

**CHAPTER 3
ENVIRONMENTAL CHECKLIST**

ENVIRONMENTAL ISSUES

I. AESTHETICS

Environmental Setting

The Project Area provides great views of Upper Newport Bay and tidal flats, freshwater marsh, and coastal bluffs. Views and aesthetics will be further enhanced with the proposed project.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) The proposed project would not impact scenic vistas. Restoration activities proposed for the project would in the long-term improve the visual character of the area. Scenic overlooks at the north edge of the restored tidal wetlands, on the new berm at Back Bay Drive, at the southern end of the new freshwater pond and at the upper end of the freshwater pond would provide views of the restored canyon.
- b,c) The Project Area is located approximately one mile north of Coast Highway. Relatively undisturbed natural areas associated with the Upper Newport Bay Ecological Reserve surround the Project Area to the north, south, and west. Temporary impacts to views of these surrounding scenic resources during restoration activities would be less than significant.
- d) The proposed project would not create a new source of substantial light or glare. Lights located within the Project Area and near streets would not adversely alter the day or nighttime views because they would represent an incremental addition to light emitted in the area.

Mitigation Measure Aesthetics:

- **None Required**

II. AGRICULTURAL RESOURCES

Environmental Setting

The proposed Project is located within an urbanized area consisting of a nature park bounded by residential developments, golf courses, commercial developments and the Upper Newport Bay Ecological Reserve. The Project Area does not contain any farmlands.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT*:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997), prepared by the California Department of Conservation as an optional model for use in assessing impacts on agricultural and farmland.

Discussion

- a, b, c) The proposed Project would not convert prime farmland, unique farmland, or farmland of statewide importance. The Project would also not conflict with existing zoning for agricultural use or a Williamson Act contract, or result in the conversion of any Farmland to non-agricultural uses. No impacts would occur.

Mitigation Measure Agricultural Resources:

- **None Required**

III. AIR QUALITY

Environmental Setting

The South Coast Air Quality Management District (SCAQMD) governs air quality in the South Coast Air Basin, which includes Orange County and portions of Los Angeles, Riverside and San Bernardino Counties. Air pollution is significant in this region due to high population density (approximately 15 million people), and tends to stagnate within this basin due to natural barriers, such as mountains. SCAQMD has a comprehensive strategy for reducing air pollution from all sources to compliance with federal and state health-based standards.

Ambient air monitoring data indicate that the South Coast area is currently in nonattainment status for two of six criteria air pollutants listed in the Clean Air Act: ozone (8-hour standard) and small particulate matter (PM_{2.5}). The remaining criteria air pollutants are carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead. SCAQMD has attained federal and state standards for all these pollutants, as well as for larger particulate matter (PM₁₀¹⁰).

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT*:				
a) Conflict with or obstruct implementation of the applicable air quality plan or regulation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations (e.g., children, the elderly, individuals with compromised respiratory or immune systems)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make these determinations.

Discussion

- a) The Project will not conflict with or obstruct implementation of any applicable air quality plans or regulations. The project area is governed by the Southern California Air Quality Management Plan. The region currently exceeds standards for ozone and PM_{2.5}. The most significant sources of these pollutants are vehicle and other mobile source emissions. This Project will restore a degraded tidal wetland and creek watershed area for ecological value and public use. The functioning of this natural area will not generate air emissions nor obstruct implementation of air quality plans.
- b) The South Coast region is currently in violation of air quality standards for ozone and PM_{2.5}, and is anticipated to reach attainment in 2010. The Project is not expected to result in significantly increased air emissions during operations. During construction and restoration operations, dust resulting from vehicle travel and fuel combustion from vehicles may cause locally increased levels of particulate matter. Approximately 75,000 cubic yards are expected to be excavated and 50% of this amount (40,000 cubic yards) will need to be hauled off during the creation of the tidal wetlands. Removal of dredge material is expected to begin in 2008 and will take approximately 125 days per year for two years. These materials are to be disposed of at Frank R. Bowerman Landfill at 11002 Bee Canyon Access Road, Irvine, CA, approximately 15 miles from the Project

Area. The haul route will be from the site to Bee Canyon Access Road via Jamboree Road, Ford Road/Bonita Canyon Road, University/Jeffrey Road, and Portola Parkway. Approximately 20 cubic yards of material would be hauled per truck, eight truck trips per day in average. This may yield approximately 0.24 lb PM_{2.5} emitted per day (SCAQMD 2007) in average for the duration of the removal process. Considering possible excess material removal during a shorter duration and transportation of other construction materials, it is necessary to define maximum truck traffic allowance per day in the construction specifications.

For 40 truck trips per day maximum, the maximum daily PM_{2.5} emission level may be increased to 1.20 lb/day. This value is significantly less than 760 lb/day which is the average PM_{2.5} emission level for heavy diesel trucks across Orange County, (CARB 2006). Based on this analysis, potential emissions from truck traffic associated with this project would represent insignificant sources of pollutant contributing the overall PM_{2.5} emissions. Nonetheless, because the South Coast airshed is a nonattainment area for PM_{2.5}, mitigation should be employed to minimize particulate emissions during construction (MMAQ-1). (SCAQMD 2003, SCAQMD 2007, California Air Resources Board 2006)

- c) The Project is not expected to result in a cumulatively considerable net increase in air emissions during operations. However, construction may cause locally increased dust emissions from vehicle travel, as discussed in b) above. The South Coast area is a nonattainment area for PM_{2.5}, and therefore mitigation measure should be employed to minimize particulate emissions (MMAQ-1).
- d) The Project will not expose sensitive human receptors to substantial pollutant concentrations. There are no residences in Big Canyon, and best management practices will be used to curtail locally increased dust levels resulting from construction, so there will be minimal off-site transfer of particulate matter from the site.
- e) The Project will not create objectionable odors impacting a substantial number of people. There are no residences within the Big Canyon area, and odor emissions will not be changed after implementation of the restoration project.

Mitigation Measure Air Quality-1:

- Best management practices (BMPs) should be employed to minimize dust emissions from vehicle travel during site restoration. Dust control BMPs typically include the following:
 - Cover all trucks hauling soil and other loose materials or require all trucks to maintain at least two feet of freeboard.
 - Roadways should be watered down to reduce dust emissions and vehicle trips to and from the site should be minimized.
 - Remove loose soil from truck surfaces before leaving the Project Area.
 - Limit traffic speeds on unpaved roads to 15 mph.
 - Suspend excavation and grading activity when winds exceed 25 mph.
 - Minimize idling time.
 - Maintain properly tuned equipment.

- Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use.

As part of the BMPs, construction activities will need to comply with all applicable SCAQMD rules and regulations from the 2007 “Air Quality Analysis Guidance Handbook”, which is currently being developed to replace the 2003 Handbook.

IV. BIOLOGICAL RESOURCES

Environmental Setting

Habitats present within the Project Area were identified and mapped as part of the Phase I study for the project. Forty-two native plant communities are present in the Project Area. Many of these communities are fragmented, discontinuous, and threatened by invasive weeds such as Brazilian peppertree and lollipop tree. Native plant communities in the upper part of Big Canyon include arroyo willow scrub, alkali meadow, freshwater marsh, and sagebrush scrub. The lower (western) portion of the canyon is dominated by a large area of freshwater marsh, along with cottonwood-willow riparian forest, alkali meadow, brackish marsh, mulefat scrub, alkali grassland, chenopod scrub, coyote brush scrub, and sagebrush scrub. The canyon slopes contain areas of coastal bluff scrub and coyote brush scrub.

The tidal wetlands on the bayside of Back Bay Drive are dominated by saltmarsh, with smaller areas of alkali grassland, alkali meadow, alkali marsh, brackish marsh, mulefat scrub and sagebrush scrub along the edges of the roadway. Mudflats and shallow tidal channels are present in Upper Newport Bay. In addition, a freshwater marsh, riparian areas, and stream channel occur on the project site. Wetlands, streams, and riparian areas that are subject to jurisdiction by the Corps of Engineers, the California Department of Fish and Game, and the City of Newport LCP have been determined. As described in the project description, these areas will be impacted by project construction; however, overall, a net increase in wetland and riparian habitats will be present following project implementation.

The Project Area contains approximately 13.9 acres of Section 404 jurisdictional wetlands and 5.8 acres of “other waters”. This restoration project includes permanently filling 0.9 acres of wetlands and 0.1 acres of waters. Approximately 3.8 acres of wetlands and 2.3 acres of waters will be temporarily impacted during Project construction. However, a net gain of 4.0 acres of Section 404 jurisdictional wetlands is expected to occur as a result of this project while 1.0 acres of waters will be lost (Table 3.1-1).

Approximately 14.2 acres of wetlands and 5.8 acres of open waters as defined by the City of Newport Beach Local Coastal Program (LPC) occur in the Project Area. Approximately 0.9 acres of wetlands and 0.13 acres of waters will be permanently filled. Approximately 3.8 acres of wetlands and 2.3 acres of waters will be temporarily impacted during Project construction. A net loss of 2.4 acres of freshwater marsh, 0.3 acres of seasonal alkali wetlands, and 1.0 acres of open waters are expected to result from this restoration project. However, a net gain of 6.6 acres of coastal salt marsh and 0.4 acres of riparian habitat will result from this Project. (Table 3.1-2)

Several federally listed plant and avian species associated with wetland and salt marsh habitats have been observed or have a high potential to occur within the Project Area. Patches of salt marsh bird’s beak (*Cordylanthus maritimus* ssp. *maritimus*; FE, SE) occurs in salt marsh near

the mouth of Big Canyon. With 30,000 individuals counted in 2003, Big Canyon has the most significant population in Southern California. The project is designed to avoid impacts to this species. Five additional special status plant species occur within the Project Area: southern tarplant (*Hemizonia parryi* spp. *australis*; CNPS List 1B), California boxthorn (*Lycium californicum*; CNPS List 4.2), southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*; CNPS List 4.2), estuary seablite (*Suaeda esteroa*; CNPS List 1B), and woolly seablite (*Suaeda taxifolia*; CNPS List 4.2).

The Coastal California Gnatcatcher (*Polioptila californica californica*; FT) has been observed in saltbrush scrub habitat. The Light-footed Clapper Rail (*Rallus longirostris levipes*; FE, SE, State Fully Protected) has been observed in cordgrass dominated habitats and Beldings Savannah Sparrow (*Passerculus sandwichensis beldingi*; ST, State Fully Protected) has been observed in pickleweed habitat within the Project Area. In addition, the California Brown Pelican (*Pelicanus occidentalis*, FE, SE) was observed foraging in channels west of the salt marsh in Upper Newport Bay and California least tern (*Sterna antillarum browni*, FT) was observed foraging in tidal water areas near the Project Area. Neither species has been observed within the Project Area.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a sensitive, candidate, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands, as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) In 2004, Keane Biological Consulting (KBC) conducted surveys for rare species with potential to occur within the Project Area. There are six special status plant species that were observed or are expected to occur in the Project Area and twelve species that are present in Upper Newport Bay and therefore could potentially occur at Big Canyon. Eleven special status bird species were observed within the Project Area and ten bird species have potential to occur. Two herpetological species have potential to occur and one special status insect species was observed. Twenty additional insect species have potential to occur within the Project Area. Mitigation measures have been established for those species impacted during restoration construction (see Mitigation Measure Biological Resource-1 MMBR-1 and MMBR-4).
- b) 11.2 acres of riparian habitat are present in the Project Area (Table 3.1-3). Approximately 0.9 acres of riparian habitat will be impacted by the restoration project. Coastal sage scrub habitat, which is an environmentally sensitive habitat area (ESHA), is also present in the Project Area. Of the 14.7 acres of coastal sage scrub found in the Project Area, approximately 1.8 acres will be permanently removed. (see MMBR-2).
- c) The Project Area contains approximately 13.8 acres of Section 404 jurisdictional wetlands and 5.8 acres of "other waters". This restoration project includes permanently filling 0.9 acres of wetlands and 0.1 acres of waters as a result of the Back Bay Road realignment, non-native plant removal, and grading in stream, pond, and marsh areas for their conversion to salt marsh or pond habitat. Approximately 3.8 acres of wetlands and 2.3 acres of waters will be temporarily impacted during Project construction.

Approximately 25.3 acres of wetlands as defined by the City of Newport Beach LCP occur in the Project Area. Approximately 1.3 acres of wetlands will be dredged or filled, including 0.3 acres of seasonal alkali wetland, 2.4 acres of freshwater marsh, and 1.0 acres of open water areas. (see MMBR-3)

- d) Removal of riparian habitat would occur as a result of the relocation of Back Bay Road, the creation of the open water pond above the new road, and construction of a diversion berm near the east end of the canyon. The removal of riparian habitat may interfere with the movement of migratory fish species and wildlife species (see MMBR-4).
- e,f) The proposed Project would not conflict with protection of biological resources under the City of Newport Beach Local Coastal Program Coastal Land Use Plan (as Adopted December 13, 2005). The proposed tidal marsh restoration would serve to enhance and restore marine resources. The biological productivity and the quality of coastal waters, tidal marsh, Big Canyon Creek, and wetlands would be enhanced and restored. The proposed Project would control runoff, maintain natural vegetation buffer areas that protect riparian habitats and provide erosion control to protect Big Canyon Creek. The proposed Project would protect environmentally sensitive habitat areas against significant disruption of habitat values by carefully controlling public use. Recreation, interpretation and educational areas would be sited and designed to prevent impacts to environmentally sensitive habitats. The Project would not conflict with the provisions of any local policies and ordinances.

Mitigation Measure Biological Resources-1

- The restoration of the Project Area would create native transitional and wetland habitats, which would increase the nesting and foraging habitats for wildlife species. The restoration of native habitats would also improve habitat for special status plants. Impacts to special status species may occur during the construction of the restored creek.
 - Project construction will be limited to the non-breeding period for sensitive wildlife, generally between September 1st to February 15th. However, should work be conducted outside this period, a qualified biologist will conduct preconstruction surveys within two weeks prior to the commencement of construction to verify the presence or absence of birds, including raptors, passerines, and their nests. If the survey indicates the potential presence of nesting raptors or protected passerines, construction workers will adhere to CDFG avoidance guidelines, which are typically a minimum 500-foot buffer zone surrounding active raptor nests and a 250-foot buffer zone surrounding nests of other birds.
 - Populations of *Cordylanthus maritimus* ssp. *maritimus* within 100 feet of project construction will be marked and construction fencing will be erected to protect these areas during construction. No take of this species is anticipated with the project.

Mitigation Measure Biological Resources-2

- Approximately 1.3 acres of riparian willow woodland will be restored and enhanced through removal of invasive exotic plant species. Native riparian species will be planted and seeded in areas that are opened up with the removal of exotic species. A mix of each canopy layer will be planted. Specific placement of species will depend on soil and hydrologic conditions. In addition, 3.3 acres of coastal sage scrub habitat will be restored and 2.3 acres will be enhanced with the implementation of this project. Therefore it is self-mitigating and no additional mitigation measures are necessary.

Mitigation Measure Biological Resources-3

- A net gain of 4.0 acres of Section 404 jurisdictional wetlands is expected to occur as a result of this project by restoring tidal influence to Big Canyon Creek, and converting the degraded freshwater pond to freshwater marsh. (Table 3.1-1) A net gain of 6.6 acres of coastal salt marsh habitat and an overall 2.1 acres of wetland features subject to LCP policies are expected to result from this restoration project (Table 3.1-2). Wetlands will be restored and enhanced through improving drainage and planting native wetland species. Because additional wetland habitat will be created with the implementation of the Project, it is self-mitigating and no additional mitigation measures are necessary.

Mitigation Measure Biological Resources-4

- Restoration of the riparian habitats will improve habitat and water quality for migratory fish and wildlife species and restore migratory corridors within the Project Area.

Mitigation Measure Biological Resources-5

- Permit applications to the U.S. Corps of Engineers, the Regional Water Quality Control Board, the Department of Fish and Game, and the City of Newport Beach must be filed prior to construction of the project and all conditions associated with those permits will be adhered to during and following construction activities.

V. CULTURAL RESOURCES

Environmental Setting

The Project Area is in an area of known resources according to the Environmental Assessment of Back Bay Trunk Sewer (East Side) (1976). A resource site does exist on the landward side of the road at the base of the bluff near Big Canyon.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Cause a substantial adverse change in the significance of a historical resource, as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a, b, c) The resource site would be fenced so that there will be no trespassing or construction in this area. The Project will have no permanent impact on known archaeological/paleontological resources.

d) No known human remains, including those interred outside of formal cemeteries would be disturbed by the Project.

Mitigation Measure Cultural Resources:

- **Mitigation Measure Cultural Resources-1**

An archaeological observer will be present during excavation to inspect the materials. If a significant resource is found, contract provisions will be made to halt construction for three days to facilitate resource removal.

VI. GEOLOGY AND SOILS

Environmental Setting

Surface materials at the Project Area generally consist of dredged fill which is typically silty sand. Native site material contains sandy clay. The deposition of dredge materials in Big Canyon combined with the construction of Back Bay Drive have apparently modified the topographic features of the canyon and influenced the establishment of both native and non-native plant communities. The specific chemistry and soil characteristics of the dredge spoil locations have created large infertile areas and areas dominated by exotic species.

WOULD THE PROJECT:	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) The Project Area is located in the City of Newport Beach. There are a number of faults in the southern California area which are considered active and will have an effect on the Project Area in the form of moderate to strong ground shaking, should they be the source of an earthquake.
- i) The Project Area is not located within an Alquist-Priolo Earthquake Fault Zone. No known active or potentially active faults are shown crossing the Project Area on published maps. No evidence for active or potentially active faulting was encountered during the onsite geotechnical evaluation (GSI 2006).
 - ii) Based on the analyses by GeoSoils, Inc. (GSI 2006) historical seismic activity in the area surrounding the proposed Project shows that the largest earthquake magnitude within a 100-mile radius of the Project Area between 1800 and 2006 was 7.6. The Project Area would be subject to varying groundshaking intensities in the event of an earthquake on any of the potentially active faults in the region. However, the project does not include any buildings or critical facilities which could be damaged and result in loss, injury, or death.
 - iii) Liquefaction, a secondary earthquake-induced hazard, occurs when water-saturated soils lose their strength and liquefy during intense and prolonged groundshaking. According to analyses by GeoSoils, Inc. (GSI 2006), areas within the middle of the canyon have liquefaction potential in the Seismic Hazard Zone. However, there are no buildings or critical structures within the Big Canyon Creek which could expose people or structures to potential substantial adverse effects.
 - iv) The Project Area does not contain any existing landslide hazards.
- b) During Project construction, excavation and grading will be required. Construction is likely to occur in and near the winter due to habitat impact restrictions (March to August). An Erosion Control Plan will be included in the Construction SWPPP and implemented at the onset of the construction to avoid temporary erosion caused by rainstorms. The contractor will provide a surface flow control plan to avoid erosion for approval prior to construction.

The Proposed Project involves beneficial changes to creek topography, including creation of upper and lower ponds and modification to the freshwater marsh, Back Bay Drive, and tidal marsh. This will result in a more stable channel condition and reduce erosion potential as summarized below. A complete description is provided in the feasibility study report (WRC 2007).

The north channel, which is currently subject to severe erosion, will have lesser flows and lower velocities during high flow events due to reduction in both the trail dike length and overtopping flows from the south channel.

Back Bay Drive will have relatively higher elevations compared to the 100-year flood level. Drainage culverts will be much wider than the existing weir and pipe culverts to avoid flow concentration and reduce scour potential.

The freshwater ponds created above the service road crossing, partially by fill at the service road (embankment) and partially by excavation, will maintain similar hydraulic

features as the existing condition – as described in Section 3.2 and Appendix B of the feasibility study report (WRC 2007). Therefore, no negative impacts on channel stability and erosion/sedimentation will result from the construction of freshwater ponds.

The creek bed upstream of the existing service road is much higher than the downstream marsh area. Creek soils may become unstable during future major rainstorm events as the service road is only protected locally and partially near the pipe culvert outlet. Under the Proposed Condition, stabilization of the road embankment will ensure the gross stability of the creek and no mass erosion will occur and impact the tidal marsh and Upper Newport Bay (MMGS-1).

- c) The canyon slope near the central gathering area has been identified as potentially unstable; however, Project elements will be placed with sufficient setback (20 feet at minimum) and will not cause any impact to the slope stability. Based on the feasibility study report (WRC 2007), no active fault zones exist in the area (see Section 3.5 and Appendix C of the report). With only minor, temporary alterations to site topography resulting from Project construction, no impacts to unique geologic features will occur.
- d) The Project area contains previously dredged materials from Upper Newport Bay and may contain expansive soils. However, there are no habitable structures and buildings existing and proposed within the project site which can expose people to hazards related to expansive soils. All concrete work, boardwalk, and roadway pavement must be constructed with adequate foundation preparation following City standards and geotechnical engineer's recommendation (MMGS-2)
- e) The Proposed Project does not include septic tanks or alternative waste disposal systems. As such, there is no potential for soil failure associated with the installation of septic tanks or alternative waste disposal systems.

Mitigation Measure Geology and Soils-1:

Soil loss prevention will be provided through the implementation of the erosion control plan and surface flow control plan, as described under Mitigation Measure Hydrology and Water Quality - 2.

Mitigation Measure Geology and Soils-2:

A licensed geotechnical engineer will prepare a foundation recommendation report for roadways and minor structures, such as overlooks and the amphitheater. A registered civil engineer will prepare structural and facility foundation details per the geotechnical engineer's recommendation or City standards (if more conservative). Other excavation and competent materials will be described on the detailed plans to guide the contractors where needed (such as roadways and minor structures), as recommended by the soils engineer. The Project will result in no significant impacts. Design and construction will follow the currently available public work construction standards, including City's standards.

VII. HAZARDS AND HAZARDOUS MATERIALS

Environmental Setting

A preliminary soil contaminant analysis of soils within the Project Area was conducted by Weston Solutions, Inc. during November 15-17, 2006. , In addition and water quality was also assessed on August 10, 2004 and August 20, 2004.

The results of the soil contaminant analysis show that metals including arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver were all detected at levels below effects range-low (ERL) for marine sediment and within background levels for soil established by NOAA (WRC 2007). Organochlorine pesticides and PCBs and organotins were not detected. These results suggest that the soils in the tidal marsh and freshwater marsh are not considered contaminated. Therefore, these soils are likely to be suitable for on-site fill. With the creation of tidal wetlands, approximately 37,500 cubic yards of dredged fill material will be disposed offsite. Offsite disposal of these soils is not expected to require additional costs due to soil contaminants. However, the analysis is based on a single sample which may not be representative of general site conditions. The analysis results will need to be verified during the construction phase.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials, substances, or waste into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites, compiled pursuant to Government Code §65962.5, and, as a result, create a significant hazard to the public or environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be located in the vicinity of a private airstrip? If so, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Expose people or structures to a significant risk of loss, injury, or death from wildland fires, including areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion

- a) No known hazardous materials are present within the Project Area and the Project would not involve the transport, use, or disposal of any hazardous materials. Soil toxicity testing conducted to date by Weston Solutions, Inc. has shown that contaminant concentrations in site soils are within background levels, and the soils are considered non-toxic and suitable for use as fill or disposal at solid waste landfills or dredge disposal areas. Therefore, no impact would occur.
- b) No foreseeable upset and/or accident conditions involving the release of hazardous materials, substances, or waste into the environment is anticipated with the implementation of this Project.
- c) No schools are present or proposed within one-quarter mile of the Project Area, nor are hazardous emissions expected to be emitted or handled through the implementation of this Project.
- d) No portion of the Project Area is included on a list of hazardous materials sites that would create a significant hazard to the public or environment.
- e, f) The project area is within two miles from John Wayne Airport. However, given the nature of the project (habitat restoration and installation of recreational and interpretive facilities), safety hazards are not expected for people working, visiting, or residing the Project Area.
- g) The proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- h) Since the proposed Project is a restoration project covering a 60-acre site of open space and includes the preservation of native plant communities susceptible to wildland fires such as chaparral and coastal sage scrub, there would be less than significant impact on exposure to people or structures to fire.

VIII. HYDROLOGY AND WATER QUALITY

Environmental Setting:

Big Canyon Creek’s watershed of approximately two square miles is highly urbanized and completely developed and contributes significant water flow to the Project Area. The Creek drains this watershed directly into Upper Newport Bay. The headwaters are located near the San Joaquin Reservoir east of MacArthur Blvd.

Big Canyon Creek is in a natural, un-channelized condition within the Project Area. The natural function of Big Canyon includes accommodating storm events and flooding; during large floods, such as a 100-year flood, the entire canyon floor is inundated. This natural flooding process provides the necessary soil moisture for plant growth. However, the channel banks and inverts are subject to erosion and sedimentation during flood events which may cause damages to roadways, boardwalk bridge, and other infrastructures. This may also impact the existing habitats. The Project intends to improve the creek stability and prevent major erosion hazards during future flood events. Recognizing the environmental sensitivity, no major engineering work is allowed to entirely armor the creek and canyon. The Project's goal is to protect the infrastructure and reduce potential habitat loss with erosion and sedimentation management acceptable to the regulatory agencies.

Tidal inundation in the Project Area is limited to the bayside of Back Bay Drive. Previous construction of Back Bay Drive cut off tidal flow but historic aerial photographs and maps of Big Canyon show that the historic range of the tidal wetlands once extended approximately 500 feet inland from Back Bay Drive and reached across the entire canyon mouth. Big Canyon currently drains through three 15-inch pipes under Back Bay Drive. The Project intends to restore the historical tidal inundation while preserving the existing sensitive habitats.

The water in Big Canyon Creek is unfiltered urban runoff draining a two-square mile developed watershed. The creek carries fertilizers and pesticides from lawns, landscaping and golf courses and pollutants from cars, streets and paved areas upstream of the Project Area. During storms, water sampling has shown very high levels of fecal bacteria at the Big Canyon Creek outlet in Upper Newport Bay based on the 2004 monitoring results. Upper Newport Bay is listed as an impaired water body under section 303(d) of the Clean Water Act. According to this classification, the following contaminants occur in both Upper and Lower Newport Bay: pesticides and metals, nutrients, pathogens, and sediments/siltation. Total Minimum Daily Loads (TMDL) for Newport Bay have been established for sediments, nutrients, and fecal coliform.

The Project intends to help meet these TMDLs by addressing the polluted runoff in the creek before contaminated water reach Upper Newport Bay. The proposed Project includes an integrated system of water quality improvement components, erosion and sedimentation control and use of natural habitats. (Community Conservancy International 2004)

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?

- | | | | | |
|---|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| d) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Substantially degrade water quality? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map, or other flood hazard delineation map? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Place structures that would impede or redirect flood flows within a 100-year flood hazard area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i) Expose people or structures to a significant risk of loss, injury, or death from flooding, including flooding resulting from the failure of a levee or dam? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| j) Inundation by seiche, tsunami, or mudflow? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a) The Proposed Project would not violate any water quality standards or waste discharge requirements.
- b) No groundwater resources would be affected. Therefore, the direction or rate of flow of groundwater would not be affected by the Proposed Project. The Project would not introduce artificial recharge or create a significant barrier. Therefore, the groundwater and subsurface flows would remain the same in both magnitudes and directions.
- c) The existing creek shows moderate sedimentation potential upstream of the service road crossing and within the freshwater marsh area. Under the project condition, the fresh water ponds would be constructed in the existing sedimentation area upstream of the service road crossing. The ponds would trap sediments as the flows move through; however, the project includes an upper pond for sediment management. The upper pond will serve as a debris/sediment management area which will significantly reduce the sedimentation levels within the lower pond and protect its habitat value. The upper pond will be routinely maintained by the City to achieve the desired restoration objectives (MMHWQ-1)

No development exists downstream which would be impacted by the sediment levels within the pond. Since the upper watershed is heavily urbanized, it is expected that sediment removal is feasible and may need to be performed only after major rainstorms.

- d) The Project would maintain the same drainage paths and patterns as currently exist. The surface flow rates would also remain the same with the implementation of the Project.
- e) The additional impervious surfaces or other similar features are insignificant to cause any noticeable increase in surface runoff.
- f) The Project would result in positive water quality improvement. This project does not involve major riparian woodland creation work which might result in negative impacts associated with wildlife pollutants. The restoration elements provide an integral system of water quality filtration: riparian wetlands, freshwater ponds (upper pond also serves sediment detention), freshwater marsh, and additional end of the pipe BMPs. Optional BMPs can be offered through formation of a detention area behind the water quality berm at the City sewer crossing in the upper canyon. In addition, the riparian channel (North Channel) would receive less flows, therefore, reduce the erosion potential during high flows (approximate at or larger than 1,000 cfs).

The Project would be required to comply with applicable construction activity through preparation and implementation of a Water Quality Management Plan (WQMP) for urban runoff pollutants (MMHWQ-2)

- g) All residential properties are on the high banks above the 100-year floodplain. These banks will not be impacted by the Proposed Project.
- h) The existing Project Area is within the Big Canyon Creek 100-year floodplain and would maintain nearly the same floodplain footprint and water surface elevations under the Proposed Project conditions. The water surface elevations in most of excavated area below the proposed Back Bay Drive would be reduced to the tidal level and the realigned portion of Back Bay Drive would not be subject to riverine or tidal flooding.
- i) The embankments of the freshwater ponds would be constructed with sufficient stability against erosion by a 10-100 year flood. Note that the design requirements do not require 100-year flood protection since it is a restoration project, but the City has elected to increase its stability level. The park will be closed during significant rainstorms and no risk associated with property loss or life threatening conditions would result from the project since no development is below the pond embankment. The Proposed Project would not increase the risk of people or structures to loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.
- j) The Proposed Project would not increase the risk of the Project Area or surrounding land to be inundated as a result of seiche, tsunami, or mudflow. The watershed is heavily urbanized and the Upper Newport Bay is protected against ocean waves.

Mitigation Measure Hydrology and Water Quality -1:

A California State registered civil engineer with sufficient knowledge of Big Canyon Creek erosion and sedimentation issues will develop a maintenance program prior to construction completion. The City will inspect and maintain the freshwater ponds per the guidelines stated in the maintenance program.

Mitigation Measure Hydrology and Water Quality -2:

The WQMP would implement all applicable Best Management Practices (BMPs) as outlined in the Countywide NPDES Drainage Area Management Plan to ensure that potential adverse effects on water quality are minimized.

A California State registered civil engineer with knowledge of the erosion, sedimentation, and water quality issues of Big Canyon Creek will prepare a Water Quality Management Plan (WQMP) according to the Orange County Resources and Development Management Department's Drainage Area Management Plan guidelines and specific project needs for construction water quality management. Construction phasing, construction SWPPP, and surface flow control will be part of the WQMP. The contractor will prepare a final plan based on the civil engineer's draft and review comments. A resident engineer or City representative will certify plan implementation and will monitor the construction activities from preparation for construction to construction completion.

Weston Solutions, Inc. (2006) has prepared a Monitoring Plan and Quality Assurance Project Plan for assessing baseline water quality data and to assess the water and sediment quality that need to be addressed in the design and long-term sustainability of the Project.

The project itself is a water quality enhancement project and no additional long term mitigation is required.

IX. LAND USE AND PLANNING

The Project Area is currently a primary access point to Upper Newport Bay. The estuary is used by the public for recreation, wildlife observation and wetland-based education. Hikers, joggers, and bicyclists typically concentrate their activities along Back Bay Drive. The parking lot can currently accommodate 35 cars and two buses. A wood timber kiosk is located a short walk from the parking lot. The trails leading to the kiosk have been damaged by flooding and are not clearly marked. The Project would maintain the current open space land use and restore the Project Area to improve open space activities for the public.

Environmental Setting

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with the applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) The proposed Project would restore Big Canyon Creek and the surrounding open space. It would not involve dividing an established community.
- b) This restoration project would not conflict with the current City of Newport Beach General Plan and any policies or regulations of any agency with jurisdiction over the Project Area. The City of Newport Beach and the Department of Fish and Game are the present owners and managers of the Project Area and are involved in the restoration efforts of this Project.
- c) The proposed Project would restore tidal influence to Big Canyon Creek and re-establish natural transitions between wetland and upland communities. In addition, the Project would involve the removal of infertile soils, repair flood damage, address urban runoff, remove non-native plant species, restore native habitats and restore the freshwater pond. None of these activities conflict with the City of Newport Beach LCP.

Mitigation Measure Land Use and Planning:

- None Required

X. MINERAL RESOURCES

Environmental Setting

The Project Area is located primarily on dredged fill. There are no known mineral resources of value to the region or the state.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Result in the loss of availability of a known mineral resource that is or would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) Because the Project does not contain any mineral resources, there would not be any potential for the loss of known mineral resources and no impact would occur.
- b) Based on the type of underlying soils, there is no known locally important mineral resource within the Project Area. As such, there would not be any potential for the loss of known mineral resources and no impact would occur.

Mitigation Measure Mineral Resources:

- **None Required**

XI. NOISE

Environmental Setting

The project is located in a canyon, which is surrounded on both sides by residences. The closest residences are approximately 500 feet from the Project Area and elevated above the site. The project is an ecological restoration of a creek and wetland area, which will not generate any noise when completed.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Generate or expose people to noise levels in excess of standards established in a local general plan or noise ordinance, or in other applicable local, state, or federal standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Generate or expose people to excessive groundborne vibrations or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Create a substantial permanent increase in ambient noise levels in the vicinity of the project (above levels without the project)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a substantial temporary or periodic increase in ambient noise levels in the vicinity of the project, in excess of noise levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be in the vicinity of a private airstrip? If so, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a, b, c) The project would not generate or expose people to noise levels in excess of standards established in a local general plan, noise ordinance, or other applicable federal, state or local standards. The project would also not expose people to excessive ground-borne

vibrations or ground-borne noise levels, or create a substantial permanent increase in ambient noise levels.

- d) The project could create a substantial temporary or periodic increase in ambient noise levels in the project vicinity during construction of tidal marshes and riparian habitat, removal of fill material, trail-building and other activities. Other than roadway pavement and erosion control work, grading operation is the only other significant activity and no other development activities will be involved. Several elements such as restrooms and amphitheaters have been changed to involve portable equipments and more environmentally friendly facilities. This will reduce construction noise significantly. In addition, proper scheduling of construction activities and control of construction equipments are planned to reduce noise to the extent possible (MNNS-1).
- e) The Project is within two miles from John Wayne Airport. However, the nature of the project involving restoration in the creek bed which is 20 feet below the surrounding residential neighborhood will not expose people residing or working in the Project Area to excessive noise levels.
- f) The project is not located in the vicinity of a private airstrip.

Mitigation Measure Noise -1:

Construction will be scheduled for normal work hours when most neighboring residents are at work. Construction will occur during fall and winter seasons only for a two to three year time period but about 50% time period will involve only planting without noise concern. Construction materials and methods which do not require heavy and noisy equipments will be applied to the extent possible.

XII. POPULATION AND HOUSING

Environmental Setting

The proposed Project is a creek restoration project and does not contain any housing developments.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) The proposed Project would not directly or indirectly induce population growth through the provision of new homes, businesses, infrastructure, or service.
- b,c) No existing housing would be displaced as a result of implementing the proposed Project, nor would the Project result in the displacement of people. Therefore, no replacement housing would be required and no impact would occur.

Mitigation Measure Population and Housing:

- **None Required**

XIII. PUBLIC SERVICES

Environmental Setting

Police and fire protection are provided by the City of Newport Beach. The Project Area is managed by the Department of Fish and Game. Schools in the vicinity are managed by the Newport Mesa Unified School District.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Result in significant environmental impacts from construction associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) The Project would not result in the construction of new or altered fire protection, police protection, school, or other public facilities. The Project would not induce population growth, and therefore, the need for new or physically altered governmental facilities (fire and police protection, schools, and other public facilities) would not be required.

Mitigation Measure Public Services:

- **None Required**

XIV. RECREATION

Environmental Setting

The Project would restore Big Canyon Creek and provide opportunities for recreation by means of trails, bike paths, overlook sites and interpretative media.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) The Project would result in a beneficial impact and would not cause deterioration of Big Canyon Park and other adjacent facilities. The Project will maintain and enhance its current function for outdoor education and passive recreation. The trail network in Big Canyon would be improved to provide continuous ADA access within the central gathering area and the public viewing of the freshwater pond and wetlands. In addition to ADA trails, two-way bike trails along Back Bay Drive and the loop road (connecting to parking and the central gathering area) will also function as hiking and jogging trails for physical fitness.
- b) The new trails and interpretive facilities would be constructed in areas without environmental significance under existing and Project conditions; therefore, no significant impact is expected. The Project would provide outdoor education and passive recreation for nearby residents, school children in Orange County and other public groups. A major objective of the project is to increase environmental awareness. Interpretive, regulatory, and directional signs would be posted to educate visitors on biological resources and water quality protection, while avoiding any unintentional disturbance.

Mitigation Measure Recreation:

- **None Required**

XV. TRANSPORTATION/TRAFFIC

Environmental Setting

The Project Area is currently accessible by the public through San Joaquin Hills Road and Back Bay Drive, which is also a primary access to Upper Newport Bay. The Project Area and estuary are used by the public for recreation, wildlife observation and outdoor education. The existing daily vehicular traffic on the Back Bay Drive was measured at 136 and 164 on April 17 and 18, 2007, respectively, by the City of Newport Beach. There are 35 existing parking lots and two buses to accommodate the existing traffic with less than 50% of these lots occupied most of time. The Back Bay Drive has a one-way lane (toward north) with a two-way dedicated bike trails on the bayside. This will be maintained under the Project condition except for realignment of the road except for tidal marsh creation. Vehicular access to the Big Canyon will continue via Back Bay Drive. Back Bay Drive will continue to function as a throughway along the edge of Upper Newport Bay Ecological Preserve (Community Conservancy International 2004).

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Cause a substantial increase in traffic, in relation to existing traffic and the capacity of the street system (i.e., a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, individually or cumulatively, the level of service standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Cause a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Contain a design feature (e.g., sharp curves or a dangerous intersection) or incompatible uses (e.g., farm equipment) that would substantially increase hazards?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) As a goal of this Project is to promote public use through recreation and education, visitor counts are expected to increase with the implementation of the Project. The vehicular traffic, however, will be managed by advanced scheduling of the public and school tours

through Inside the Outdoor, which has been conducting educational tours to the project site. By proper scheduling visitor groups, it is expected that vehicular traffic increase will be insignificant and will be monitored yearly for at least three years after Project construction. Since the land use is preserved under the Project condition, it is expected that traffic changes or associated hazards would not occur due to design features or incompatible use.

During the construction phase of the Project, trucks will be used to haul off approximately 40,000 cubic yards of dredge material. Removal of dredge material is expected to begin in 2008 and will take approximately 125 days per year for two years. The dredged material is expected to be disposed of at Frank R. Bowerman Landfill, located at 11002 Bee Canyon Access Road, Irvine, CA, approximately 15 miles from the Project Area. Approximately 20 cubic yards of material would be hauled per truck, an average of eight truck trips per day with 40 truck trips per day maximum (See Air Quality section, discussion (b) for details on construction traffic). This will not cause significant impacts on Back Bay Drive or adjoining streets.

- b) The Project would not exceed the level of service standards established by the county congestion management agency for designated roads or highways.
- c) The construction of the Project and related facilities would not affect air traffic facilities. The Project Area is not in the immediate vicinity of any air traffic facility or function. Therefore, no impacts are anticipated.
- d) To create the tidal marsh, Back Bay Drive has to be lengthened with a large curve crossing freshwater marsh as shown in Figure 2.2-2 of the Project Feasibility Study Report (WRC 2007). No major obstruction within the driving distance of this crossing will cause visibility issue. Traffic speed will be limited to ten miles per hour generally with stop signs at pedestrian crossings. Numerous speed limit and warning signs will be posted along the road to enforce traffic safety. No significant impacts are expected for the realigned roadways.
- e) The Project Area is accessible to and from Jamboree Road, San Joaquin Hill Road/Big Canyon Drive, and several service roads on the high banks. The Project would maintain all these access points.
- f) The parking lot will be moved out of the sensitive tidal wetlands area and relocated to the opposite side of the road in an infertile, barren area where dredge spoils were dumped as shown in Figures 4.2-3 and 4.2-4 of the Project Feasibility Report (WRC 2007). Relocation of the parking lot will allow school groups and other visitors to assemble safely away from traffic on Back Bay Drive. Forty parking lots including bus pads and ADA stalls will be provided. This should be sufficient as any increased activities for school tours will be scheduled properly to maintain the traffic and visitor intensity.
- g) Implementation of the Proposed Project would not conflict with any adopted policies supporting alternative transportation.

Mitigation Measure Transportation/Traffic:

- **None Required**

XVI. UTILITIES AND SERVICE SYSTEMS

Environmental Setting

Orange County Sanitation District (OCSD) sewer main is the only major utility crossing the Project Area. The sewer main and manholes will not interfere project construction. The sewer lines are deep below the proposed grade without potential damage. OCSD is extending the maintenance to the manhole north of the channel bank near Jamboree Road. City's sewer lines are on the high bank and will not be impacted. Temporary irrigation water for construction and plant establishment will be tapped to those along Jamboree Road under the agreement with the City.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Exceed wastewater treatment restrictions or standards of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider that serves or may serve the project, that it has adequate capacity to service the project's anticipated demand, in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations as they relate to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a,b) The Project would not require construction of a new water treatment or wastewater treatment facility or expansion of the existing treatment facilities serving the project vicinity. The project would not impact the wastewater treatment quality based on the restrictions or standards of the applicable Regional Water Quality Control Board.

The project does not require long-term potable water supply and all plants will be native with low water needs. However, short-term irrigation would be needed to establish the plants outside of the creek or outside tidal inundation areas. Temporary water may be needed during construction. A temporary water lateral from the Jamboree Road water main will be provided during construction and the two year plant establishment period. Reclaimed water may be considered but will require investigation regarding its quality for native plant establishment. Solar power could be used to operate the temporary irrigation system.

The restroom facility included in the Project contains four unisex portable chemical toilets. The toilets are near the existing sewer manhole but there is no immediate plan for gravity sewer connection.

- c) The Project is within and near Big Canyon Creek. No new storm water system is required.
- d) The Project would have sufficient water supplies available to serve the implementation of the restoration. No new entitlements would be needed.
- e) The restroom facility included in the Project contains four unisex portable chemical toilets. The toilets are near the existing sewer manhole but there is no immediate plan for gravity sewer connection. The existing sewer has the capacity to accommodate the toilet discharge and the Orange County Sanitation District (OCSD) has approved the connection per OCSD standards.
- f) Project construction will produce debris and dirt. The Bowerman Landfill located at 11002 Bee Canyon Access Road, Irvine, CA 92602 would be the closest disposal site. Approximately 75,000 cubic yards of excavated materials would be generated; of which, approximately 50% would be disposed at the closest landfill, Bowerman Landfill in Irvine, California. Based on the available soils toxicity test, the soils do not contain toxicity and other hazardous materials (Project Feasibility Report, WRC 2007). The project waste will not exceed the existing landfill capacity. In fact, the site materials have high content of silt and clay and are suitable as landfill cap.
- g) Based on the available soil toxicity analysis (WRC 2007), there is not contamination in the soils that would be excavated during construction. The Proposed Project would not result in significant impacts related to solid waste.

Mitigation Measure Utilities and Service Systems:

- **None Required**

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or Restrict the range of a rare or endangered plant or animal or eliminate important examples of the major Periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects, and probably future projects?)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have environmental effects that will cause substantial adverse effects on humans, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) The proposed Project was evaluated for potential significant adverse impacts to the natural environment and its plant and animal communities. It was determined that the project could potentially impact birds and other sensitive wildlife species as well and sensitive plant species and communities. However, implementation of all conditions and mitigation measures incorporated into this document would reduce those impacts, both individually and cumulatively, to a less than significant level.
- b) The proposed Project would not have cumulatively considerable impacts.
- c) The proposed Project would not have environmental effects that would cause substantial adverse effects on humans.

CHAPTER 4 REFERENCES

- California Air Resources Board. 2006. Almanac Emissions Projection Data, Annual Average Emissions (2005), Orange County.
- Community Conservancy International. 2004. Big Canyon Creek: Historic Tidal Wetlands Conceptual Restoration Plan.
- County Sanitation Districts of Orange County. 1976. Environmental Assessment of Back Bay Trunk Sewer (East Side).
- Environmental Protection Agency (EPA). 1978. Protective Noise Levels. Condensed Version of US EPA Levels Document. USEPA 550/9-79-100.
- Geosoils, Inc. 2006. Geotechnical Feasibility Report: Big Canyon Creek Restoration, Upper Newport Bay, Newport Beach, County of Orange, California.
- South Coast Air Quality Management District (SCAQMD). 2007. Emissions Factors (EMFAC) Version 2.3. Onroad, Heavy Duty Diesel Trucks, <http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html>.
- SCAQMD. 2003. Air Quality Management Plan.
- Weston Solutions, Inc. 2006. Monitoring Plan and Quality Assurance Project Plan for Big Canyon Creek Flow and Water Quality Assessment.
- WRC Consulting Services, Inc. 2007. Big Canyon Creek Restoration Project Phase II: Feasibility Study Report.