 15, 2012]

Board. San Diego Water Board acceptance of the final mitigation plan applies only to the Project described in this Certification and must not be construed as approval for other current or future projects that are planning to use additional acreage at the site for mitigation.

- D. Compensatory mitigation for permanent and temporary discharges to waters of the State and the United States and/or State must be achieved as follows in conformance with the Mitigation Plan :
1. Rehabilitation: Mitigation for permanent discharges of fill into streambed waters of the United States and/or State shall be achieved by the rehabilitation of no less than 0.32 acres of streambed waters in Alta La Jolla Canyon. The 0.32 acres shall serve as mitigation exclusively for this Project.
 2. Enhancement - Kate Sessions Park: Mitigation for permanent discharges of fill into streambed waters of the United States and/or State shall be achieved by the enhancement in the form of pampas grass eradication of no less than 0.22 acres of streambed waters of the United States and/or State in Kate Sessions Park. The proposed removal of the pampas grass includes an initial herbicide treatment between July and November, followed by an assessment of the treatment area within one year. Any live leaf blades found will be re-sprayed and the area will be resurveyed for new pampas grass seedlings. New pampas grass seedlings will be immediately treated with herbicide. The area will be re-surveyed within two years of the initial treatment to ensure that all pampas grass is controlled in the area.
- E. The stream rehabilitation design shall allow flows to sinuate naturally within the channel banks with no berms, channelization, man-made constraints or barriers constructed in the restored drainage channel. Natural rock and cobble will be placed to dissipate flows and prevent scour in the channel bed.
- F. Compensatory mitigation required under this Certification shall be considered as achieved once it has met the ecological success performance standards contained in the Mitigation Plan.
- G. The construction of proposed mitigation must be concurrent with Project grading and completed no later than 9 months following the initial discharge of dredge or fill material into on-site waters. Delays in implementing mitigation must be compensated by an increased mitigation implementation of 10 percent of the cumulative compensatory mitigation for each month of delay.
- H. Where practical, the Applicant must salvage leaf litter, coarse woody debris, and top soil from impacted jurisdictional water sites that are relatively free of invasive exotic species for use in on-site mitigation areas.

- I. The Applicant must restore all areas of temporary impacts and all other areas of temporary disturbance which could result in a discharge or a threatened discharge to waters of the United States and/or State. Restoration must include grading of disturbed areas to pre-Project contours and revegetation with native species. The Applicant must implement all necessary BMPs to control erosion and runoff from areas associated with the Project.
- J. The mitigation sites must be maintained, in perpetuity, free of perennial exotic plant species including, but not limited to, pampas grass, giant reed, tamarisk, sweet fennel, tree tobacco, castor bean, and pepper tree. Annual exotic plant species must not occupy more than 5 percent of the on-site or off-site mitigation areas.
- K. The compensatory mitigation site(s), must be protected and maintained, in perpetuity, in conformance with the final ecological success performance standards identified in the Mitigation Plan. The aquatic habitats, riparian areas, buffers, and uplands that comprise the mitigation site(s) must be protected in perpetuity from land-use and maintenance activities that may threaten water quality or beneficial uses within the mitigation area. If at any time during the implementation and establishment of the mitigation area(s), and prior to verification of meeting success criteria, a catastrophic natural event (e.g., fire, flood) occurs and impacts the mitigation area, the Applicant is responsible for repair and replanting of the damaged area(s).
- L. For the purpose of determining mitigation credit for the removal of exotic/invasive plant species, only the actual area occupied by exotic/invasive plant species shall be quantified to comply with mitigation requirements.
- M. For purposes of this Certification, establishment is defined as the creation of vegetated or unvegetated waters of the United States and/or State where the resource has never previously existed (e.g. conversion of nonnative grassland to a freshwater marsh). Restoration is divided into two activities, re-establishment and rehabilitation. Re-establishment is defined as the return of natural/historic functions to a site where vegetated or unvegetated waters of the United States and/or State previously existed (e.g., removal of fill material to restore a drainage). Rehabilitation is defined as the improvement of the general suite of functions of degraded vegetated or unvegetated waters of the United States and/or State (e.g., removal of a heavy infestation or monoculture of exotic plant species from jurisdictional areas and replacing with native species). Enhancement is defined as the improvement to one or two functions of existing vegetated or unvegetated waters of the United States and/or State (e.g., removal of small patches of exotic plant species from an area containing predominantly natural plant species). Preservation is defined as the acquisition in fee or easement and legal protection from future impacts in perpetuity of existing vegetated or unvegetated waters of the United States and/or State (e.g., conservation easement). In the case of the mitigation areas for the Project, both are located within MHPAs of the MSCP and are considered to have the requisite protection status.

VI. MONITORING REQUIREMENTS

- A. **California Rapid Assessment Method.** Prior to initiating Project construction, the Applicant shall develop a monitoring plan to implement the California Rapid Assessment Method (CRAM)³ for the unnamed ephemeral drainage in Alta La Jolla Canyon. The Applicant must conduct a quantitative function-based assessment of the health of streambed habitat to establish baseline conditions, set success criteria, and assess site progress in the unnamed ephemeral drainage in Alta La Jolla Canyon. CRAM monitoring must be conducted prior to the start of construction authorized under this Certification and years three and five following construction completion. The CRAM results shall be reported with the applicable **Annual Progress Report**. An evaluation, interpretation, and tabulation of all the CRAM assessment data shall be included in the final Project Annual Progress Report.
- B. **Progress Monitoring.** The Applicant must monitor compliance with this Certification, including BMP implementation, and report the monitoring results to the San Diego Water Board in accordance with the reporting requirements in section VIII of this Certification.
- C. The San Diego Water Board may make revisions to the monitoring program at any time during the five-year monitoring term, and may reduce or increase in the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.

VII. NOTIFICATION REQUIREMENTS

- A. The Applicant must report to the San Diego Water Board any noncompliance which may endanger human health or the environment. Any information shall be provided orally within **24 hours** from the time the Applicant becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Applicant becomes aware of the circumstances. The written submission shall contain a description of the incident and its cause, the period of the noncompliance including exact dates and times, and if the and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The San Diego Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours.
- B. This Certification is not transferable in its entirety or in part to any person except after notice to the Executive Officer of the San Diego Water Board in accordance with the following terms.

³ Information on CRAM is available at the California Rapid Assessment Method homepage at <http://www.cramwetlands.org/>

1. **Transfer of Property Ownership:** The Applicant must notify the San Diego Water Board of any change in ownership of the Project area. Notification of change in ownership must include, but not be limited to a statement that the Applicant has provided the purchaser with a copy of the Section 401 Water Quality Certification and that the purchaser understands and accepts the certification requirements and the obligation to implement them or be subject to liability for failure to do so. The seller and purchaser must sign and date the notification and provide such notification to the Executive Officer of the San Diego Water Board **within 10 days of the transfer of ownership.**
2. **Transfer of Mitigation Responsibility:** Any notification of transfer of responsibilities to satisfy the mitigation requirements set forth in this Certification must include a signed statement from an authorized representative of the new party (transferee) demonstrating acceptance and understanding of the responsibility to comply with and fully satisfy the mitigation conditions and agreement that failure to comply with the mitigation conditions and associated requirements may subject the transferee to enforcement by the San Diego Water Board under Water Code section 13385, subdivision (a). Notification of transfer of responsibilities meeting the above conditions must be provided to the San Diego Water Board **within 10 days of the transfer date.**
3. **Transfer of Post-Construction BMP Maintenance Responsibility:** The Applicant assumes responsibility for the inspection and maintenance of all post-construction structural BMPs until such responsibility is legally transferred to another entity. At the time maintenance responsibility for post-construction BMPs is legally transferred, the Applicant must submit to the San Diego Water Board a copy of such documentation and must provide the transferee with a copy of a long-term BMP maintenance plan that complies with manufacturer specifications. Notification of transfer of responsibilities meeting the above conditions must be provided to the San Diego Water Board **within 10 days of the transfer date.**

Upon properly noticed transfers of responsibility, the transferee assumes responsibility for compliance with this Certification and references in this Certification to the Applicant will be interpreted to refer to the transferee as appropriate. Transfer of responsibility does not necessarily relieve the Applicant of this Certification in the event that a transferee fails to comply.

- C. The Applicant must notify the San Diego Water Board in writing **at least 5 days prior to the actual commencement of dredge, fill, and discharge activities.**
- D. **Within 60 days from the start of construction,** the Applicant must provide the San Diego Water Board a draft preservation mechanism (e.g. deed restriction, conservation easement, etc.) that will protect all mitigation areas and their buffers in perpetuity. **Within one year of the issuance of this Certification,** the Applicant must submit proof of the completed conservation easement protecting all mitigation areas and their buffers

in perpetuity. The conservation easement, deed restriction, or other legal limitation on the mitigation property must be adequate to demonstrate that the site will be maintained without future development or encroachment on the site which could otherwise reduce the functions and values of the site for the variety of beneficial uses of waters of the State that it supports. The legal limitation must prohibit all residential, commercial, industrial, institutional, and transportation development and any other infrastructure development that would not maintain or enhance the wetland and streambed functions and values of the site, except those specific uses defined in the City of San Diego's MHPA. The preservation mechanism must clearly prohibit activities that would result in soil disturbance or vegetation removal, other than the removal of non-native vegetation. Other infrastructure development to be prohibited includes, but is not limited to, additional utility lines, maintenance roads, and areas of maintained landscaping for recreation.

VIII. REPORTING REQUIREMENTS

- A. **Annual Project Reports.** The Applicant must submit annual project reports describing status of BMP implementation and compliance with all requirements of this Certification to the San Diego Water Board prior to **August 1** of each year following the issuance of this Certification until the Project has reached completion. The report must contain a description of each incident of noncompliance and its cause, the period of the noncompliance including exact dates and times, and if the noncompliance has not been corrected, state the anticipated time it is expected to continue; and identify the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- B. **Final Project Completion Report.** The Applicant must submit a Final Project Completion Report to the San Diego Water Board **within 45 days of completion of the Project**. The final reports must include the following information:
1. Date of construction initiation.
 2. Date of construction completion.
 3. Status of BMPs for the Project.
 4. As-built drawings no bigger than 11"X17."
 5. Photo documentation of implemented post-construction BMPs. Photo documentation must be conducted in accordance with guidelines posted at http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/401c/401PhotoDocRB9V713.pdf. In addition, photo documentation must include Global Positioning System (GPS) coordinates for each of the photo points referenced.

C. Annual Mitigation Monitoring Reports. The Applicant must submit compensatory mitigation monitoring reports annually, by **August 1** of each year, containing sufficient information to demonstrate how the compensatory mitigation Project is progressing towards meeting its performance standards. Mitigation monitoring reports must be submitted annually until the compensatory mitigation project has accomplished its objectives and met ecological success performance standards contained in the Mitigation Plan and been deemed successful. The monitoring reports must include, but not be limited to, the following information:

1. Names, statement of qualifications, and affiliations of the responsible lead professionals contributing to the report;
2. Date of initiation of mitigation installation and date mitigation installation was completed;
3. Mitigation as-builts, including topography maps and planting locations;
4. Tables presenting the raw data collected in the field as well as analyses of the physical and biological data;
5. Topographic complexity characteristics at each mitigation site;
6. Upstream and downstream habitat and hydrologic connectivity;
7. Source of hydrology;
8. Width of native vegetation buffer around the entire mitigation site;
9. Qualitative and quantitative comparisons of current mitigation conditions with pre-construction conditions and previous mitigation monitoring results;
10. Stream Photo documentation, including all areas of permanent and temporary impact, prior to and after project construction; and mitigation areas, including all areas of permanent and temporary impact, prior to and after mitigation area construction, must be submitted with the mitigation monitoring reports. See Section VIII.B.5 of this Certification for photo documentation procedures; and
11. A survey report documenting boundaries of mitigation area, including Geographic Information System (GIS) shape files (polygons) of the impact and mitigation areas (Two GPS readings (points) must be taken on each line of the polygon and the polygon must have a minimum of 10 points); including all GIS metadata.

D. The Applicant must submit final grading and landscaping plans prior to initiation of construction activities.

- E. The Applicant must submit a Final Restoration Monitoring Plan **prior to initiation of construction activities.**
- F. The Applicant must submit a Storm Water Pollution Prevention Plan (SWPPP) **prior to initiation of construction activities.**
- G. The submittal of information under this Certification is required pursuant to Water Code section 13267 and 13383. Civil liability may be administratively imposed by the San Diego Water Board for failure to submit information pursuant to Water Code sections 13268 or 13383.
- H. The Applicant must submit all reports and information required under this Certification in both hardcopy (paper) and electronic format. The preferred electronic format for each report submission is one file in PDF format that is also Optical Character Recognition (OCR) capable. All paper and electronic documents submitted to the San Diego Water Board must include the following identification numbers in the header or subject line: Certification No. 10C-033:PIN 752221
- I. All applications, reports, or information submitted to the San Diego Water Board must be signed and certified as follows:
 - 1. For a corporation, by a responsible corporate officer of at least the level of vice president.
 - 2. For a partnership or sole proprietorship, by a general partner or proprietor, respectively.
 - 3. For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.
 - 4. A duly authorized representative may sign applications, reports, or information if:
 - a. The authorization is made in writing by a person described above.
 - b. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.
 - c. The written authorization is submitted to the San Diego Water Board Executive Officer.

If such authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the Project, a new authorization satisfying the above requirements must be submitted to the San Diego Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative.

- J. All applications, reports, or information submitted to the San Diego Water Board must be signed and certified as follows:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

- K. The Applicant must submit reports required under this Certification, or other information required by the San Diego Water Board, to:

Executive Officer
California Regional Water Quality Control Board
San Diego Region
Attn: 401 Certification; Project No. 10C-033
2375 Northside Drive, Suite 100
San Diego, California 92108

IX. CEQA FINDINGS

- A. The City of San Diego is the lead agency under the California Environmental Quality Act (Public Resources Code section 21000, et seq., (CEQA)), and filed a Notice of Determination of their Environmental Impact Report (EIR) on May 6, 2011 (SCH# 2010081080). The City of San Diego has determined the Project will have a significant effect on the environment and mitigation measures were made a condition of the Project.
- B. The San Diego Water Board has reviewed the lead agency's Mitigated Negative Declaration and also finds that the Project as proposed will have a significant effect on the environment and has conditioned mitigation measures accordingly and therefore determines that issuance of this Certification is consistent with the Mitigated Negative Declaration.

X. PUBLIC NOTIFICATION OF PROJECT APPLICATION

On March 2, 2011, receipt of the project application was posted on the San Diego Water Board website to serve as appropriate notification to the public. Comments received regarding this Project were considered during the preparation of this Certification.

XI. SAN DIEGO WATER BOARD CONTACT PERSON

Alan Monji

California Regional Water Quality Control Board, San Diego Region
2375 Northside Drive, Suite 100
San Diego, California 92108
(619) 521-3968
amonji@waterboards.ca.gov

XII. WATER QUALITY CERTIFICATION

I hereby certify that the proposed discharge from the **Alta La Jolla Drive Drainage Repair Project** (Certification No. 10C-033) will comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ("Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under State Water Board Order No. 2003-0017-DWQ, "*Statewide General Waste Discharge Requirements for Dredged or Fill Discharges that have Received State Water Quality Certification (General WDRs)*," which requires compliance with all conditions of this Water Quality Certification. Please note that enrollment under Order No. 2003-017-DWQ is conditional and, should new information come to our attention that indicates a water quality problem, the San Diego Water Board may issue individual waste discharge requirements at that time.

Except insofar as may be modified by any preceding conditions, all Certification actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the applicants' project description, and (b) compliance with all applicable requirements of the Water Quality Control Plan for the San Diego Basin Region (9) (Basin Plan).

I, David W. Gibson, Executive Officer, do hereby certify the forgoing is a full, true, and correct copy of Certification No. 10C-033 issued on November 20, 2013.



DAVID W. GIBSON
Executive Officer
San Diego Regional Water Quality Control Board

11-20-2013

Date

ATTACHMENT 1
DISTRIBUTION LIST

Robert Smith
U.S. Army Corps of Engineers
Robert.R.Smith@usace.army.mil

Kelly Fisher
California Department of Fish and Game
Kfisher@wildlife.ca.gov

U.S. Department of the Interior
Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, CA 92011

U.S. EPA, OWOW, Region 9
75 Hawthorne St.
San Francisco, CA 94105
R9-WTR8-Mailbox@epa.gov

State Water Resources Control Board, Division of Water Quality
401 Water Quality Certification and Wetlands Unit
P.O. Box 100
Sacramento, CA 95812-0100
Stateboard401@waterboards.ca.gov

Kerry Santoro
City of San Diego
KSantoro@sandiego.gov

ATTACHMENT 2
PROJECT LOCATION



**PROJECT
LOCATION**

PACIFIC OCEAN



**REGIONAL VICINITY MAP
ALTA LA JOLLA DRIVE DRAINAGE
REPAIR PROJECT, PHASE 2**
San Diego, California.

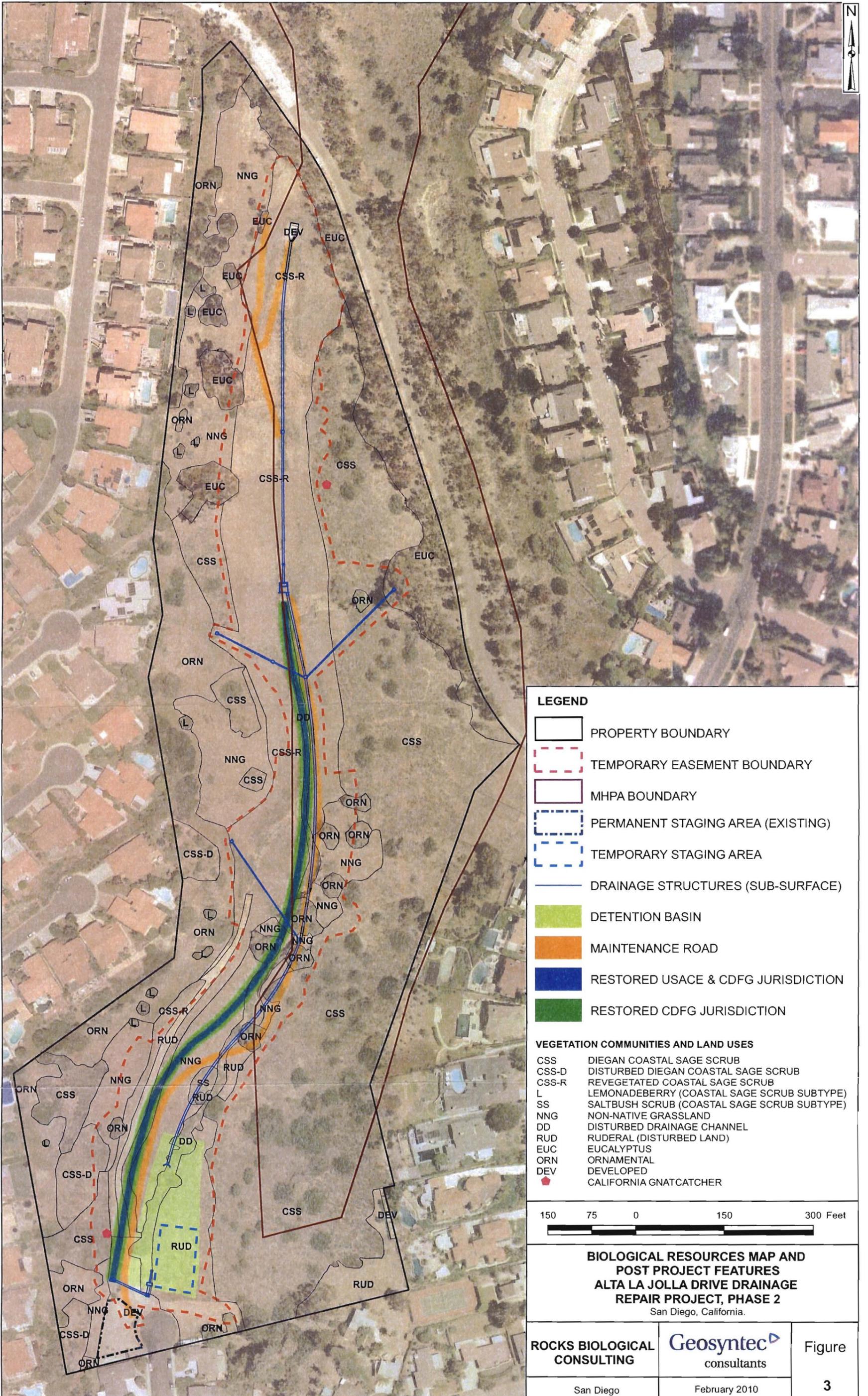
**ROCKS BIOLOGICAL
CONSULTING**

Figure
1

* ESRI WORLD STREET MAP

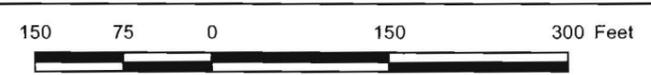
ATTACHMENT 3

GRADING AND RESTORATION PLANS



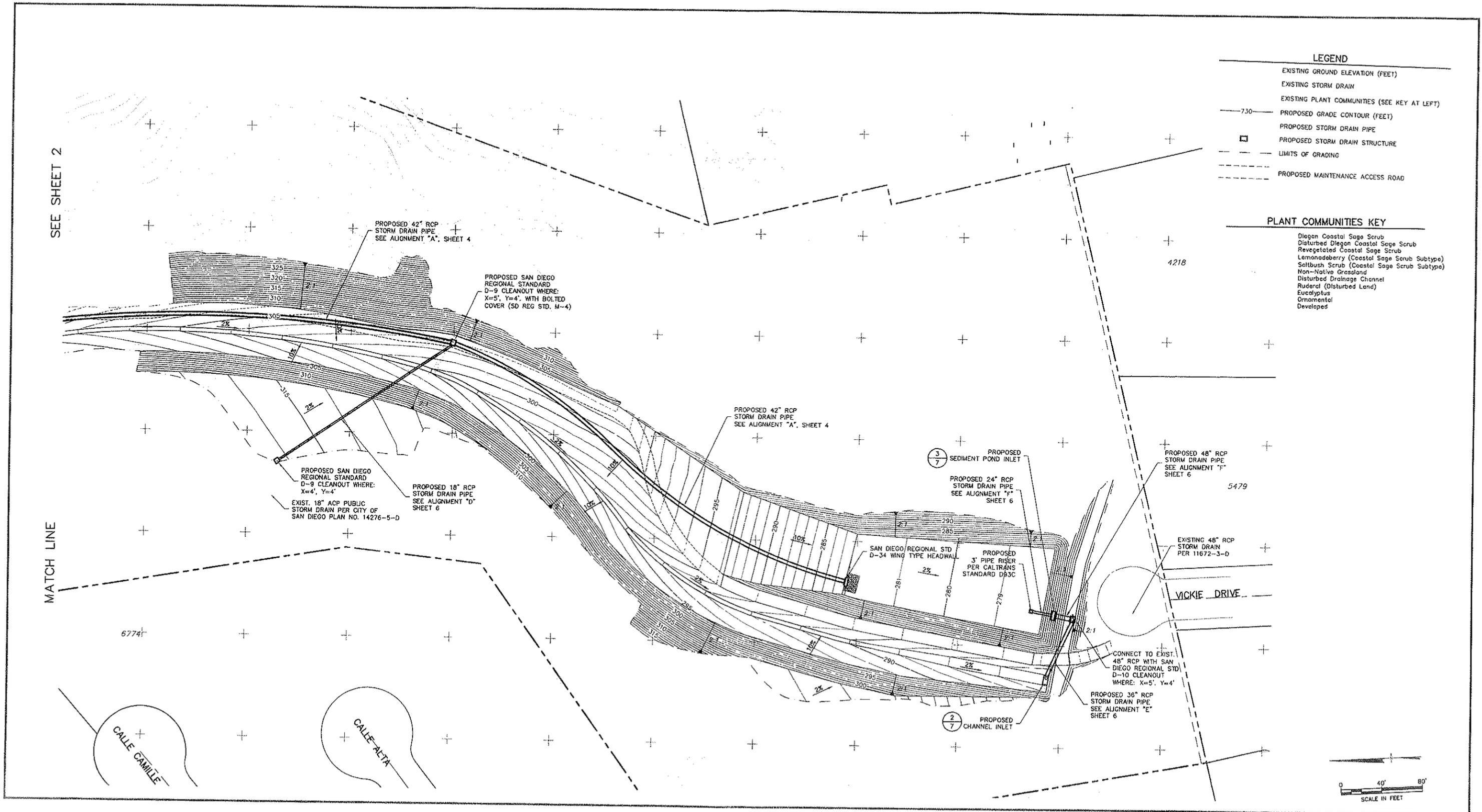
- LEGEND**
- PROPERTY BOUNDARY
 - TEMPORARY EASEMENT BOUNDARY
 - MHPA BOUNDARY
 - PERMANENT STAGING AREA (EXISTING)
 - TEMPORARY STAGING AREA
 - DRAINAGE STRUCTURES (SUB-SURFACE)
 - DETENTION BASIN
 - MAINTENANCE ROAD
 - RESTORED USACE & CDFG JURISDICTION
 - RESTORED CDFG JURISDICTION

- VEGETATION COMMUNITIES AND LAND USES**
- CSS DIEGAN COASTAL SAGE SCRUB
 - CSS-D DISTURBED DIEGAN COASTAL SAGE SCRUB
 - CSS-R REVEGETATED COASTAL SAGE SCRUB
 - L LEMONADEBERRY (COASTAL SAGE SCRUB SUBTYPE)
 - SS SALTBUSH SCRUB (COASTAL SAGE SCRUB SUBTYPE)
 - NNG NON-NATIVE GRASSLAND
 - DD DISTURBED DRAINAGE CHANNEL
 - RUD RUDERAL (DISTURBED LAND)
 - EUC EUCALYPTUS
 - ORN ORNAMENTAL
 - DEV DEVELOPED
 - ◆ CALIFORNIA GNATCATCHER



**BIOLOGICAL RESOURCES MAP AND
POST PROJECT FEATURES
ALTA LA JOLLA DRIVE DRAINAGE
REPAIR PROJECT, PHASE 2**
San Diego, California.

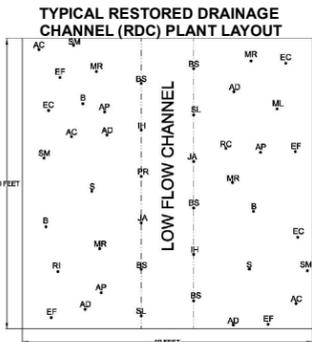
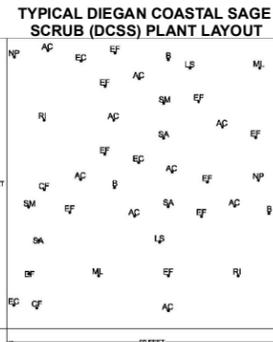
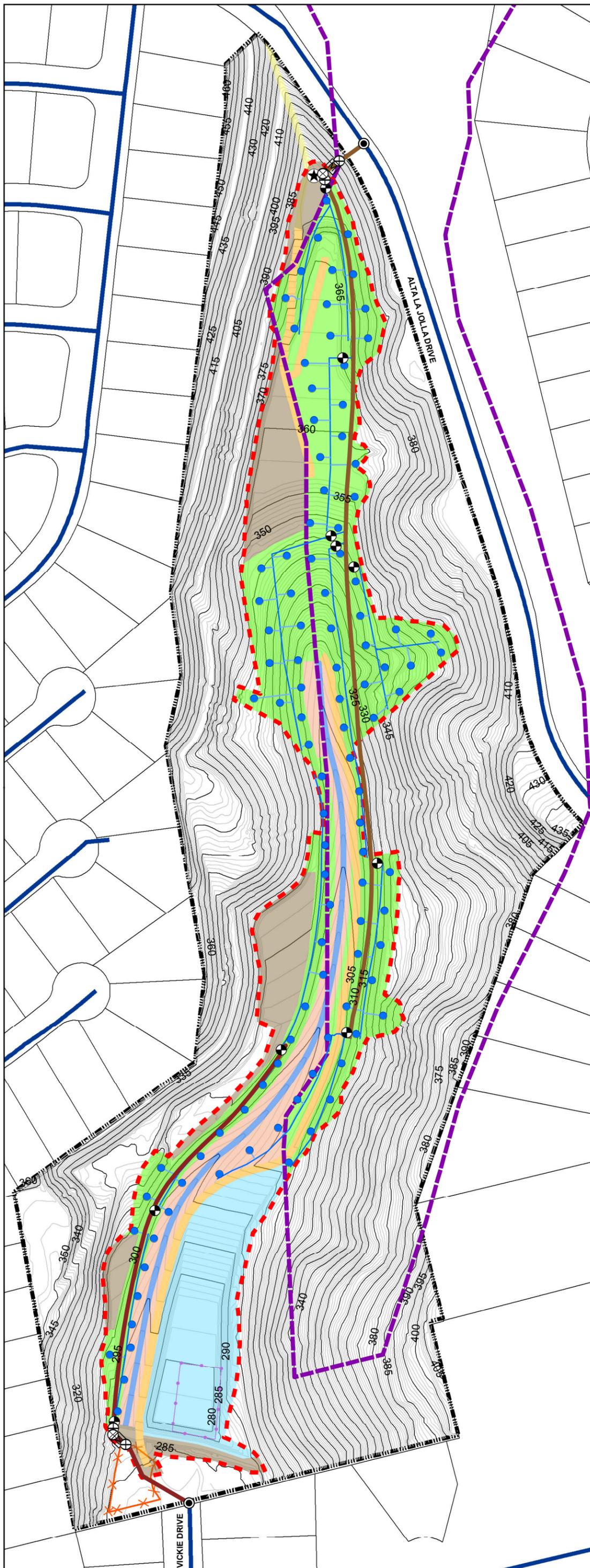
ROCKS BIOLOGICAL CONSULTING	Geosyntec consultants	Figure
San Diego	February 2010	3



Site Plan - Sheet 2

ALTA LA JOLLA DRIVE DRAINAGE REPAIR PHASE II / Project No. 128971
 City of San Diego – Development Services Department

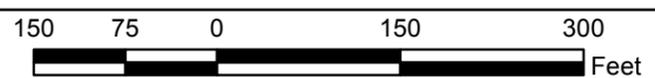
FIGURE
No. 5



Symbol	Scientific Name	Common Name
AC	<i>Artemisia californica</i>	California Sagebrush
AD	<i>Artemisia douglasiana</i>	Douglas' Mugwort
AP	<i>Artemisia palmeri</i>	Palmer's Sagewort
BS	<i>Baccharis salicifolia</i>	Mulefat
BS	<i>Baccharis sarothroides</i>	Broom Baccharis
CF	<i>Corethrogyne filaginifolia</i>	Sand Aster
EC	<i>Encelia californica</i>	California Encelia
EF	<i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>	Coast California Buckwheat
IH	<i>Iva hayesiana</i>	San Diego Marsh Elder
JA	<i>Juncus acutus</i> ssp. <i>Leopoldii</i>	Spiny Rush
LS	<i>Lotus scoparius</i> var. <i>scoparius</i>	Deerweed
ML	<i>Malosma laurina</i>	Laurel Sumac
MR	<i>Muhlenbergia rigens</i>	Deergrass
NP	<i>Nassella pulchra</i>	Purple Needlegrass
PR	<i>Platanus racemosa</i>	Western Sycamore
RC	<i>Rosa californica</i>	California Rose
RI	<i>Rhus integrifolia</i>	Lemonadeberry
SA	<i>Salvia apiana</i>	White Sage
SL	<i>Salix lasiolepis</i>	Arroyo Willow
SL	<i>Sambucus mexicana</i>	Elderberry
SM	<i>Salvia mellifera</i>	Black Sage

- LEGEND:**
- PROPERTY BOUNDARY
 - CONSTRUCTION BOUNDARY/ TEMPORARY EASEMENT BOUNDARY
 - MHPA BOUNDARY
 - UPLAND MITIGATION AREA [DCSS CONTAINER PLANTINGS AND DCSS HYDROSEED MIX]
 - CONTAINER PLANTINGS AND DCSS HYDROSEED MIX
 - STEEP SLOPE REVEGETATION AREA [DCSS CONTAINER PLANTINGS AND DCSS HYDROSEED MIX]
 - RESTORED DRAINAGE CHANNEL [RIPARIAN CONTAINER PLANTINGS AND HYDROSEED MIX; RIPARIAN UPLAND HYDROSEED MIX]
 - EROSION CONTROL AREAS (<4:1 SLOPE; DCSS HYDROSEED MIX)
 - LOW FLOW CHANNEL
 - DETENTION BASIN [RIPARIAN UPLAND TRANSITIONAL HYDROSEED MIX]
 - MAINTENANCE ROAD [WWD HYDROSEED MIX]
 - PERMANENT STAGING AREA
 - TEMPORARY STAGING AREA
 - EXISTING EASEMENT ACCESS ROAD
 - PROPOSED FINAL 1' CONTOURS
 - PROPOSED FINAL 5' CONTOURS
 - TAP VALVE
 - WATER METER
 - WILKINS #575 OR SIMILAR BACKFLOW PREVENTER
 - MUELLER OR SIMILAR GATE VALVE
 - RAINBIRD 150-EFB-CP OR SIMILAR VALVES
 - RAINBIRD 2045 OR SIMILAR IMPACT SPRINKLER
 - RAINBIRD ESP OR SIMILAR IRRIGATION CONTROLLER
 - 3" Galvanized Steel Pipe
 - 4" Galvanized Steel Pipe
 - 0.5" SCH 40 PVC Pipe
 - 1.5" SCH 40 PVC Pipe
 - CITY OF SAN DIEGO WATER MAINS

* DATA SOURCES: SANGIS & SANDAG

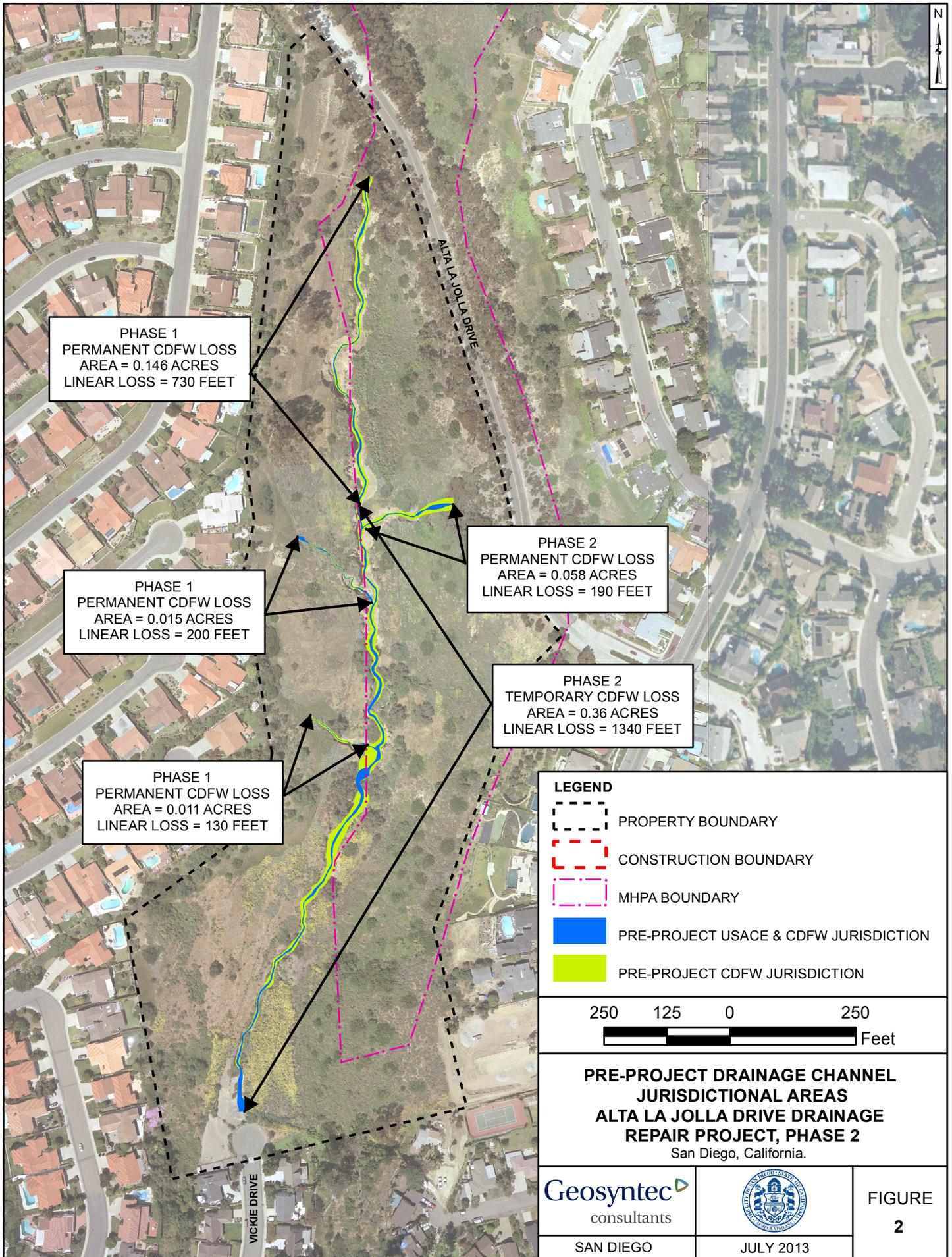


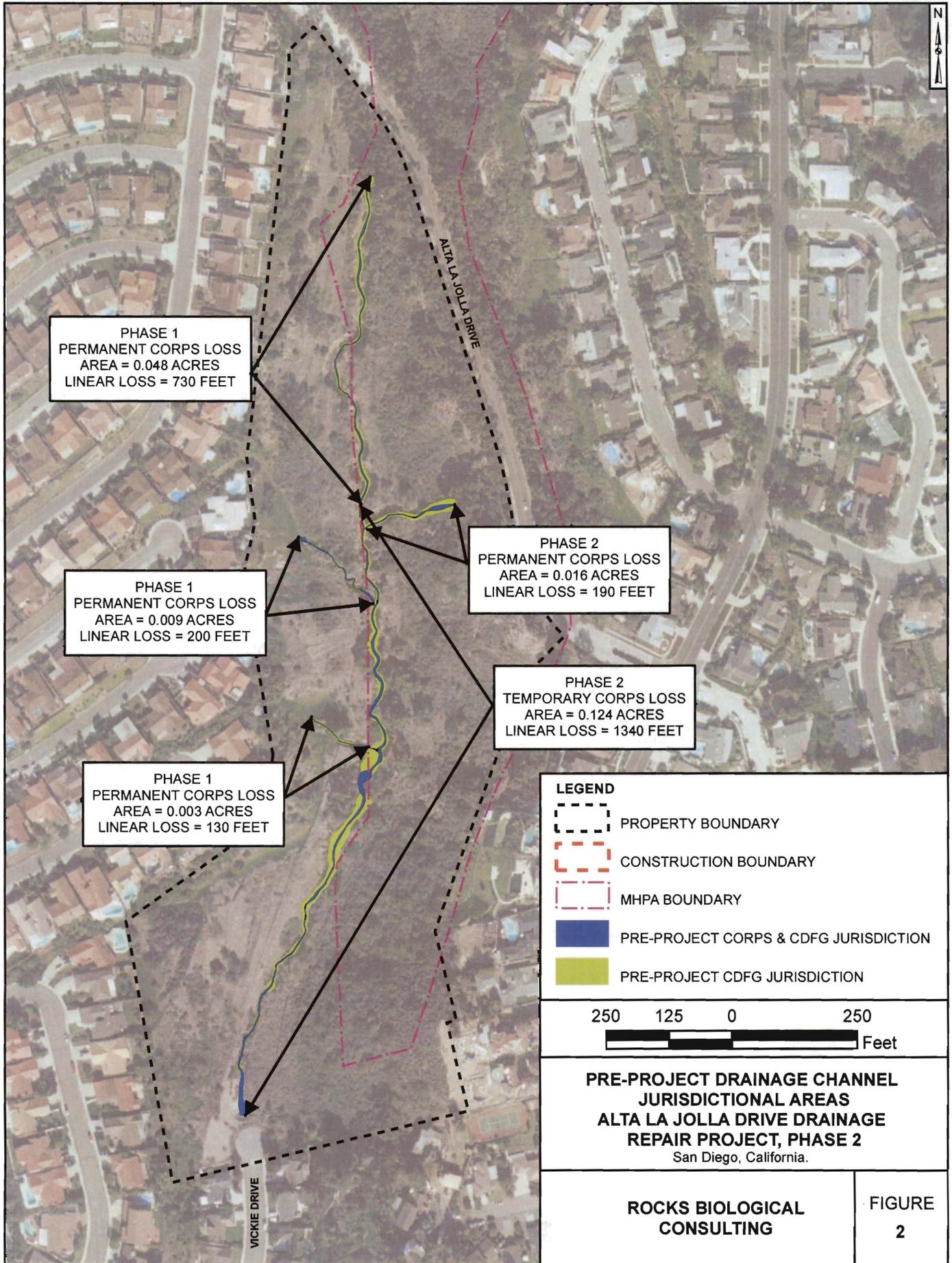
**REVEGETATION PLAN
ALTA LA JOLLA DRIVE DRAINAGE
REPAIR PROJECT, PHASE 2**
San Diego, California.

**ROCKS BIOLOGICAL
CONSULTING**

San Diego

Figure
4





PHASE 1
 PERMANENT CORPS LOSS
 AREA = 0.048 ACRES
 LINEAR LOSS = 730 FEET

PHASE 1
 PERMANENT CORPS LOSS
 AREA = 0.009 ACRES
 LINEAR LOSS = 200 FEET

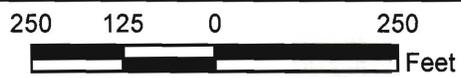
PHASE 1
 PERMANENT CORPS LOSS
 AREA = 0.003 ACRES
 LINEAR LOSS = 130 FEET

PHASE 2
 PERMANENT CORPS LOSS
 AREA = 0.016 ACRES
 LINEAR LOSS = 190 FEET

PHASE 2
 TEMPORARY CORPS LOSS
 AREA = 0.124 ACRES
 LINEAR LOSS = 1340 FEET

LEGEND

- PROPERTY BOUNDARY
- CONSTRUCTION BOUNDARY
- MHPA BOUNDARY
- PRE-PROJECT CORPS & CDFG JURISDICTION
- PRE-PROJECT CDFG JURISDICTION



**PRE-PROJECT DRAINAGE CHANNEL
 JURISDICTIONAL AREAS
 ALTA LA JOLLA DRIVE DRAINAGE
 REPAIR PROJECT, PHASE 2
 San Diego, California.**



ATTACHMENT 4
ALTERNATIVE ANALYSIS



THE CITY OF SAN DIEGO

Mr. Robert Smith
Regulatory Project Manager
U.S. Army Corps of Engineers – San Diego Field Office
6010 Hidden Valley Rd, Suite 105
San Diego, CA 92011-4213

March 29, 2012

RE: Alta La Jolla Drainage Repair Project, Phase 2, 404 Individual Permit Application –
Alternative Analysis

Dear Mr. Smith,

We are providing this supplemental alternatives analysis evaluation to comply with Section 404(b)(1) of the Clean Water Act (CWA) to analyze and describe the potential impacts from proposed discharges of fill material into waters of the United States as a result of the Alta La Jolla Drainage Repair Project, Phase 2 (Project) in La Jolla, California. The purpose of this analysis is to provide the U.S. Army Corps of Engineers (USACE or Corps) with information to support your determination regarding the availability of practicable alternatives to the Proposed Action, and to identify the least environmentally damaging practicable alternative (LEDPA).

Background

The project is required to meet the requirements of a 2008 Settlement Agreement between the City of San Diego and the Alta La Jolla Home Owners Association (La Jolla Alta Master Council) and requires the City to repair La Jolla Alta Canyon to prevent potential slope failures and to manage water flows in a non-erosive manner, limiting future erosion problems and decreasing maintenance requirements. The project location is a designated private open space. The project will not result in the creation of impervious surfaces or include landscaping that will require on-going pesticide or fertilizer use and is not a “pollutant generating development project;” therefore, it is exempt from City of San Diego Priority Development Project post-BMP requirements.



Mr. Robert Smith
U.S. Army Corps of Engineers
March 29, 2012

As you are aware, the basic project purposes for the Alta La Jolla Drainage Repair Project was substantially established by the legal settlement agreement from the lawsuit La Jolla Alta Master Council v City of San Diego, et al. (February 5, 2008). This agreement between the parties required the City to repair drainage to prevent slope failure and manage runoff in a non-erosive manner. It also established requirements and timelines for the City to provide easements to conduct repairs and provide access for on-going maintenance. This agreement led to completion of technical investigations through 2009, and a meeting with the Corps, CDFG, and RWQCB on September 9, 2009, to present the Phase II project and obtain concurrence on the project approach and mitigation strategy. On February 3, 2010, the City applied to the Corps for a permit for the Phase II project. On September 24, 2010, a draft Public Notice for the 404 permit was submitted to the Corps to repair the Alta La Jolla Drive storm drain system and associated drainage channel. The overall project purpose serves as the basis for the Corps' 404(b)(1) alternatives analysis and is determined by further defining the basic project purpose in a manner that more specifically describes the applicant's goals for the project, and that allows a reasonable range of alternatives to be analyzed. The overall project purpose for the proposed project is to stabilize slopes in the northwest portion of the project area, repair the Alta La Jolla Drive storm drain system, restore and provide long-term stabilization of the natural drainage channel and vegetative buffers in the southern portion of the project area, and construct a detention basin. The project will also provide water quality benefits for the developed watershed runoff, attenuate 100-year peak flood events to the extent possible, restore degraded upland coastal sage habitat and meet the requirements of the Settlement Agreement between the City of San Diego and La Jolla Alta Master Council.

The City has included "water quality benefits" in our objectives descriptions at various times. However, as contemplated in the City's project description and design, it was intended that the water quality component of the project be a secondary objective achievable within the downstream detention basin by a design that facilitates the removal of trash, debris, and sediment loads prior to discharge of the canyon waters to Tourmaline Beach via the closed conveyance culvert downstream of the canyon. It appears from the Corps recommended supplemental alternatives to be considered, that this constituent focused goal is being expanded by the Corps to include nutrient removals. We disagree strongly with the introduction of a late period migration

Mr. Robert Smith
U.S. Army Corps of Engineers
March 29, 2012

of project purpose on a process that commenced more than 4 years ago and which was completed with open agency dialogue that goes back to September 2009 meetings with the agencies, where broad options were discussed on means to achieve the project objectives.

The City has subsequently completed CEQA, obtained its CDFG Streambed Alteration Agreement, submitted easement documents in accordance with the settlement agreement requirements, and reached 90 percent design with the full intent of initiating construction in September 2012 at the end of the gnatcatcher breeding season. In order to meet this schedule, the City must advertise for contractor selection imminently.

To this date, the City has expended millions of dollars reimbursing the La Jolla Alta Master Council for the Phase I emergency repairs for the Phase II geotechnical engineering, boundary and utilities investigations, civil engineering and design, environmental investigations, review and permitting, following the course generally set by settlement agreement and input received from the resource and regulatory agencies during September 2009. There are substantial logistical and cost impacts of changing direction in design two years after the original application was filed with the Corps and more than two years after receipt of agency input directing the City to restore the stream hydraulics to pre-development flow regimes, as contemplated for the project. While keeping these factors in mind, it is also important to recognize that the waters involved in the project include a total of 0.33 acre of ephemeral drainage consisting of 0.13 acre in Phase I that was filled by the Master Council under an emergency RGP 63, and 0.20 acre of drainage proposed to be filled under the present Phase II action.

The Phase II work would backfill a deeply incised drainage to impart slope stability and would restore surface flows along the drainage at a higher stable elevation, while bypassing the more erosive storm flows via a high flow diversion splitter box. The concept of restoring the natural canyon flow regime, prior to development exacerbating the peak events, was the fundamental outcome of the 2009 agency meeting. The City will achieve this objective with the proposed project.

Mr. Robert Smith
U.S. Army Corps of Engineers
March 29, 2012

Corps New Alternatives

A total of ten (10) alternatives were evaluated, including four previously identified by the agencies and City and six new alternatives put forth by the San Diego Regional Water Quality Control Board (SD RWQCB) and the USACE including:

- 1) No Action Alternative (Less Impact Alternative);
- 2) Restoration of channel to non-eroded configuration;
- 3) Gabion mattress grade control structures;
- 4) Proponent proposed action;
- 5) SD RWQCB Alternative - retrofitting the existing developments to minimize, capture, and treat flows prior to entering the canyon;
- 6) SD RWQCB Alternative - widening, stabilizing, and/or restoring the area north of Alta La Jolla Drive to minimize downstream erosion (Greater Impact Alternative);
- 7) USACE Alternative concept of using bio-engineered drop structures for both Phase I and II with special ERDC based designed water quality basin at downstream end of the project. Phase I would have an elevation of a restored channel invert to allow for proper slope stability and to allow existing Phase I buttressing to remain to resolve residential slope failures of northern portion of the project area;
- 8) USACE Alternative concepts with other various configurations of high flow pipe flow diversions and restored channel flow diversions with other alternative restored natural channel and basin designs and flow diversions;
- 9) Corps ERDC Alternative of using a different basin design for better water quality benefits (Hawaiian design) with the use of a rain garden-bioswale treatment & retention feature down both sides of the valley (Phases 1 and 2 areas). In the detention basin have the nitrogen and phosphorus reduction in groundwater technique installed. On the stream

Mr. Robert Smith
U.S. Army Corps of Engineers
March 29, 2012

floodplain have them put in the microhabitat, increased edge and plant the willow poles deep and perpendicular to flow so the project does not get wiped out with a flood after planting. If possible, transplant plants from disturbed areas to streamside areas; and,

10) USACE Alternative - restoration of channel to non-eroded configuration by removing Phase I fill and pipe and re-contouring entire Phase I and II channel and importing fill and restoring and re-vegetating restored channel. Restore and stabilize bank erosion caused by the storm drain pipes to the east and west side of the canyon and lower outlet to the canyon floor. Include a water quality treatment/detention basin at the bottom of the canyon. In considering these alternatives, it is important to keep in mind that “[a]n alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose” [40 CFR 230.10(a)(2)]. It is also important to keep in mind that RGL 93-02 guidance advises that the Corps, while implementing its mandates, should undertake a reasonable and balanced consideration of alternatives to the proposed action in order to assess the practicability of less damaging alternatives that achieve the project overall purpose. “A reasonable, common sense approach in applying the requirements of the Guidelines’ alternatives analysis is fully consistent with sound environmental protection.” The Corps’ ultimate decision regarding what is the LEDPA must also take into account the degree of wetland impacts at stake in the matter such that “[t]he level of documentation should reflect the significance and complexity of the discharge activity” (40 CFR § 230.6(b)).

The Corps’ charge to render determinations regarding the LEDPA must also avoid unreasonably expensive alternatives. “If an alleged alternative is unreasonably expensive to the applicant, the alternative is not ‘practicable’” (45 Fed. Reg. 85336, 85343). In establishing that the definition of “practicable” depends on “cost” factors EPA stated that “[o]ur intent is to consider those alternatives which are reasonable in terms of overall scope/cost of the proposed project” (45 Fed. Reg. 85336, 85339).

RGL 93-02 also serves to outline a suggested review format for projects that have potential for only minor impacts to the aquatic environment. Minor impacts are associated with activities that generally would have little potential to degrade the aquatic environment and include one, and

frequently more, of the following characteristics: are located in aquatic resources of limited natural function; are small in size and cause little direct impact; have little potential for secondary or cumulative impacts; or cause only temporary impacts. The specific guidance of RGL 93-02 is as follows:

In reviewing projects that have the potential only for minor impacts on the aquatic environment, Corps and EPA field offices are directed to consider, in coordination with state and Federal resource agencies, the following factors:

- i. Such projects by their nature should not cause or contribute to significant degradation individually or cumulatively. Therefore, it generally should not be necessary to conduct or require detailed analyses to determine compliance with Section 230.10(c).*
- ii. Although sufficient information must be developed to determine whether the proposed activity is in the fact the least damaging practicable alternative, the Guidelines do not require an elaborate search for practicable alternatives if it is reasonably anticipated that there are only minor differences between the environmental impacts of the proposed activity and potentially practicable alternatives. This decision will be made after consideration of resource agency comments on the proposed project. **It often makes sense to examine first whether potential alternatives would result in no identifiable or discernible difference in impact on the aquatic ecosystem. Those alternatives that do not may be eliminated from the analysis since Section 230.10(a) of the Guidelines only prohibits discharges when a practicable alternative exists when would have less adverse impact on the aquatic ecosystem** [emphasis added]. Because evaluating practicability is generally the more difficult aspect of the alternatives analysis, this approach should save time and effort for both the applicant and the regulatory agencies.* **By initially focusing the alternatives analysis on the question of impacts on the aquatic ecosystem, it may be impossible to limit (or in some instances eliminate altogether) the number of alternatives that have to be evaluated for practicability.***
- * In certain instances, however, it may be easier to examine practicability first. **Some projects may be so site-specific (e.g. erosion control, bridge replacement) that no offsite alternative could be practicable. In such cases the alternatives analysis may appropriately be limited to onsite options only**[emphasis added].*
- iii. **When it is determined that there is no identifiable or discernible difference in adverse impact on the environment between the applicant's proposed alternative and all other practicable alternatives, then the applicant's alternative is considered as satisfying the requirements of Section 230.10(a)**[emphasis added].*
- iv. **Even where a practicable alternative exists that would have less adverse impact on the aquatic ecosystem, the Guidelines allow it to be rejected if it would have***

Mr. Robert Smith
U.S. Army Corps of Engineers
March 29, 2012

"other significant adverse environment consequences." 40 CFR 230.10(A). As explained in the preamble, this allows for consideration of "evidence of damages to other ecosystems in deciding whether there is a 'better' alternative." Hence, in applying the alternatives analysis required by the Guidelines, it is not appropriate to select an alternative where minor impacts on the aquatic environment are avoided at the cost of substantial impacts to other natural environmental values.

v. In cases of negligible or trivial impacts (e.g., small discharges to construct individual driveways), it may be possible to conclude that no alternative location could result in less adverse impact on the aquatic environment within the meaning of the Guidelines. In such cases, it may not be necessary to conduct an offsite alternatives analysis but instead require only any practicable onsite minimization.

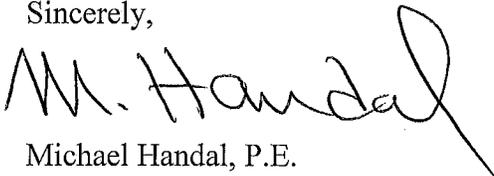
Due to the prior Phase I work conducted under the RGP 63, there is no available alternative that eliminates discharges to water of the U.S. Alternative 1 "No Action Alternative" would result in less impact to waters of the U.S. than the Proposed Action (Alternative 4) as it would result in 0.13 acre of impact compared to 0.33 acre associated with the full Phase I and II project implementation; however, it does not achieve the stated overall project purpose to mitigate erosive storm water flows and repair the Phase 2 channel and it would not accomplish the additional permanent stabilization of erosion and culvert material standards for municipal infrastructure within the Phase I project area. As such, it is not considered to be a practicable alternative. Alternative 6 would result in greater impacts to the waters of the U.S. than the Proposed Action, because it expands the area of waters involved in the project but does not eliminate the need to make safety and slope stability erosion repairs to the existing drainage in Phase II. As such, this alternative would not be the LEDPA. Alternatives 2, 3, 5, 7, 8, 9 and 10 would all result in the same base level of impact to waters of the U.S. as the Proposed Action (Alternative 4), with some alternatives potentially having greater impacts due to expanded action areas. According to Corps guidance in RGL 93-02 (iii) "When it is determined that there is no identifiable or discernible difference in adverse impact on the environment between the applicant's proposed alternative and all other practicable alternatives, then the applicant's alternative is considered as satisfying the requirements of Section 230.10(a)". Notwithstanding this failure of the alternatives to lessen the project impacts to waters over the proposed project, the City has completed a technical analysis of these alternatives based solely on their practicability, after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. The

Mr. Robert Smith
U.S. Army Corps of Engineers
March 29, 2012

analysis is presented in a tabular format as an attachment to this letter. This abbreviated format is provided in compliance with the direction that the level of analysis should be scaled to the magnitude of impact under evaluation.

Based on the results of our alternative analysis evaluation, the Proposed Action is recommended as the LEDPA because it meets the objectives of the overall project purpose, fulfills the requirements of the Settlement Agreement, meets the City's design specifications, and has substantially lower construction and/or maintenance cost than the other alternatives evaluated. Further, it is within the capacity of the City to perform the work on lands to which it has legal access rights, adopted environmental documents and a state Streambed Alteration Agreement. We trust the provided information enables the Corps to make its determination on identifying the LEDPA. We look forward to discussing the findings of this evaluation with you, and understand that a revised Public Notice will be issued once the Corps has completed its review. If you have any additional questions, please do not hesitate to contact me at (619) 533-7588 or Kerry Santoro at (619) 533-5406.

Sincerely,



Michael Handal, P.E.
Project Manager
City of San Diego
Engineering and Capital Improvements Project

Attachment: Alternative Analysis Evaluation

Cc: Ms. Therese Bradford, USACOE, South Coast Section Chief
Mr. Tony Heinrichs, Public Works Director
Mr. Jamal Batta, Senior Civil Engineer, City of San Diego
Ms. Kerry Santoro, City of San Diego
Mr. Keith Merkel, Merkel & Associates
Ms. Kathleen Harrison, Geosyntec

ALTA LA JOLLA DRAINAGE REPAIR PROJECT PHASE 2 – ALTERNATIVES ANALYSIS EVALUATION

Basic Project Purposes: The basic project purposes include flood control, restoration of functions and values of the Alta La Jolla canyon stream, and improvement of canyon slope stability in the northern portion of the canyon near residential areas.

Overall Project Purpose: The overall project purpose of the Alta La Jolla Drive Drainage Repair Project (Phase I and Phase II) is to stabilize slopes in the northwest Phase I portion of the drainage and restore the functions and values of the Alta La Jolla drainage in the Phase I and Phase II area. Also the City’s goals are mandated by the Settlement Agreement to prevent drainage slope failures adjacent to residential areas in the northern portion of the canyon, to convey non-erosive 100 year storm year flows greater than or equal to 190 cubic feet per second (cfs) within the drainage, and to minimize erosion while improving downstream water quality of drainage flows to Tourmaline Beach.

Alternatives Analysis Criteria: Does it meet the overall project purpose, are the alternatives available, and selection of the Least Environmentally Damaging Practicable Alternative (LEDPA) based on cost, logistics, and technology.

Alternative	Impacts to Waters of the U.S.	Alternative Analysis	Practicability
Alternative 1 – “No Action” Project	Total impacts to waters of the U.S. would be 0.13 acres and would be less than the Proposed Action.	The “No Action” Alternative would result in not repairing or restoring the Alta La Jolla drainage storm drain system. The No-Action Alternative would involve leaving the Phase 1 emergency repair structures in place without conducting any of the necessary repairs to the remainder of the drainage channel or storm drain system. The No Action Alternative would eliminate discharges of fill material into waters of the U.S. in the Phase 2 area since no fill material placement or grading associated with restoration or repair activities would occur.	Although the No-Action Alternative would result in the less impact to waters of the United States than the Proposed Project, it does not achieve the stated overall project purpose to mitigate erosive storm water flows and repair the Phase 2 channel, and is therefore not a practicable alternative. Channel incision and habitat degradation would continue to occur. The potential for loss of property, habitat, and life would increase as the erosive storm water and non-storm water flows increase the potential for slope failure in the canyon. This alternative would not provide an opportunity for invasive species removal. Under the No Action Alternative, the CMP storm drains installed during the emergency repair project (Phase 1) would not be replaced with RCP storm drains and would not be compliant with City’s design standards. This alternative would also cause the City to be non-compliant with respect to the Settlement Agreement with La Jolla Alta Master Council and the compensatory mitigation requirements of the RGP 63 Permit.
Alternative 2 – Restoration of channel to non-eroded configuration by removing Phase I fill and pipe and re-contouring entire Phase I and II channel and importing fill and restoring and re-vegetating restored channel.	Total new impacts to waters of the U.S. would be 0.2 acres as a result of fill placement; which is the same as the Proposed Project Phase 2 impacts.	Restoring the channel to its non-eroded/incised configuration would involve removing all temporary structures installed during Phase 1. The entire drainage channel would be re-contoured, which would require import of additional fill and construction of a natural bed and bank channel in the canyon bottom.	Although Alternative 2 would temporarily restore the natural channel, it would not address the increased flows from the surrounding developments, which might ultimately result in the channel returning to its degraded incised condition. Stability of the channel, canyon slopes, and earthen buttress installed during the emergency Phase I activities, would subsequently be compromised, increasing risk to the surrounding property owners. Habitat restoration efforts along the stream corridor might fail as the increased flows due to development are not addressed and hence would not be in compliant with MHPA regulations. This alternative would disturb a larger footprint associated with fill import than the Proposed Action, which would result in greater impacts to sensitive vegetation and species and require greater mitigation. This alternative would also cause greater traffic and noise impacts associated with fill import than the Proposed Action to the surrounding neighborhoods and sensitive species. This alternative would require the City to perform on-going channel restoration (fill and grading activities) and maintenance to meet the requirements of the Settlement Agreement. The City would also be required to obtain permits for future restoration activities that occur within waters of United States after the current permits have expired. The City’s maintenance and permitting cost would therefore be higher under Alternative 2 than the Proposed Project. Alternative 2 would also not provide flood control benefits required to minimize the probability of flooding of the downstream storm drain. Alternative 2 may also result in on-going habitat disturbance either as a result of the channel degradation or earthwork activities to restore the degraded channel. Alternative 2 does not achieve the stated overall project purpose, and is not a practicable alternative.

ALTA LA JOLLA DRAINAGE REPAIR PROJECT PHASE 2 – ALTERNATIVES ANALYSIS EVALUATION

<p>Alternative 3 –Gabion Mattress Grade Control Structures installation (six total spaced throughout entire Phase 1 and 2 channel) for both Phase 1 and 2 including the removal of Phase 1 pipe and fill.</p>	<p>Total impacts to waters of the U.S. would be 0.2 acres as a result of fill placement; which is the same as the Proposed Project Phase 2 impacts.</p>	<p>RiverTech, Inc. conducted a study for La Jolla Alta Mater Council to identify alternative plans for stabilization of Alta La Jolla Creek in 2006. RiverTech’s preferred alternative included flattening the stream bed slope and installation of a series of stair-step type Gabion Mattress Grade Control Structures to control flow velocity through the canyon. All structures installed during Phase 1 emergency activities would be removed under this alternative. The entire drainage would be re-contoured, which would require import of approximately 48,100 cubic feet(1800 Cubic Yards) of additional fill. Permanent stability structures and six Gabion Mattress Grade Control Structures would be installed at specified intervals in the drainage channel. Riprap outlets and energy dissipaters/impact basins would be constructed at the outfalls of the temporary 42-inch and 24-inch storm drains. A permanent maintenance road would be installed the length of the canyon along the western bank that would be vegetated with saltgrass (<i>Distichlis spicata</i>), a native grass. This alternative would require a larger construction footprint than the Proposed Action and would have greater impacts on the MHPA uplands.</p>	<p>Alternative 3 would not provide flood control benefits to minimize the probability of downstream flooding. Project construction cost would be higher from soil import and purchase of grade control structures than the other alternatives. This alternative would also result in a throw away of the existing investment in hydraulic structures from Phase 1 and additional costs to remove these structures. This alternative would require a larger construction footprint than the Proposed Action, which would result in greater impacts to sensitive vegetation and species and require greater mitigation. This alternative would also cause greater traffic, noise and air quality impacts associated with fill import than the Proposed Action to the surrounding neighborhoods and sensitive species. The grade control structures would require more long-term maintenance than the Proposed Project restored channel. The City would be required to redo its CEQA document, obtain a new streambed alteration agreement, and reengineer the project in total. The City may also be required to obtain subsequent permits for future maintenance of the gabion mattress structures after the current 404 permit has expired. Alternative 3 does not achieve all the stated basic project purpose objectives, would result in greater impacts to the MHPA, and would be costlier than the Proposed Project, and is therefore not a practicable alternative.</p>
<p>Alternative 5 – (San Diego Regional Water Quality Control Board alternative) Retrofitting the existing developments to minimize, capture, and treat flows prior to entering the canyon.</p>	<p>Total impacts to waters of the U.S. would be 0.2 acres as a result of fill placement; which is the same as the Proposed Project Phase 2 impacts. Additional impacts would likely also occur as this alternative would likely require altering storm drain systems, including discharge points or discharge aprons at waters of the U.S.</p>	<p>In addition to the Proposed Project design, the City would retrofit the existing developments to minimize, capture, and treat flows higher in the watershed, prior to entering the canyon. Although Alternative 5 would provide an opportunity to minimize, capture, and treat flows higher up in the watershed, adequate open-space is not available in the watershed for retrofit projects that would properly restore the hydraulic function of drainage in the Phase 2 area. Mitigation of erosive flows would still need to be addressed in the Phase 2 area design. A design variation to the Proposed Action may result under this alternative; however the Phase 2 design would still require the key design components including the weir structure and tributary storm drain pipes. A detailed hydrologic and engineering analysis would be required to assess the actual design of the retrofit structures and design variation requirements for the Phase 2 design.</p>	<p>The majority of the watershed is developed with private developments and properties on which the City does not have access or other legal rights to perform work. Retrofits would be limited to City-owned streets unless eminent domain, permanent easements, or other acquisition measures were taken to acquire access to private property for construction and long-term maintenance of retrofit projects. Adequate open-space is not available in the watershed for retrofit projects that would properly restore the hydraulic function of drainage. Mitigation of erosive flows would be addressed by the Proposed Action design. Construction of retrofits in City right-of-ways would result in greater temporary traffic impacts than the Proposed Alternative. This alternative would result in substantially higher cost and greater logistical requirements to the City than the Proposed Project, to acquire or obtain permanent property or easements, design and purchase retrofit materials, and maintain the retrofit projects and channel. Further, the alternative would not eliminate the need to repair existing eroded creek conditions within the Phase 2 area and thus the alternative would not result in a reduced impact to the aquatic ecosystem and thus fails to be a less damaging practicable alternative on face value. Based on these criteria, Alternative 5 is not the LEDPA.</p>
<p>Alternative 6 – (San Diego Regional Water Quality Control Board alternative) Widening, stabilizing, and/or restoring the area north of Alta La Jolla Dr. to minimize downstream erosion.</p>	<p>Alternative 6 would result in greater impacts to waters of the U.S. than the Proposed Project. In addition to the 0.2 acres of impact to waters of the U.S. in the Phase 2 Project Area, impacts to waters of the U.S. would occur in the canyon north of Alta La Jolla Drive as a result of fill and grading activities.</p>	<p>In addition to the Proposed Project design, the City would widen, stabilize and restore the drainage channel and adjacent canyon area north of Alta La Jolla Drive to minimize downstream erosion in the Project Area. Although Alternative 6 would provide an opportunity to restore the canyon north of Alta La Jolla Drive, it would not address the erosive flows entering the Phase 2 area from the eastern and western tributaries, and would not restoration the incised Phase 2 channel. A design variation to the Proposed Action weir structure/flow diversion may result under this alternative; however the Phase 2 design would still require the key design components including the tributary storm drain pipes. A geologic, geotechnical study and detailed hydrologic and engineering analysis would be required to assess the actual design, footprint, fill requirements, and additional impacts to waters of the U.S. under this alternative. In addition to the Phase 2 maintenance road, a permanent maintenance road would also be constructed north of Alta La Jolla Drive to provide maintenance access.</p>	<p>The canyon north of Alta La Jolla Drive is designated private open space and MHPA. The City would be required to use eminent domain, obtain permanent easements, and/or use other acquisition measures to obtain access to construct and maintain Alternative 6. Alternative 6 would provide the opportunity for invasive species removal and restoration of the channel north of Alta La Jolla Road; however it would result in greater impacts to the MHPA than the Proposed Alternative. Alternative 6 would result in greater temporary construction traffic and air quality impacts than the Proposed Project due to the enlarged construction footprint. Although Alternative 6 would provide an opportunity to restore the canyon north of Alta La Jolla Drive, it would still require restoration and repair activities in the Phase 2 area in order to meet the requirements of the Settlement Agreement. Alternative 6 would result in greater impacts to waters of the U.S. and MHPA, greater temporary traffic and air quality construction impacts, and greater cost to the City due to the additional acquisition/land access requirements, and the enlarged construction and long-term maintenance project footprint than the Proposed Project, and is therefore not the LEDPA.</p>

ALTA LA JOLLA DRAINAGE REPAIR PROJECT PHASE 2 – ALTERNATIVES ANALYSIS EVALUATION

<p>Alternative 7 – New Corps alternative concept of using bio-engineered drop structures for both Phase 1 and 2 with a special ERDC based designed water quality basin at downstream end of the project. Phase 1 would have an elevation of a restored channel invert to allow for proper slope stability and to allow existing Phase 1 buttressing to remain to resolve residential slope failures of northern portion of the project area.</p>	<p>The total impacts to waters of the U.S. would be 0.2 acres, which is the same as the Proposed Phase 2 Action.</p>	<p>Under Alternative 7, the City would remove the Phase 1 CMP, re-contour the canyon, reconstruct a drainage channel, install bio-engineered drop structures, and construct an ERDC “Hawaiian Design” water quality basin. The Phase 1 buttressing would remain in place to maintain slope stability. Sloping bio-engineered drop structures would be installed along the length of the canyon, including at the transition of Phase 1 and Phase 2 to establish the channel invert at an elevation to prevent scour of the fill buttress. Additional hydrologic and engineering analysis would be required to evaluate the design and spacing requirements of the bio-engineered drop structures; including how to address the flows entering the canyon from eastern and western tributary drainages, and to assess additional fill requirements. The reconstructed drainage channel would discharge into a water quality basin constructed at the southern end of the Phase 2 area. The water quality basin would be designed to trap and filter out sediment and provide shallow groundwater treatment for phosphate and nitrogen removal. The basin would be designed using an ERDC-based design that includes: a stone “funnel” designed to control & direct flow into the detention basin, stone and soil vegetated “speed bumps” designed to guide flow during lower flow events, rows of dense living woody plants (shrubs & small trees) designed to reduce velocities, construction of trenches parallel to the flow paths filled with aluminum sulfate & organic material to reduce nitrogen & phosphate from shallow groundwater and possibly from stream flow during periods of low flow, and installation of stone reinforcement along the basin side walls. A permanent maintenance road would be installed along the length of the canyon to provide the City maintenance access to the drop structures and water quality basin.</p>	<p>The canyon is a naturally dry intermittent drainage and year-round availability of sufficient runoff to maintain the plants to function as designed in the bio-engineered drop structures and water quality basin without supplemental irrigation, is uncertain. Additional irrigation or regular replanting may be required during dry periods to maintain adequate vegetation in these structures. Additional vegetation monitoring may be required to evaluate success criteria of vegetation in the basin and bio-engineered drop structures. The Alternative 7 water quality basin is designed to trap sediment and remove phosphorous and nitrogen from shallow groundwater. Based on the findings of the Project’s Geotechnical Investigations, the groundwater table in the vicinity of the proposed basin is greater than 22 feet below ground surface; so the goal of shallow groundwater treatment is not feasible. The sloped bio-engineered drop structures may require more maintenance than traditional vertical or hardened drop structures, grade control structures proposed in Alternative 3, or the RCP and restored drainage channel design of the Proposed Project. In addition a study performed about maintenance requirements of drop structures in the Denver metropolitan area recommends a shift away from sloping riprap drops to grouted/concrete drops because of an observation made that more frequent and more structural maintenance work is required for sloping riprap drops. No readily available literature was found during this analysis that presents the performance of bio-engineered drop structures. Available literature on critical shear stress values suggest that bioengineered drop structures are more similar to sloping riprap drops than grouted/concrete drops from stability point of view and additional cost for future redesign or maintenance may be incurred. If additional fill is required there will be greater temporary traffic and air quality impacts due to truck traffic during construction. The City may be required to obtain permits for future maintenance of the bio-engineered drop structures and water quality basin after the current 404 permit has expired. The water quality basin would be logistically more difficult to maintain, and will require more maintenance than the Proposed Project basin, due to the incorporation of shrubs and small trees, stone speed bumps, and bio-swales. Sediment removal would likely be required on a more frequent basis to maintain plant viability, and functionality of the stone speed bumps and water quality treatment trenches. Regular inspections of the basin would be required and would include sediment and vegetation removal, replacement of dead plants, potential irrigation during dry periods, and replacement/re-contouring of trench media. Based on water quality reports reviewed (2010-11 Urban Runoff Monitoring Annual Report, 2010-2011 Heal the Bay Beach Report Card for Tourmaline Surf Park, and 2011 Natural Resources Defense Council (NRDC) report on water testing), phosphorous and nitrogen were either not tested for, or identified as elevated in storm water samples collected at Tourmaline Surf Park. Given that the Proposed Project is not a “pollutant generating development project” that would generate pollutants, including phosphorous and nitrogen at levels greater than background levels, and these constituents do not appear to be present at elevated concentrations in the receiving water, there does not appear to be a regulatory driver to design a basin specific to remove these constituents. Therefore, the additional cost and maintenance associated with this design is an unnecessary financial burden for the City.</p>
---	--	--	---

ALTA LA JOLLA DRAINAGE REPAIR PROJECT PHASE 2 – ALTERNATIVES ANALYSIS EVALUATION

			<p>Project construction and maintenance cost would likely be higher than the Proposed Project due to installation of the bio-engineered drop structures, the basin design, and maintenance requirements, and potential fill requirements. Components of the Alternative 7 design including the shallow water groundwater treatment trenches, and viability of the vegetation to function as designed without supplemental irrigation, may not be feasible. Based on these criteria, Alternative 7 is not the LEDPA.</p>																																			
<p>Alternative 8 – New Corps alternative concepts with other various configurations of high flow pipe flow diversions and restored channel flow diversions with other alternative restored natural channel and basin designs and flow diversions.</p>	<p>The total impacts to waters of the United States would be 0.2 acres, which is the same as the Proposed Phase 2 Project.</p>	<p>Alternative 8 is a design variation of the Proposed Project. One variation could divert dry weather flows from north of the Project Area to the reconstructed natural channel to provide greater year-round moisture to the drainage, particularly in the vicinity of the Phase 1 outfall. A second variation could direct additional post-development storm water flows into the reconstruction drainage. The Proposed Project is designed to direct pre-development (1972) flows into the restored channel (40 acre feet). Additional excessive flows from urbanization (up to 58 acre feet) may be able to be directed into the restored channel.</p>	<p>These design variations would create a slightly wetter channel that would not match pre-development flow conditions. Vegetation that survives under wetter conditions would likely become established near the outfall at the southern end of Phase 1 and in pockets where moister conditions persist. The potential for channel instability would be greater than the Proposed Project due to the addition of post-development excessive flows. These design variations deviate from the RWQCB principle of not using streams as BMPs as presented in 2007 CASQA technical conference by RWQCB staff.</p> <p>The proposed weir configuration is designed such that the peak discharges discharging through the proposed channel for different recurrence intervals are similar to or slightly lower than the previous stable channel. During the settlement agreement it was determined that increase in peak flows for different recurrence intervals which is primarily due to urbanization within the watershed is the major reason for the current channel condition within the project footprint (severe incision). Not removing the excessive peaks from the channel might lead to the channel eroding again.</p> <table border="1" data-bbox="1964 1003 2862 1245"> <thead> <tr> <th rowspan="2">Recurrence Interval</th> <th colspan="3">Peak Discharge (ft³/s)</th> </tr> <tr> <th>Stable Condition</th> <th>Current Condition</th> <th>Proposed Condition</th> </tr> </thead> <tbody> <tr> <td>1 Year</td> <td>33.6</td> <td>55.6</td> <td>33.1</td> </tr> <tr> <td>2 Year</td> <td>54.9</td> <td>79.3</td> <td>47</td> </tr> <tr> <td>5 Year</td> <td>84.8</td> <td>122.6</td> <td>76.1</td> </tr> <tr> <td>10 Year</td> <td>101.1</td> <td>142.4</td> <td>89.8</td> </tr> </tbody> </table> <p>The duration and volume of the flow through the channel for the proposed design is presented below (from the Hydrology Report). This suggests that vegetation similar to the stable condition might establish in the proposed channel.</p> <table border="1" data-bbox="1964 1413 3002 1564"> <thead> <tr> <th>Phase 2 Channel</th> <th>Stable Condition</th> <th>Current Condition</th> <th>Proposed Condition</th> </tr> </thead> <tbody> <tr> <td>Annual Duration (Hours)</td> <td>142</td> <td>210</td> <td>144</td> </tr> <tr> <td>Annual Volume (acre-ft)</td> <td>37</td> <td>86</td> <td>42</td> </tr> </tbody> </table>	Recurrence Interval	Peak Discharge (ft ³ /s)			Stable Condition	Current Condition	Proposed Condition	1 Year	33.6	55.6	33.1	2 Year	54.9	79.3	47	5 Year	84.8	122.6	76.1	10 Year	101.1	142.4	89.8	Phase 2 Channel	Stable Condition	Current Condition	Proposed Condition	Annual Duration (Hours)	142	210	144	Annual Volume (acre-ft)	37	86	42
Recurrence Interval	Peak Discharge (ft ³ /s)																																					
	Stable Condition	Current Condition	Proposed Condition																																			
1 Year	33.6	55.6	33.1																																			
2 Year	54.9	79.3	47																																			
5 Year	84.8	122.6	76.1																																			
10 Year	101.1	142.4	89.8																																			
Phase 2 Channel	Stable Condition	Current Condition	Proposed Condition																																			
Annual Duration (Hours)	142	210	144																																			
Annual Volume (acre-ft)	37	86	42																																			
<p>Alternative 9 – Corps ERDC alternative of using a different basin design for better water quality benefits (Hawaiian design)</p>	<p>The total impacts to waters of the United States would be 0.2 acres, which is the same as the Proposed Phase 2 Project.</p>	<p>Under Alternative 9, the City would construct the Proposed Project using an ERDC “Hawaiian Design” water quality basin. Alternative 9 would also include construction of rain garden bioswale treatment and retention features along both sides of the canyon to capture surface runoff. Microhabitats would be</p>	<p>The canyon is a naturally dry intermittent drainage and year-round availability of sufficient runoff to maintain the willows to function as designed for scour control during high flows is uncertain. Additional irrigation or replanting may be required to maintain the willows to function as intended. Based on the findings of the Project’s Geotechnical Investigations, the</p>																																			

ALTA LA JOLLA DRAINAGE REPAIR PROJECT PHASE 2 – ALTERNATIVES ANALYSIS EVALUATION

<p>with the use of a rain garden-bioswale treatment & retention feature down both sides of the valley (Phases 1 and 2 areas). In the detention basin have the nitrogen and phosphorus reduction in groundwater technique installed. On the stream floodplain have them put in the microhabitat, increased edge and plant the willow poles deep and perpendicular to flow so the project does not get wiped out with a flood after planting. If possible, transplant plants from disturbed areas to streamside areas.</p>		<p>constructed during finished grading in the stream floodplain to create isolated wetter environments and create a more natural appearing stream channel. Willow poles would be planted perpendicular to the flow path in the reconstructed channel to slow velocities to prevent scour during flood events. Vegetation disturbed during construction activities would be salvaged and transplanted to the channel banks, where possible. The basin would be designed using an ERDC-based design that includes: a stone “funnel” designed to control & direct flow into the detention basin, stone and soil vegetated “speed bumps” designed to guide flow during lower flow events, rows of dense living woody plants (shrubs & small trees) designed to reduce velocities, construction of trenches parallel to the flow paths filled with aluminum sulfate & organic material to reduce nitrogen & phosphate from shallow groundwater, and installation of stone reinforcement along the basin side walls. The rain garden bio-swales would consist of trenches constructed parallel to the valley sidewalls to intercept runoff from the side slopes. The trenches would be excavated to a depth of about 4 feet below grade and filled with aluminum sulfate and organic mulch to reduce nitrogen and phosphate. In addition to the Proposed Action maintenance road, permanent maintenance roads would also be installed along the length of both sides the canyon to provide the City access to the rain garden bio-swales.</p>	<p>groundwater table in the vicinity of the proposed basin is greater than 22 feet below ground surface; so the goal of shallow groundwater treatment is not feasible. Treatment would be limited to surface water infiltration. The water quality basin would be logistically more difficult to maintain, and will require more maintenance than the Proposed Project basin, due to the incorporation of shrubs and small trees, stone speed bumps, and bio-swales. Regular inspections and maintenance of the basin and bio-swales would be required to remove sediment to maintain plant viability, and functionality of the stone speed bumps and bio-swales, remove dead vegetation, replace dead plants, potential irrigation during dry periods, and replacement/re-contouring of trench and bioswale media. The City would likely be required to obtain permits for future maintenance of the water quality basin after the current permits have expired. Based on water quality reports reviewed (2010-11 Urban Runoff Monitoring Annual Report, 2010-2011 Heal the Bay Beach Report Card for Tourmaline Surf Park, and 2011 Natural Resources Defense Council (NRDC) report on water testing), phosphorous and nitrogen were either not tested for, or identified as elevated in storm water samples collected at Tourmaline Surf Park. Given that the Proposed Project is not a “pollutant generating development project” that would generate pollutants, including phosphorous and nitrogen at levels greater than background levels, and these constituents do not appear to be present at elevated concentrations in the receiving water, there does not appear to be a regulatory driver to design a basin specific to remove these constituents. Therefore, the additional cost and maintenance associated with this design is an unnecessary financial burden for the City. Project construction, maintenance and inspection cost would be higher than the Proposed Project due to the purchase of bio-engineered drop structures, the basin and bioswale design. Components of the Alternative 9 design including the shallow water groundwater treatment trenches, and viability of the vegetation to function as designed without supplemental irrigation, may not be feasible. Based on these criteria, Alternative 9 is not the LEDPA.</p>
<p>Alternative 10- New alternative of restoration of channel to non-eroded configuration by removing Phase I fill and pipe and re-contouring entire Phase I and II channel and importing fill and restoring and re-vegetating restored channel. Restore and stabilize bank erosion caused by the storm drain pipes on the east and west side of the canyon and lower outlet to the canyon floor. Include a water quality treatment/detention basin at the bottom of the canyon.</p>	<p>The total impacts to waters of the United States would be 0.2 acres, which is the same as the Proposed Phase 2 Project.</p>	<p>Alternative 10 is similar to Alternative 2, with the addition of a water quality treatment/detention basin at the bottom of the canyon. Restoring the channel to its non-eroded/incised configuration would involve removing all temporary structures installed during Phase 1. The entire drainage channel would be re-contoured, which would require import of additional fill and construction of a natural bed and bank channel in the canyon bottom. A more detailed engineering and hydrologic analysis would be required to evaluate variations in channel design (e.g. Pyramat, low growth wetlands with armorflex, buried riprap, bio-engineered drop structures).</p>	<p>Although Alternative 10 would temporarily restore the natural channel, it would not address the flows from urbanization of the watershed. A more detailed engineering and hydraulic design analysis would be required to identify if alternative channel designs be stable during 100 year flow events. The potential risk to stability of the channel, canyon slopes, and earthen buttress would be higher than the Proposed Project. This alternative may require the City to perform on-going channel restoration (fill and grading activities) and maintenance to meet the requirements of the Settlement Agreement. The City would also be required to obtain permits for future restoration activities that occur within waters of U.S. after the current permits have expired. The City’s maintenance and permitting cost would therefore be higher under Alternative 10 than the Proposed Project. Based on this criteria, Alternative 10 is not the LEDPA</p>