



Environmental Assessment - Improve Tidepool Parking Area



Point Loma Peninsula
Cabrillo National Monument

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**U.S. Department of the Interior-National Park Service
Cabrillo National Monument
Environmental Assessment - Improve Tidepool Parking Area
San Diego County, California**

Summary

The National Park Service (NPS) at Cabrillo National Monument proposes to improve the Tidepool Parking Area on the western side of the monument, to improve vehicle circulation, reduce the risk of vehicular accidents, provide space for a bus turnaround, school bus parking drop-off, and permanent restroom. The parking area is at the southern end of the Point Loma peninsula within the city limits of San Diego, San Diego County, California. It is jointly-owned by the U.S. Navy and the NPS, and is operated and maintained by Cabrillo National Monument.

Improvement of the parking area would include

- removing and pulverizing existing asphalt and curbs;
- removing the interpretive kiosk/shelter for later reinstallation and use;
- excavating, compacting and finish grading, placing aggregate base course and asphalt, and pouring tan-colored concrete curbs, gutters, and walks with red brick soldier course;
- installing an oil/water separator and outfall;
- excavating for a vault toilet and installing a pre-fabricated vault toilet and retaining wall;
- designating a bus turnaround and drop-off area and striping 44 parking spaces (the existing number of parking spaces); and
- revegetation of disturbed areas with native plants from the park greenhouse.

The environmental assessment examines two alternatives: no action and the preferred alternative (improve the Tidepool parking area). Implementation of the preferred alternative would have either no or negligible impacts to archeological resources; historic structures; cultural landscapes; ethnographic resources; paleontological resources; prime and unique farmlands; threatened, endangered, endemic and/or sensitive species or MSCP covered species; visual resources; water resources; air quality; socioeconomic resources; and park operations. Potential adverse impacts to soils and biotic communities would be long-term and range in intensity from negligible to minor. Implementation of the preferred alternative would result in both long-term, moderate beneficial impacts and short-term, construction related minor adverse impacts to visitor use and experience.

Note to Reviewers and Respondents

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Please address written comments to:

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Acronyms and Abbreviations

CAA - Clean Air Act
CCC- California Coastal Commission
CEQ - Council on Environmental Quality
CO – Carbon Monoxide
dBA – Decibels Audible
MOU- Memorandum Of Understanding
NAAQS - National Ambient Air Quality Standards
NEPA - National Environmental Policy Act
NM - National Monument
NO – Nitrous Oxides
NPS – National Park Service
NRHP – National Register of Historic Places
PLECA - Point Loma Ecological Conservation Area
PLER - Point Loma Ecological Reserve
PM – Particulate Matter
USFWS – U.S. Fish and Wildlife Service
USGS – U.S. Geological Survey
VOC – Volatile Organic Compounds

Purpose and Need for Action

Cabrillo National Monument is a 160 acre unit of the National Park System within the city limits of San Diego, California. It is located on the southern end of Point Loma, a narrow, six-mile long peninsula at the entrance to San Diego Bay. The monument was established by Presidential Proclamation in 1913 to commemorate Juan Rodriguez Cabrillo's 1542 voyage of exploration. The monument offers a commanding view of San Diego and its bay, adjacent cities to the north, east and south; Mexico to the far south; and the Pacific Ocean to the west. The monument is bordered by Naval Base Point Loma on the north, northeast, and south, the City of San Diego Point Loma Wastewater Treatment Plant on the northwest, and the U.S. Coast Guard Point Loma Light Station on the southwest. The monument is visited by over 900,000 people from around the world each year and is an important part of San Diego's tourism economy.

Purpose and Need for Action

The National Park Service (NPS) at Cabrillo National Monument proposes to improve the Tidepool Parking Area on the western side of the monument. The parking area is at the southern end of the Point Loma peninsula within the city limits of San Diego, San Diego County, California. It is jointly-owned by the U.S. Navy and the National Park Service, and is operated and maintained by Cabrillo National Monument. Adjacent to the Pacific Ocean, and situated on the coastal bluffs, the parking area is located immediately north of and adjacent to the Space and Naval Warfare Systems Center. It currently contains 44 parking spaces, including two van accessible handicap parking spaces. Since its construction in the early 1970s by the Navy, it has served as the primary parking area used by visitors that wish to explore the tidepools or hike the nearby trails, and school groups for learning about the ecology of the rocky intertidal habitat.

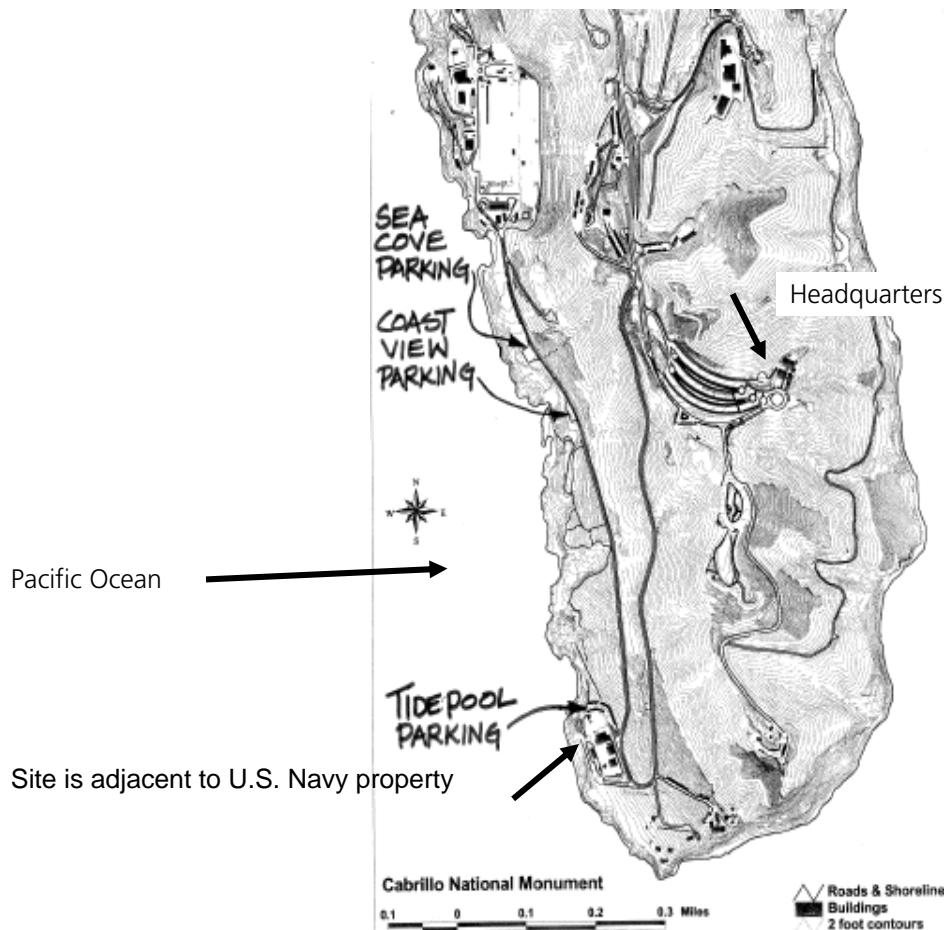


Figure 1, Cabrillo National Monument and Tidepool Parking

The purpose of this project is to improve access and egress, making it easier for motorists, including school bus drivers, to maneuver and park within the parking area and safely exit; provide a turn around area and parking for school buses; incorporate design and architectural elements from the visitor center in order to tie the parking area in with the rest of the developed area; provide a permanent toilet facility for visitors; and soften the visual impact of the parking area when seen from the Whale Overlook and Ocean View Scenic Overlook and other vantage points along the west side of the monument. This project is needed to ensure that visitors can easily and safely enter, maneuver within, and exit Tidepool Parking, use healthy toilet facilities, and convey the impression that this parking area is part of Cabrillo National Monument.



Figure 2, Existing Tidepool Parking Area

Growing visitor use in the Tidepool parking area and associated congestion and trampling of adjoining coastal bluff areas was a concern identified in the Cabrillo NM's FEIS\GMP (1996). However, the need for parking improvements, both in terms of sustainably accommodating vehicles and providing for suitable pedestrian use, was only addressed in general terms. The terse description of the Final Proposed Action with respect to parking indicated that the monument would:

"Convert existing building at the Marine Sciences facility to a tidepool interpretive center add parking at facility remove existing parking area" (sic).

The future management direction for this area of the monument is the same under all "action" alternatives - improved parking would be appurtenant to the new visitor facility and the existing parking lot removed and native vegetation restored. Although the ROD (7\10\1996) envisions the interpretive center being developed through conversion of Navy facilities (if transfer could be negotiated and if funding could be obtained), the vision for appurtenant parking was not further addressed beyond the direction as stated in the Final EIS\GMP.

Despite continued discussions with the Navy, there now appears to be little hope of obtaining their container storage site for development of the tidepool interpretive facility and appurtenant parking as originally

envisioned. Furthermore, upon further review of the Tidepool area, even if in the future the storage area could be transferred, the site may not be adequate for both the new visitor facility and additional parking sufficient to meet current and projected needs.

Consequently, the proposed improvements are designed so as to both accommodate growing visitor parking needs, as well as provide for pedestrian use which is sensitive to area resources. Interpretive media, trail delineation, etc will be addressed as a follow up to construction of the parking area, consistent with the RODs expressed commitment to strategies limiting adverse visitor effects in this sensitive coastal bluff area. And by utilizing the current location as now proposed, the eventual development of an interpretive facility (at an area of limited size) will not be constrained by having first relocated parking to an appurtenant location as set forth in the original plan.

On June 23, 2009 the NPS and Navy signed a *Use Agreement* authorizing the NPS "...use of the property at the Naval Base Point Loma..." for work including "...rehabilitating the parking area, improving grading, adding a bus turnaround area and installing permanent restrooms."

Park Purpose, Significance and Mission

Cabrillo NM is a unit of the National Park System and is administered by the National Park Service (NPS), Department of the Interior. The monument was established in 1913 to commemorate the 1542 voyage of exploration of Juan Rodríguez Cabrillo.

The purpose of Cabrillo NM, as stated in the monument's 1996 General Management Plan and Environmental Impact Statement is:

- To commemorate the 1542 voyage of exploration and accomplishments of Juan Rodríguez Cabrillo and communicate this story and its significance to visitors and local residents.
- To preserve, restore, protect, interpret and enhance the significant cultural and natural resources within and adjacent to the park.
- To provide visitors the opportunity to enjoy one of the great harbor views of the world and to experience and understand the relationships humans have with their land and sea environment.

The significance of Cabrillo NM can be summarized as follows:

The monument overlooks the first landing site of Europeans on the west coast of what is now the United States of America, and represents an important chapter in the history of Spanish exploration and settlement of North America.

The significance of the monument is enhanced by the presence of the Old Point Loma Lighthouse, one of the first eight lighthouses built along the west coast by the US government in the 1850s; 21 historic structures of the US Army's coastal defense system at Fort Rosecrans that protected the aircraft industry and naval port of San Diego during World War II; one of the best land-based sites from which to watch the annual migration of the Pacific gray whale; one of the few protected and accessible rocky intertidal (tidepool) communities on the Southern California mainland; and US Fish & Wildlife-designated sensitive coastal sage scrub/maritime succulent scrub habitats, which is representative of the Southern California, Mediterranean environment.

It is the mission of the National Park Service at Cabrillo NM to commemorate Juan Rodríguez Cabrillo's voyage of exploration and its significance, and protect, preserve and manage the cultural and natural resources and associated values in a manner that leaves them unimpaired while providing a safe, high quality educational and recreational experience for all visitors.

This mission statement is founded upon the Presidential Proclamation that created the monument in 1913, and the evolution of the monument as it was expanded and new resources were added. It is a synthesis of this mandated purpose, plus the park's primary significance as stated above.

There are no buildings, structures, districts or landscapes either listed in or eligible to be listed in the National Register of Historic Places in the area of potential effects. Neither Gatchell Road nor the parking area are considered eligible for listing in the National Register.

Impact Topics

Issues and concerns affecting the proposed action were identified from past National Park Service planning efforts, in particular preparation of the current General Management Plan and Environmental Impact Statement (1996), by park staff and input from individuals and state and federal agencies. The following impact topics were identified on the basis of federal laws, regulations, National Park Service *Management Policies, 2006*, and National Park Service Director's Orders. A brief rationale for the selection of each impact topic is given below, as well as the rationale for dismissing specific topics from further consideration.

Impact Topics Analyzed in This Environmental Assessment

Soils. The proposed improvements to the Tidepool Parking area would increase the size of the parking area from 32,000 square feet to approximately 48,000 square feet. A maximum of 17,000 square feet of adjacent landscaping would be affected and a maximum of 6,000 square feet would potentially need to be revegetated. Because soils would be disturbed as a result of excavation and revegetation, soils will be addressed as an impact topic.

Biotic Communities. The proposed improvements to the Tidepool Parking area would increase the size of the parking area from 22,000 square feet to approximately 48,000 square feet. A maximum of 17,000 square feet of adjacent landscaping would be affected and a maximum of 6,000 square feet would potentially need to be revegetated. Because vegetation, wildlife, and wildlife habitat would be disturbed as a result of excavation and revegetation, biotic communities will be addressed as an impact topic.

Visitor Use and Experience. The proposed improvements to the Tidepool Parking area would improve access and egress - making it easier for motorists, including school bus drivers, to maneuver and park within the parking area and safely exit; provide a turn around area and parking for school buses; provide a permanent toilet facility for visitors; and soften the visual impact of the parking area when seen from the Whale Overlook and Ocean View Scenic Overlook and other vantage points along the west side of the monument. Therefore, visitor use and experience will be addressed as an impact topic.

Land Use. In 1995, the NPS, U.S. Navy, Department of Veterans Affairs, U.S. Coast Guard and the City of San Diego signed a memorandum of understanding (MOU) with the U.S. Fish and Wildlife Service (USFWS) to establish and cooperatively manage the Point Loma Ecological Reserve (PLER). The PLER was established to protect viable sensitive biological communities and to ensure the long-term protection and perpetuation of these resources on Point Loma. In 2005, the same entities signed a new MOU to continue their cooperative protection of the biologically diverse habitats within the Federal reservation. The name of the PLER was changed to the Point Loma Ecological Conservation Area (PLECA). Because construction limits for the proposed improvements to the Tidepool parking areas are expected to extend into the PLECA, land use will be addressed as an impact topic.

Impact Topics Dismissed From Further Analysis

Archeological Resources. In 2000, ASM Affiliates, Inc. conducted archaeological testing along Gatchell Road and the parking area. Three sites were discovered:

- CA-SDI-11,935 – a prehistoric site was highly disturbed by the construction of Cabrillo and Gatchell Roads and nearby military features. The California State Historic Preservation Officer concurred with ASM Affiliates, Inc.'s that the site had lost its integrity and was not eligible to be listed in the National Register of Historic Places (Abeyta, Daniel (State of California, Department of Parks and Recreation, Office of Historic Preservation), Letter to Terry DiMattio (National Park Service, Cabrillo National Monument), 2000 August 3.).

- CA-SDI-11,937/H – a multi-component site (Searchlight Shelter #15 and associated generator station). Searchlight Shelter # 15 and the generator station is over 500 yards north of parking area and is not within the area of potential effects for this project.
- CA-SDI-11,936H – Battery Point Loma site. Battery Point Loma is located about 150 yards east of and physically separated from the parking area by Gatchell Road.

There are no known National Register listed or eligible archeological resources in the area of potential effects. If during construction significant archeological resources are discovered, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate mitigation strategy developed, if necessary, in consultation with the California state historic preservation officer. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3001) of 1990 would be followed. Therefore, archeological resources was dismissed as an impact topic.

Historic Structures. There are no known National Register of Historic Places listed or eligible structures in the area of potential effects. Neither Gatchell Road nor the parking area, which was constructed by the U.S. Navy in the mid-1970s, are considered National Register eligible, because neither structure meets one of the four National Register criteria for significance: historic properties significant for their association or linkage to events (criterion A) or persons (criterion B) important in the past; historic properties significant for their design or construction value or historic properties significant as representatives of the manmade expression of culture or technology (criterion C), or historic properties significant for their ability to yield important information about prehistory or history (criterion D). The existing visitor kiosk/shelter, which is slated to be removed before construction and reinstalled following construction, is a non-historic structure. Therefore, historic structures was dismissed as an impact topic.

Cultural Landscapes. According to the National Park Service's *Cultural Resource Management Guideline* (DO-28), a cultural landscape is

...a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions.

As discussed under historic structures above, neither Gatchell Road nor the parking area, which was constructed by the U.S. Navy in the mid-1970s, are considered eligible for listing in the National Register of Historic Places, and the kiosk/shelter is a non-historic structure. In addition, the proposed improvements to the parking area would have little effect on the site's topography, spatial organization, or land use patterns. Due to the proposed revegetation of disturbed areas following construction, with native plants from the park greenhouse, any impacts to vegetation would be negligible. Therefore, cultural landscapes was dismissed as an impact topic.

Ethnographic Resources. Ethnographic resources are defined by the National Park Service as any "site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it" (Director's Order # 28, *Cultural Resource Management Guideline*, 181). There are no known ethnographic resources in or near the area of potential effects. Because there are no known ethnographic resources in the area of potential effects, and because appropriate steps would be taken to protect any human remains, funerary objects, sacred objects, or objects of cultural patrimony inadvertently discovered, ethnographic resources was dismissed as an impact topic.

Museum Collections. Implementation of the proposed action would have no effect on the monument's museum collections (historic artifacts, natural specimens, and archival and manuscript material). Therefore, museum collections was dismissed as an impact topic.

Geological Resources. The Point Loma peninsula is an uplifted and tilted landform comprised of three distinct formations including the Cretaceous-age sedimentary rocks of the Point Loma Formation, Cabrillo Formation, and the Quaternary-age Bay Point Formation. The physiography north of Tidepool Parking consists of moderate slopes and terraces that meet steep cliffs along the shoreline marked by numerous overhangs and caves. At the water, the cliffs meet the hard rock bench of the Point Loma Formation. The bench in this area extends out several hundred yards. Intertidal habitat below Tidepool Parking consists of boulders and shallow pools on the tops of the rocky benches, and to the north a small, sand and, at times, cobble-filled beach at the mouths of a cove.

The City of San Diego has classified areas of geologic hazard within the city. The majority of Point Loma is classified as Hazard code 53, "All other conditions: Sloping or level terrain, unfavorable geologic structure, low to moderate risk." The coastal bluffs are classified as Coastal Bluffs: "Moderately stable, mostly stable formations, local high erosion." The project area is classified as a low to moderate geologic risk.

Implementation of the proposed action would neither impact geological resources nor affect the geologic hazard classification of the project area. Therefore, geologic resources was dismissed as an impact topic.

Paleontological Resources: Paleontological resources are the remains of ancient plants and animals, both organic and mineralized remains in body or trace form, that provide information about earth's ancient environment. The probability of discovering paleontological resources depends on the geologic formation being excavated and the depth and volume of the excavation. Normal weathering processes (leaching, rodent activity, rooting disturbance) generally compromise paleontological resources in the top several feet of geological formations.

Excavation of approximately 4,000 cubic yards of soil to an average depth of about 1-foot and a maximum depth of 3-feet would occur during construction, to provide for a bus drop-off and turnaround area while retaining the same number of parking spaces and a slope of not greater than 4.75%. This excavation would occur primarily in the Bay Point Formation, but may extend into the Point Loma Formation, both of which have a High sensitivity rating for paleontological resources. The County of San Diego's Department of Land Use has issued *Thresholds of Significance and Project Screening Criteria* for paleontological resources (June 27, 2001). Impacts resulting from grading of more than 1,000 cubic yards to a depth exceeding 10-feet in formations with High sensitivity ratings are considered significant.

Although more than 1,000 cubic yards would be excavated during construction, the maximum depth of disturbance would not exceed 3-feet. Therefore, paleontological resources was dismissed as an impact topic. If during construction paleontological resources are discovered, all work in the immediate vicinity of the discovery would be halted until an appropriate mitigation strategy could be developed and executed.

Prime and Unique Farmland. In August, 1980, the Council on Environmental Quality (CEQ) directed that federal agencies assess the effects of their actions on farmland soils classified by the U.S. Department of Agriculture's Natural Resource Conservation Service as prime or unique. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and that is available for these uses. Unique farmland is land other than prime farmland that is used for the production of specific high value food and fiber crops (e.g. citrus, tree nuts, olives, cranberries, fruit, and vegetables).

According to the Natural Resources Conservation Service, the soils that comprise the vicinity of the project area - Reiff fine sandy loams, Hambright gravelly clay loams, and Gaviota fine sandy loams – are not classified as prime and unique farmland. Because there are no prime and unique farmlands in the project area, prime and unique farmlands was dismissed as an impact topic

Threatened, Endangered, Endemic and/or Sensitive Species or MSCP Covered Species. Several sensitive flora and faunal species exist on the west side of Cabrillo NM. Plant species include Seaside Calandrinia (*Calandrinia maritima*), Cliff Spurge (*Euphorbia misera*), Snake Cholla (*Opuntia californica* var. *californica*), San Diego Barrel Cactus (*Ferocactus viridescens*), South Coast Saltscale (*Atriplex pacifica*), San Diego Sand Aster (*Corethrogyne filafinifolia* var. *incana*), and San Diego Coastal Creeper (*Aphanisma blitoides*). None of the aforementioned plant species are in the project area.

Habitat for the sensitive Salt Marsh Skipper (*Panoquina errans*) and Quino Checkerspot (*Euphydryas editha quino*) is absent from the project area. Other sensitive beach/coastal invertebrate species do not occur within the study area, e.g. an uncommon snail species, the Mimic Tryonia (*Tryonia imitator*). Several species of sensitive tiger beetles are known from the back beaches and mudflats of coastal San Diego County including the Gabb's Tiger Beetle (*Cicindela gabbii*) and Oblivious Tiger Beetle (*Cicindela latesignata obliuosa*). These tiger beetles can utilize sandy beaches and tidal areas that occur sporadically at the foot of Point Loma outside the project area.

The regionally sensitive San Diego Horned Lizard (*Phrynosoma coronatum blainvillei*) and Coronado Island Skink (*Eumeces skiltonianus interparietalis*) are likely extirpated from Point Loma. Vernal basin habitat for the Western Spadefoot Toad (*Spea hammondi*) is absent from the project area. The disturbed sandy upland and sage scrub vegetation is well-suited to the sensitive California Legless Lizard (*Anniella nigra*), a species regularly encountered within coastal sandy soils, however such habitat is outside of the project area.

Likely extirpated from Point Loma are the Red Diamond Rattlesnake (*Crotalus ruber*) the Coachwhip (*Masticophis flagellum*), Glossy Snake (*Arizona elegans*), Long-nosed Snake (*Rhinocheilus lecontei*), and Two-striped Garter Snake (*Thamnophis hammondi*) (Lawrence Klauber unpublished notes). Speckled Rattlesnake (*Crotalus mitchelli*) is also specifically noted by Klauber on Point Loma and in Mission Valley; although a majority of the collections and reports are from the foothills and the mountains and not the vicinity of the project area.

Sensitive wildlife species include Orangethroat Whiptail (*Cnemidophorus hyperythrus beldingi*), California Brown Pelican (*Pelecanus occidentalis californicus*), and California gnatcatcher (*Poliophtila californica*); however, none are known to inhabit the project area or its immediate vicinity.

Because there would be no impacts to threatened, endangered, endemic and/or sensitive species or MSCP covered species, the topic was dismissed from further consideration.

Visual Resources. The tidepool parking area is in a scenic and visually sensitive area of the City of San Diego, within Cabrillo NM, south of Fort Rosecrans National Cemetery and north of the historic new Point Loma Lighthouse. Tidepool parking is located on a bench with an elevation of approximately 30 feet above mean sea level. The scenic amenities at and around Cabrillo NM contribute substantially to the park's significance and value as a recreational resource. The project site is visible from the monument's Whale Overlook and Cabrillo Road as visitors drive south. From the north the site is screened by the treatment plant. Public views from the west toward the parking area are relatively unrestricted and open to recreationists who may be sailing, fishing, or diving in the vicinity. At 2+ miles from shore, the distance at which ocean vessels such as pleasure craft and larger commercial vessels are likely to travel, the most visually dominant elements are the Navy complex to the north of the treatment plant, the treatment plant's buildings, and the U.S. Coast Guard facility to the south of the plant. Closer to shore, in areas occasionally occupied by small commercial fishing and recreational vessels, the specific characteristics of the parking area in the vicinity of the project site are more apparent.

The proposed parking area would be approximately 48,000 square feet in size compared to 32,000 square feet for the current facility. While the asphalt area of Tidepool Parking would be larger, the tan-colored concrete walks would blend in with their surroundings. It is expected that the enlarged parking area and vault toilet would be only slightly more visible to motorists entering the parking area and to visitors standing at the Whale Overlook than the current facility. The larger Tidepool Parking area would not be noticeably more visible from the entrance sign pullout or the west side of the Old Point Loma Lighthouse. It would not be visible at all from the Ocean View Scenic Overlook.

It is not expected that the modified parking area would be more visible to offshore vessels than the existing facility. The presence of more substantial facilities on Point Loma (Naval Base Point Loma and the treatment plant), would tend to attract the attention of mariners offshore. As a result, any adverse impacts to visual resources would be long-term but of negligible intensity. Therefore, visual resources was dismissed as an impact topic.

Water Resources. The project site is not within or adjacent to any wetland, freshwater seep, or floodplain. Most of Point Loma is not located over a usable groundwater basin. The underlying bedrock is considered to be non-water bearing.

Storm water runoff from the improved parking area would be conveyed to an oil/water separator installed at the west end of the parking area. To minimize potential impacts to marine water resources and soils from construction, an erosion control plan would be developed by the contractor prior to the initiation of construction and best management practices would be used to control erosion, reduce the amount of sedimentation in storm water runoff and mitigate any potential adverse environmental effects during construction. The site would be fully stabilized prior to and during construction, and prior to completion. Any adverse impacts to water resources would be negligible to minor.

The land adjacent to the Tidepool parking area on the east and north sides that would be disturbed by construction may require temporary irrigation to establish native vegetation. The irrigation of approximately 6,000 square feet for one to three years until native plants are established would represent a negligible increase in water consumption.

Due to the elevation of the site of approximately ten meters above mean sea level and the absence of known tsunami generating faults in the region, the risk for any inundation of the parking area by a tsunami is remote. The area is also a "day use only" site with no overnight occupation and it is anticipated that in event of any adverse conditions including a tsunami warning, adequate warning time for evacuation would exist; therefore the risk for tsunami would be so low as to not require further evaluation under Procedural Manual 77-2: Floodplain Management.

Because any adverse impacts to water resources would be negligible to minor, water resources was dismissed as an impact topic. A permeable parking surface was not considered due to the proximity to the ocean and the desire to avoid percolation of pollutants into the soils in the project area. Statements of findings for either wetlands or floodplains will not be prepared.

Air Quality. Point Loma and Cabrillo National Monument are located within the San Diego Air Basin, which consists of San Diego County. The air basin is bounded on the north by the South Coast Air Basin, on the east by the Southeast Desert Air Basin, on the west by the Pacific Ocean, and on the south by the Mexican State of Baja California. The coastal area of San Diego is separated from the desert to the east by the Laguna Mountains, which run parallel to the coast about 45 miles inland. The coastal region is made up of coastal beach terraces, which rise from sea level to the Laguna Mountain foothills.

The Clean Air Act (CAA), as amended in 1990, requires the U.S. Environmental Protection Agency (EPA) to identify national ambient air quality standards (NAAQS) to protect health and welfare. NAAQS have been established for seven pollutants: carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), ozone (O₃), lead (Pb), particulate matter less than 10 microns (PM₁₀), and fine particulate matter equal to or less than 2.5 microns in size (PM_{2.5}). An area where a NAAQS is exceeded more than three times in three years is considered a "non-attainment" area for that pollutant. The San Diego Air Basin is considered a "serious" non-attainment area for ozone.

The State of California Air Resources Board (CARB) has also set ambient air quality standards to protect public health and welfare that are stricter than NAAQS. The San Diego Air Basin meets all state pollutant standards except for ozone and PM₁₀.

The General Conformity Rule requires that federal actions conform to applicable Federal or state implementation plans for achieving and maintaining air quality standards. Federal actions must not cause or contribute to new violations of any standard, increase the frequency or severity of any existing violation, interfere with timely attainment or maintenance of any standard, delay emission reduction milestones, or contradict state implementation plan requirements in nonattainment areas. The NPS must show that the proposed project meets or is exempt from general conformity requirements. A project is exempt if predicted pollutant levels fall below "*de minimus*" values as reported in 40 CFR, subpart B, subsection 93.153.

The precursors for ozone are primarily generated by fuel combustion, and one of the primary sources of ozone is mobile source emissions. Improvement of the Tidepool parking area would neither affect vehicular

traffic patterns in the park nor increase visitation and vehicular traffic, and any adverse impacts (direct, indirect, or cumulative) to air quality related to park visitation would be negligible imperceptible above existing background conditions.

Construction activities, including equipment operation and the hauling of material, could result in temporarily increased vehicle exhaust and emissions, as well as inhalable particulate matter. Improvement of the Tidepool parking area would include grading, excavation for the vault toilet and site preparation, which would result in the generation of fugitive dust, PM₁₀, and exhaust emissions from construction equipment. After grading, exhaust emissions would be generated by the construction equipment used to pour the concrete curb, gutter, and retaining wall, as well as to lay and roll the asphalt. Through construction of the project, the vehicles used for commuting by the construction crews would generate additional exhaust emissions. Construction emissions were estimated by assuming that 6 pieces of equipment, such as a tracked loader, wheeled loader, wheeled dozer, motor grader, and off highway truck would operate for 15 day(s) each during grading operations. Following grading, 5 pieces of heavy equipment were estimated for the construction period which was assumed to be 6 months.

The table below shows the estimated construction emissions for the Preferred Alternative. The pollutants include volatile organic compounds (VOC – also reactive organic gases), nitrogen oxides (NO_x), carbon monoxide (CO), and particulate matter less than 10 microns in size (PM₁₀).

Table 1 – Estimated Air Quality Impacts from Construction

	Pollutant (tons/year)			
	CO	NO _x	VOC	PM ₁₀
Construction Emissions ¹				
General Conformity <i>de minimis</i> Thresholds ²	100	50	50	100
Exceed Threshold?	No	No	No	-
San Diego Air Basin forecast emissions for 2005 ³	371,934	69,601	71,083	47,747
Exceed 10 percent of area's annual emissions?	No	No	No	No

¹Construction emissions estimated using URBEMIS, <http://www.arb.ca.gov/planning/urbemis/urbemis.htm>.

²*De minimis* thresholds for San Diego Air Basin nonattainment pollutants VOC and NO_x, and maintenance pollutant CO. The basin is in Federal attainment for PM; *de minimis* threshold for PM₁₀ nonattainment is used for significance determination.

³PM emissions are not included in the General Conformity emissions because the San Diego Air Basin is an attainment area for PM₁₀.

Because implementation of the proposed action would not violate any air quality standard or result in a cumulatively considerable net increase of any criteria pollutant for which the area is in nonattainment under federal or state ambient air quality standards, air quality was dismissed as an impact topic.

Lightscape Management. In accordance with National Park Service Management Policies (2006), the National Park Service strives to preserve natural ambient landscapes, which are natural resources and values that exist in the absence of human caused light.

No net increase in lighting for the Tidepool parking area is anticipated. In addition, the monument would continue to strive to limit the use of artificial outdoor lighting to that which is necessary for basic safety requirements and to ensure that all outdoor lighting is shielded to the maximum extent possible, to keep light on the intended subject and out of the night sky. Because potential impacts to lightscape management would be negligible, lightscape management was dismissed as an impact topic.

Soundscape Management. In accordance with National Park Service Management Policies (2006) and Director's Order #47, *Sound Preservation and Noise Management*, an important aspect of the National Park Service mission is preservation of natural soundscapes associated with national park units. Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be transmitted through air, water, or solid materials. The frequencies, magnitudes, and durations of human-

caused sound considered acceptable varies among National Park Service units, as well as potentially throughout each park unit, being generally greater in developed areas and less in undeveloped areas.

Although the square footage of the Tidepool parking area would increase to accommodate a bus turnaround and drop-off, the number of parking spaces would remain at 44. Noise associated with vehicular traffic in the improved parking area or along Gatchell Road would be expected to remain largely unchanged from existing levels and the quieter, intermittent sounds of nature along the beach would be unaffected. Any construction associated with implementation of the proposed action, e.g. the hauling of material or the operation of construction equipment, could result in dissonant sounds, but such sounds would be temporary and end with the cessation of construction. Any adverse impacts to natural soundscapes would be negligible to minor in intensity and short-term. Therefore, soundscape management was dismissed as an impact topic.

Socioeconomic Environment. Implementation of the proposed action would have no effect upon such socioeconomic characteristics as population, demographics, or housing since no additional employees or relocations of existing employees are associated with this project. The proposed action could result in a negligible beneficial impact to the economy of San Diego County (e.g. minimal increases in employment opportunities for the construction workforce and revenues for local businesses and government generated from construction activities and workers). Any increase, however, would be temporary and negligible, lasting only as long as construction.

There would be no change in land use. The Tidepool parking area is jointly owned by the National Park Service and the Department of the Navy. By letter dated February 26, 2006, the Department of the Navy approved the improvements of the parking area pending preparation of the appropriate National Environmental Policy Act compliance, concurrence from the California Coastal Commission, and completion of required Department of Navy reviews (Patton, Mark D. (Department of Navy, Naval Base Point Loma), Letter to Terry DiMattio (National Park Service, Cabrillo National Monument), 2006 February 28.).

Therefore, socioeconomic environment was dismissed as an impact topic.

Park Operations. The proposed improvements to the Tidepool parking area would result in minimal changes to park operations. Although the paved surface area of the parking area would increase, the number of parking spaces would remain at 44. The level of maintenance required for the improved parking area would not appreciably change, and no additional staffing would be necessary. The monument would absorb the costs of maintenance and custodial supplies for the vault toilet its base funding, and the costs would be partially offset by the elimination of the rental cost for the existing, portable toilet. Because impacts to park operations would be negligible, park operations was dismissed as an impact topic.

Environmental Justice. Presidential Executive Order 12898, *General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. According to the Environmental Protection Agency, environmental justice is the

...fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

The goal of 'fair treatment' is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects and identify alternatives that may mitigate these impacts.

San Diego County contains both minority and low-income populations and communities; however, environmental justice is dismissed as an impact topic for the following reasons:

- The developments and actions of the proposed action would not result in any identifiable adverse human health effects. Therefore, there would be no direct or indirect adverse effects on any minority or low-income population or community.
- The impacts on the natural environment that would occur due to the implementation of the proposed action would not disproportionately affect any minority or low-income population or community.
- The proposed action would not result in any identified effects that would be specific to any minority or low-income community.

In addition, any impacts to the socioeconomic environment due to the proposed action are negligible. Therefore, environmental justice was dismissed as an impact topic.

Energy Requirements and Conservation Potential. The Council on Environmental Quality (CEQ) guidelines for implementing the National Environmental Policy Act requires examination of energy requirements and conservation potential as a possible impact topic in environmental impact statements.

Cabrillo National Monument strives to incorporate the principles of sustainable design and development into all facilities and park operations. Sustainability can be described as the result achieved by doing things in ways that do not compromise the environment or its capacity to provide for present and future generations. Sustainable practices minimize the short- and long-term environmental impacts of developments and other activities through resource conservation, recycling, waste minimization, and the use of energy efficient and ecologically responsible materials and techniques.

The National Park Service's *Guiding Principles of Sustainable Design* (1993) provide a basis for achieving sustainability in facility planning and design, emphasizes the importance of bio-diversity, and encourages responsible decisions. The guidebook describes principles to be used in the design and management of visitor facilities that emphasize environmental sensitivity in construction, use of nontoxic materials, resource conservation, recycling, and integration of visitors with natural and cultural settings. Cabrillo National Monument strives to reduce energy costs, eliminate waste, and conserve energy resources by using energy efficient and cost effective technology wherever possible. Energy efficiency is also be incorporated into any decision-making process during the design or acquisition of facilities, as well as all decisions affecting park operations. The use of value analysis and value engineering, including life cycle cost analysis, is performed to examine energy, environmental, and economic implications of proposed development. In addition, the monument would encourage suppliers, permittees, and contractors to follow sustainable practices and address sustainable park and non-park practices in interpretive programs.

Consequently, any adverse impacts relating to energy use, availability, or conservation would be negligible. Therefore, energy requirements and conservation potential is an impact topic dismissed from further consideration.

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Alternatives

No Action

The No-Action Alternative would continue present management operations and maintain existing facilities at the Tidepool parking area. The No-Action Alternative is required by federal regulations and provides a basis for comparing the environmental consequences of the action alternatives. Should the No-Action Alternative be selected, the NPS would respond to future needs and conditions associated with circulation, facilities, and interpretation within the Tidepool parking area without major actions or changes in the present course. Under the no-action alternative the parking area would continue to contain 44 parking spaces, including two van accessible handicap parking spaces, a commercially-rented portable toilet would continue to be maintained in the parking area for the convenience of visitors, and but there would be no increase in the size or layout of the parking area.

Preferred Alternative - Improve Tidepool Parking Area

On coastal bluffs adjacent to the Pacific Ocean, the Tidepool parking area is the primary parking area for visitors and school children who wish to explore the nearby tidepools or walk the trails on the west side of Cabrillo National Monument. The parking area is on a shelf approximately 30 feet above mean sea level and is accessed via Gatchell Road. The primary trail that provides access to the tidepools via Grunion Beach begins at the Tidepool parking area. There is currently a commercially-rented portable toilet in the parking area for the convenience of visitors.

The Tidepool parking area would be the last of three parking areas to be improved. All three parking areas – Tidepool, Sea cove, and Coast View – are on Gatchell Road adjacent to the coastal bluff. The three parking areas provide parking for 200,000 visitors per year, and allow access to ocean views and trails popular with the public. Similar site elements and materials used elsewhere at the monument, including the recently improved Sea Cove and Coast View parking areas, would be incorporated into the design of the Tidepool parking area. Improvement of the parking area would

- make the area more harmonious with its surrounding natural environment;
- improve vehicle circulation;
- add a bus turnaround, school bus parking drop-off, and permanent restroom;
- reduce the risk of vehicular accidents; and
- maintain the existing 44 parking spaces, including two fully accessible spaces.

The size of the proposed parking area would increase from 32,000 square feet to approximately 48,000 square feet. A maximum of 17,000 square feet of adjacent landscaping would be affected and a maximum of 6,000 square feet would potentially need to be revegetated. The improvements would entail

- removing and pulverizing existing asphalt and curbs;
- removing the interpretive kiosk/shelter for later reinstallation and use;
- excavating, compacting and finish grading, and placing aggregate base course and asphalt;
- pouring tan-colored concrete curbs, gutters, and walks with red brick soldier course;
- installing a storm ceptor grit chamber and drainage outfall;
- excavating for a vault toilet and installing a fully accessible pre-fabricated vault toilet and retaining wall;
- designating a bus turnaround and drop-off area and striping 44 parking spaces;
- revegetation of disturbed areas with native plants from the park greenhouse.

In addition to the fully accessible parking spaces and vault toilet, the bus drop-off would include a ramp to allow fully accessible entry and egress. The handicap parking spaces would be at a 1.8% maximum grade, to

make it easier for disabled visitors to exit and enter their vehicles, with no greater than a 4.75% slope to the vault toilet and tidepool trail. The proposed improvements to the Tidepool parking area would conform to the Architectural Barriers Act Accessibility Standards (ABAAS), 2006. There would be no changes to the existing crushed-rock trails that lead from the Tidepool parking area to the tidepools.

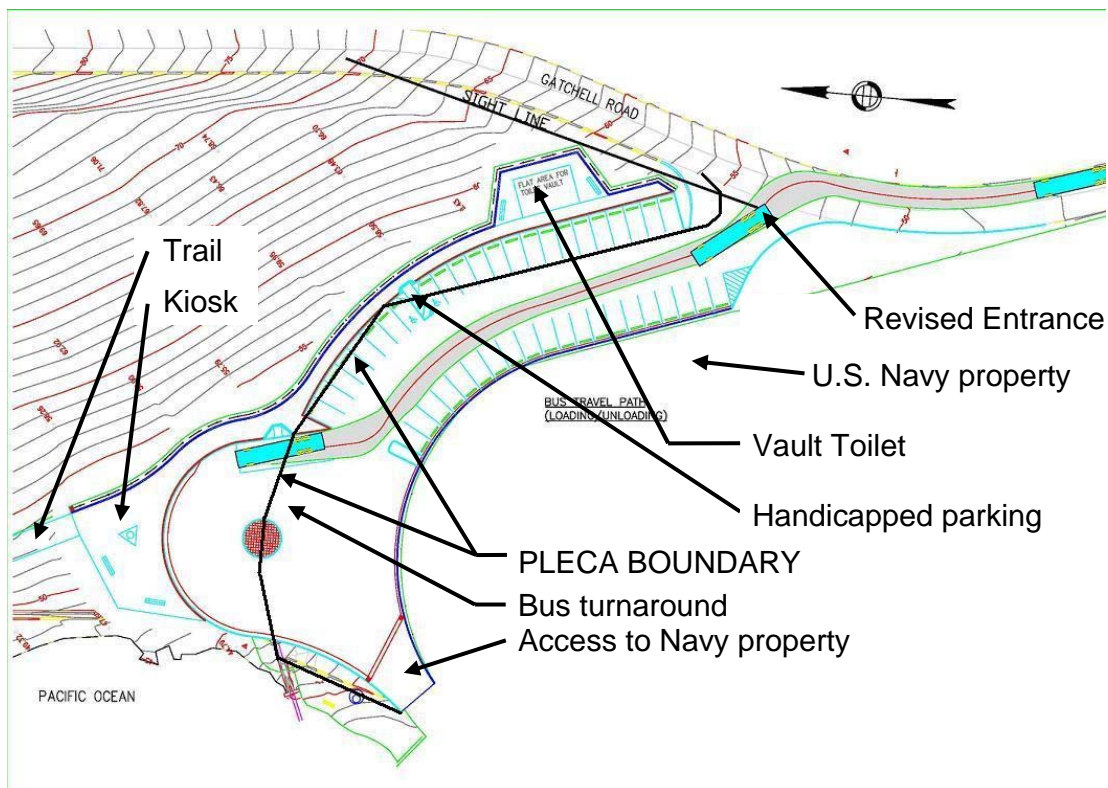


Figure 3, Schematic of Proposed Parking Area Improvements

Improvements to the Tidepool parking area are not anticipated to result in an increase in visitation to the tidepools. The number of parking spaces (44) would remain unchanged. The bus turnaround would allow passengers to enter and egress buses in the parking area rather than along Gatchell Road, where the buses currently park. However, the bus turnaround and the construction of the retaining wall along the sidewalk should reduce "social trailing," as visitors will be directed more effectively away from the surrounding natural landscape to the tidepool trails.

All staging and stockpiling would occur on sections of the existing asphalt Tidepool parking area.

The Preferred Alternative would require the excavation of approximately 4,000 cubic yards of soil to expand the area needed to provide a bus turnaround area while retaining the same number of parking spaces and achieve a maximum slope of 4.75%. Figure 4 delineates the limits of construction. Because the preferred alternative would affect the Point Loma Ecological Conservation Area (PLECA), and under the terms of the memorandum of understanding the NPS signed with the US Fish and Wildlife Service, the impacted acreage would have to be removed from the PLECA and an equal amount of habitat would be added. However, there is no suitable habitat of maritime succulent scrub on NPS lands on the western side of the peninsula that is not already in the PLECA. When the PLECA was established, all suitable habitat on the western side of the park was added in. Instead, two efforts would occur to mitigate for the loss of the habitat:

- A similar habitat would be added into the PLECA on the eastern side of the peninsula to account for the loss of habitat on the western side. The habitat type is Diegan coastal sage scrub. The habitat patch to be added is on NPS property and is generally north of the museum and Lower Maintenance facilities. The amount of habitat to be added depends on the total acreage that will be impacted and would occur at a 1:1 ratio.

- Habitat restoration in the project area would replace the low quality habitat that is a mix of native and non-native species in a process what would eventual result in a higher quality habitat of maritime succulent scrub than is currently there.



Figure 4, Limits of Construction

Mitigation Measures for the Preferred Alternative

Construction zones would be identified and fenced with construction tape or some similar material prior to any construction activity. The fencing would define the construction zone and confine activity to the minimum area required for construction. All protection measures would be clearly stated in the construction specifications and workers would be instructed to avoid conducting activities beyond the construction zone as defined by the fencing. In addition, the National Park Service would ensure that all contractors and subcontractors are informed that damage to resources outside the scope of work is subject to prosecution, fine, restitution costs, and other penalties.

If during construction previously undiscovered archeological resources are discovered, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate mitigation strategy developed in consultation with the California state historic preservation office.

Soil cast aside during construction would be susceptible to some erosion, though such erosion would be minimized by placing silt fencing around the excavated soil. Silt fencing fabric would be inspected weekly or after every major storm. Accumulated sediments would be removed when the fabric is estimated to be approximately 75% full. Excavated soil may be used in the construction project; excess soil would be stored in approved areas.

Local borrow material, if required, would be available through sources outside of the monument. All soils borrowed would be sterile, as well as certified archeologically sterile and weed free. Borrow material would be used for only base material and not for top soil unless it can be confirmed that it would support and enhance revegetation of the coastal scrub and not contain non-native germplasm. Any excess material generated from construction activities would be stockpiled in monument storage areas for future use in approved projects or disposed of at approved sites outside the monument.

To avoid introduction of exotic plant species, no hay bales would be used to control soil erosion. Hay often contains seed of undesirable or harmful alien plant species. Therefore, on a case-by-case basis the following materials may be used for any erosion control dams that may be necessary: rice straw, straws determined by the National Park Service to be weed-free (e.g., Coors barley straw or Arizona winter wheat straw), cereal grain straw that has been fumigated to kill weed seed, and wood excelsior bales. Standard erosion control measures such as silt fences and/or sand bags would also be used to minimize any potential soil erosion.

Revegetation efforts in the project area would include removal of smaller native shrubs where possible (e.g., cholla, boxthorn) prior to the beginning of construction, for replanting after the completion of the project and additional plantings using native plants cultivated in the park's greenhouse.

Fueling of all construction equipment would be conducted only in equipment staging areas. During the operation of equipment some petrochemicals could seep into the soil. To minimize this possibility, equipment would be checked frequently to identify and repair any leaks.

Environmentally Preferable Alternative

According to Council on Environmental Quality regulations implementing the National Environmental Policy Act (NEPA), and the National Park Service NEPA guidelines contained in Director's Order #12, *Conservation Planning, Environmental Impact Analysis and Decision-Making*, an environmentally preferred alternative must be identified in an environmental assessment. For an alternative to be environmentally preferred, it must meet the following criteria established in section 101(b) of NEPA and subsequently adopted by the NPS:

1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
2. Ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings.

3. Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences.
4. Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.
5. Achieve a balance between population and resource use that would permit high standards of living and a wide sharing of life's amenities.
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Although each of the alternatives meets the above criteria to some degree, the preferred alternative surpasses the no-action in fulfilling the criteria outlined in NEPA Section 101(b). The preferred alternative would attain a wider range of beneficial use while reducing risk to health and safety, and achieves a better balance between population and resource use. As a result the NPS preferred alternative is also the environmentally preferred alternative.

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Affected Environment

The affected environment describes the existing conditions of the impact topics identified for analysis in this environmental assessment. Its purpose is to provide background information for analyzing the potential environmental consequences that would be expected to occur from either implementation of either the no action alternative or the proposed action.

Soils

Soils in the project area are mapped as Reiff fine sandy loams on the flatter terraces and shoreline cliffs, and Hambright gravelly clay loams on the steeper slopes. At the southern end of the peninsula, soils change to Gaviota fine sandy loams along the slopes. The cliffs are extremely unstable and highly erosive. Bluff retreat and sediment collapses are common in the area.

Biotic Communities

The Federal reservation contains ten vegetation communities with high wildlife value. These include seven native associations: southern foredunes, southern coastal bluff scrub, maritime succulent scrub, Diegan coastal sage scrub, southern maritime chaparral, Diegan coastal sage scrub/southern maritime chaparral, maritime succulent scrub/southern maritime chaparral. The USFWS considers these communities to be regionally sensitive due to the diversity of plant and animal species and the local rarity of these habitat types within San Diego and the region.

Two of the aforementioned vegetation communities, as defined according to the current Holland Code classification system (Holland 1986) and San Diego County terrestrial vegetation community descriptions (Oberbauer 1996), are adjacent to the project site: southern coastal bluff scrub and maritime succulent scrub. Southern coastal bluff scrub (Holland Code 31200) is a low, sometimes prostrate scrub that generally occurs at localized sites along the coast south of Point Conception. Dominant plants are mostly woody and/or succulent species that are often kept short and pruned by almost constant exposure to coastal, moisture and salt-laden winds. This plant community occurs as a narrow band on the oceanside bluffs the length of Point Loma, and is found on the western half of the north side of Tidepool Parking. Representative species include California desert-thorn (*Lycium californicum*), Woolly sea-blite (*Suaeda taxifolia*), Shaw's agave (*Agave shawii*), coast barrel cactus (*Ferocactus viridescens*), and snake cholla (*Cylindropuntia Californica* var. *californica*).

The second vegetation community, maritime succulent scrub (Holland Code #32400), is a low, open scrub dominated by drought deciduous, soft-woody shrubs, many of which are stem and/or leaf succulents. It is often found on thin, rocky or sandy soils, on steep slopes of coastal headlands and bluffs from Torrey Pines south to El Rosario, Baja California. It is found on the eastern half of Tidepool Parking immediately adjacent to Gatchell Road. Lemonade berry (*Rhus integrifolia*) is the dominant species within the study area. Other woody species include California Encelia (*Encelia californica*), Flat-top Buckwheat (*Eriogonum fasciculatum* var. *foliolosum*), Black Sage (*Salvia mellifera*), Bladderpod (*Isomeris arborea*) and California Sagebrush (*Artemisia californica*). Three species of cacti including San Diego Barrel Cactus (*Ferocactus viridescens*), Snake Cholla (*Cylindropuntia Californica* var. *californica*), and Fish-hook Cactus (*Mammillaria dioica*) were found in the vicinity; of these, the Barrel Cactus and the Snake Cholla are considered sensitive species. Other succulent plants included sensitive species such as Cliff Spurge (*Euphorbia misera*) and Seaside Calandrinia (*Calandrinia maritima*) as well as more common malacophyllus associates such as California Desert Thorn (*Lycium californicum*) and Coastal Dudleya (*Dudleya lanceolata*). San Diego Coastal Creeper (*Aphanisma blitoides*), a rare plant that was considered to possibly be extirpated from San Diego County was located in the vicinity of the project in 2003, but not within the area of potential effects.

The diversity of invertebrate species that inhabit the Point Loma sea bluffs and surrounding upland habitats is difficult to quantify. Population fluctuations, seasonal variability, distinctive micro-habitats, and restricted activity periods makes the assessment of these populations difficult. Invertebrates have been incidental captures during the 12-year herpetological monitoring program initially started by the UC San Diego and continued by the NPS; sample sites for this monitoring program are located west of the project area (less than

¼ mile). Numerous species have been identified, and include rare species, some of which are declining or extirpated from other portions of the county (e.g. beetles, scorpions, and trapdoor spiders). Butterfly species observed during previous surveys of the immediate area include common species such as West Coast Lady (*Vanessa carye anabella*), and Cabbage Butterfly (*Pieris rapae*).

Habitat for the sensitive Salt Marsh Skipper (*Panoquina errans*) and Quino Checkerspot (*Euphydryas editha quino*) is absent from the project area. Other sensitive beach/coastal invertebrate species do not occur within the study area, e.g. an uncommon snail species, the Mimic Tryonia (*Tryonia imitator*). This former Category 2 species inhabits coastal lagoons and is able to survive under a variety of salinity conditions. Several species of sensitive tiger beetles are known from the back beaches and mudflats of coastal San Diego County including the Gabb's Tiger Beetle (*Cicindela gabbii*) and Oblivious Tiger Beetle (*Cicindela latesignata obliuosa*). These tiger beetles can utilize sandy beaches and tidal areas that occur sporadically at the foot of Point Loma outside the project area.

The 2002 *Naval Base Point Loma Integrated Natural Resources Management Plan* provides a full species list for the Point Loma peninsula. Only one common amphibian species is expected in the vicinity of the project area: the Garden Slender Salamander (*Batrachoseps major*). It could occur in mesic (moderately moist) locations. Another species with a low potential for occurrence is the California Toad (*Bufo boreas halophilus*) which occurs in sage scrub microhabitats. It is likely this species is still extant on Point Loma. Vernal basin habitat for the Western Spadefoot Toad (*Spea hammondi*) is absent from the project area.

Four lizard species, the regionally common Side-blotched Lizard (*Uta stansburiana*), Western Fence Lizard (*Sceloporus occidentalis*), Southern Alligator Lizard (*Elgaria multicarinatus*), and the sensitive Orange Throated Whiptail (*Cnemidophorus hyperythrus*) are known to occur in the general vicinity and have been captured during the herpetological monitoring. The regionally sensitive San Diego Horned Lizard (*Phrynosoma coronatum blainvillei*) and Coronado Island Skink (*Eumeces skiltonianus interparietalis*) are, however, likely to be extirpated from Point Loma. Furthermore, the disturbed sandy upland and sage scrub vegetation is also well-suited to the sensitive California Legless Lizard (*Anniella nigra*), a species regularly encountered within coastal sandy soils.

The Striped Racer (*Masticophis lateralis*) has been observed in the area. The San Diego Gopher Snake (*Pituophis melanoleucus catenifer*) and the Southern Pacific Rattlesnake (*Crotalus oreganus helleri*) are two species likely present in the study area. Other species currently collected on Point Loma include the San Diego Ringneck Snake (*Diadophis punctatus similis*), Common Kingsnake (*Lampropeltis getulus*), and Night Snake (*Hypsiglena torquata*). Previous in the 1950's, but likely extirpated, are the Red Diamond Rattlesnake (*Crotalus ruber*) the Coachwhip (*Masticophis flagellum*), Glossy Snake (*Arizona elegans*), Long-nosed Snake (*Rhinocheilus lecontei*), and Two-striped Garter Snake (*Thamnophis hammondi*) (Lawrence Klauber unpublished notes). Speckled Rattlesnake (*Crotalus mitchelli*) is also specifically noted by Klauber on Point Loma and in Mission Valley; although a majority of the collections and reports are from the foothills and the mountains.

The Coastal Rosy Boa (*Charina trivirgata roseofusca*) is also known from Point Loma, despite the lack of rocky terrain as well as the relative isolation of Point Loma from larger tracts of suitable boa habitat in the coastal interior (e.g., Mission Gorge). It is thought that the species may have been introduced. Herpetological pit fall traps were placed east of Gatchell Road near the northern entrance to the Point Loma Wastewater Treatment Plan under a County-wide San Diego State University study. The U.S. Geological Survey (USGS) conducted the survey until 2002. At that point, the NPS began, and continues today, to conduct sampling. Results of these studies were released in February 2001 (Brown and Fisher 2001). Species caught in traps during this survey on Point Loma include all the species mentioned above except the Long-nosed Snake, Red Diamond Rattlesnake, Coachwhip, Glossy Snake, Coronado Island Skink, Two-striped Garter Snake, and Coast Horned Lizard.

Over four hundred species of birds have been recorded on Point Loma; one of the largest totals for such a limited area, in the United States. Common avian species that use maritime succulent scrub habitat include the Scrub Jay (*Aphelocoma coerulescens*), House Finch (*Carpodacus mexicanus*), Spotted (San Diego) Towhee (*Pipilo maculatus megalonyx*), California Towhee (*Pipilo crissalis*), Bushtit (*Psaltiriparus minimus*), and Bewick's Wren (*Thryomanis bewickii*). Other species expected to occur in succulent scrub in the project area include Anna's Hummingbird (*Calypte anna*), Lesser Goldfinch (*Carduelis psaltria*), California Quail (*Callipepla*

californica), California Thrasher (*Toxostoma redivivum*), Wrentit (*Chamaea fasciata*) and various spring migrants and nomadic species including the White-crowned Sparrow (*Zonotrichia leucophrys*), Yellow-rumped Warbler (*Dendroica coronata*), Tree Swallow (*Tachycineta bicolor*), Barn Swallow (*Hirundo rustica*), Violet-green Swallow (*Tachycineta thalassina*), and Cedar Waxwing (*Bombycilla cedrorum*).

Following an apparent absence of several years at Point Loma, individual California gnatcatchers have been observed and heard in scrub vegetation at the monument, though not in the vicinity of the project area.

Several mammal species have been observed by park staff and/or visitors, or detected during recent surveys/trapping efforts conducted in the area. These include the California Ground Squirrel (*Spermophilus beecheyi*), Botta's Pocket Gopher (*Thomomys bottae*), Gray Fox (*Urocyon cinereoargenteus*), Coyote (*Canis latrans*), Desert Cottontail (*Sylvilagus audubonii*), San Diego Desert Woodrat (*Neotoma lepida intermedia*), Raccoon (*Procyon lotor*), and Virginia Opossum (*Didelphis virginiana*). Small mammals are included as incidental captures in the herpetological monitoring efforts in arrays in proximity to the project area. Species captured through that effort include California vole (*Microtus californicus sanctidiegi*), San Diego desert woodrat (*Neotoma lepida intermedia*), brush mouse (*Peromyscus boylii*), California mouse (*Peromyscus californicus*), Cactus mouse (*Peromyscus eremicus*), deer mouse (*Peromyscus maniculatus*), and the Western harvest mouse (*Reithrodontomys megalotis*). A focused trapping program to potentially detect the Pacific Little Pocket Mouse north of the site was negative for this federally endangered species. In addition, over ten species of bats have been reported for the peninsula.

The project area is located within the City of San Diego's Multiple Species Conservation Program (MSCP) Subarea Plan and within that area's Multi-Habitat Planning Area, the area designated for preservation through the City's MSCP.

Visitor Use and Experience

Visitation to Cabrillo National Monument in fiscal year 2005 was 920,124. Visitation occurs almost evenly throughout the year with peaks in July and August and January, February and March. Visitors come from all over the world. Two-thirds of the total visitation is from the western United States, with a little more than 40% coming from the San Diego area. The majority of visitors arrive by private automobile, comprised of family and/or friends in groups mostly of two to four people.

The Tidepool parking area provides parking for the sole access to the tidepools. It is heavily used by school groups and adults who wish to explore the tidepools during the week, and on weekends when low tides occur in the late morning and afternoons during the low tide season from October through April. On low tide weekends, the parking area's 44 vehicle spaces, including one accessible space, are often full. Visitors seeking a space at these times find maneuvering their vehicle to turn around and leave a challenge. When Tidepool Parking is full, visitors seek a place to park at the other two scenic overlooks/parking areas along Gatchell Road: Sea Cove Parking Area (located just south of the entrance to the treatment plant) with 30 spaces, and Coast View Parking Area with 13 spaces.

A traffic count conducted in May 1998 on south Gatchell Road at the tidepools averaged 730 trips per day at the Tidepool Parking Area. This count includes traffic to the Sea Cove Parking Area and the wastewater treatment plant in addition to traffic to Tidepool and Coast View parking areas. A traffic survey conducted in January/February 2000 at the entrance to the wastewater treatment plant, which, for the public, is the terminus of Gatchell Road, counted an average of 245 cars per day, with an average of 330 cars per day on weekdays, and 52 cars per day on weekends. An average of 128 vehicles per day was construction related.

Land Use

In 1995, the NPS, U.S. Navy, Department of Veterans Affairs, U.S. Coast Guard and the City of San Diego signed a memorandum of understanding (MOU) with the U.S. Fish and Wildlife Service (USFWS) to establish and cooperatively manage the Point Loma Ecological Reserve (PLER). The PLER was established to protect viable sensitive biological communities and to ensure the long-term protection and perpetuation of these resources on Point Loma. In 2005, the same entities signed a new MOU to continue their cooperative protection of the biologically diverse habitats within the Federal reservation. The name of the PLER was changed to the Point Loma Ecological Conservation Area.

The Tidepool parking area is within the PLECA. The PLECA's boundary within Cabrillo National Monument and the criteria by which the boundary will be consistently drawn has been finalized, but not applied yet. Paved surfaces, such as the existing and proposed Tidepool parking area, will be removed from the PLECA in the future. However, if the boundary is redrawn, the previously disturbed area to the north of the existing parking area would remain in the PLECA. It is expected that the construction limits for the project would extend into the PLECA.

Environmental Consequences

Methodology for Assessing Impacts: This section describes the potential environmental consequences associated with the No Action and Preferred Alternatives. Potential impacts (direct, indirect, and cumulative effects) are described in terms of type (are the effects beneficial or adverse?), context (are the effects site-specific, local, or even regional?), duration (are the effects short-term - lasting less than one year, long-term - lasting more than one year, or permanent?) and intensity (is the degree or severity of effects negligible, minor, moderate, or major). Because definitions of intensity (negligible, minor, moderate, or major) vary by impact topic, intensity definitions are provided separately for each impact topic analyzed in this environmental assessment.

Cumulative Impacts: The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969 (42 USC 4321 *et seq.*), require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts are considered for all alternatives, including the no-action alternative.

Cumulative impacts were determined by combining the impacts of the alternatives with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or reasonably foreseeable future projects at Cabrillo National Monument and, if applicable, the surrounding region:

- Installation of drainage structures, the widening of the curve where Cabrillo Road becomes Gatchell Road, the installation of asphalt curbs and the application of a 3 inch asphalt overlay to Cabrillo and Gatchell roads completed in early calendar year 2002.
- In April – June 2005, the National Park Service improved two parking areas, Coast View and Sea Cove, along Gatchell Road immediately north of the project area, and Sea Cove, immediately north of the project area, to improve access and egress and the appearance of the facilities, and to incorporate architectural design elements and materials found at the monument visitor center. Work on Coast View and Sea Cove did not extend beyond the footprint of these two parking areas into the natural zone.
- The Metropolitan Wastewater Department (MWWDD), City of San Diego, began planning to ensure continued access to the Point Loma Wastewater Treatment Plant via Gatchell Road on the northwest boundary of Cabrillo NM. Using the NEPA process, it had identified three alternatives, in addition to the No Action alternative: Bridge, Road Realignment with Retaining Wall and Road Realignment. In 2005, MWWDD placed this project on indefinite hold.

Impairment. In addition to determining the environmental consequences of the alternatives, National Park Service policy (NPS *Management Policies 2006*) requires that potential effects be analyzed to determine whether or not proposed actions would impair the resources or values of the park.

The fundamental purpose of the national park system, established by the Organic Act in 1916 and reaffirmed by the General Authorities Act in 1976, as amended, begins with a mandate to conserve resources and values. National Park Service managers must always seek ways to avoid, or minimize, to the greatest degree practicable, adverse impacts on the resources and values. However, the laws do give the National Park Service the management discretion to allow impacts on the resources and values when necessary and appropriate to fulfill the purposes of the park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service this management discretion, that discretion is limited by the statutory requirement that the National Park Service must leave the resources and values unimpaired unless a particular law directly and specifically provides otherwise.

The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of the resources and values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. An impact on any resource or

value may constitute an impairment. An impact would be most likely to constitute an impairment if it affected a resource or value whose conservation would be:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation for the park
- Key to the natural or cultural integrity of the park or to opportunities to enjoy it
- Identified as a goal in the park's general management plan or other relevant National Park Service planning documents

Impairment may result from National Park Service activities in managing the monument, visitor activities, or activities undertaken by the cooperating association, contractors, and others operating in the park. A determination on impairment is made in the conclusion statement of the impact analyses for soils, vegetation, and wildlife. The National Park Service does not analyze impairment for visitor use and experience (unless impacts are resource based) and land use.

Soils

The thresholds of change for the intensity of impacts to soils are defined as follows:

Negligible:	There are no measurable or perceptible changes in soil structure.
Minor:	Impacts are measurable or perceptible, but localized in a relatively small area. Mitigation may be needed to offset adverse effects, would be simple to implement and likely to succeed.
Moderate:	Impacts would be readily apparent and result in a change to soil character or structure over a relatively wide area. Mitigation measures would be necessary to offset adverse effects and likely would be successful.
Major:	The effects to soils would be readily apparent and substantially change the character or structure of the soils over a large area in and out of the park. Mitigation measures to offset adverse effects would be needed, extensive and their success could not be guaranteed.

NO ACTION ALTERNATIVE. Under the no action alternative, the Tidepool parking area would not be improved. No excavation or revegetation would occur. There would be no impacts to soils.

Cumulative Impacts. Although other past, present, and reasonably foreseeable future actions may affect soils in the area, the no action alternative would have no impacts on soils and therefore would not contribute to the effects of other actions. Consequently, there would be no cumulative impacts to soils under the no action alternative.

Conclusion. There would be no direct, indirect or cumulative impacts to soils.

PREFERRED ALTERNATIVE. Implementation of the preferred alternative would result in the expansion of the paved surface of the Tidepool parking area within soils of moderate stability and locally high erosion. It has been estimated that the Sea Cove parking area approximately 0.4 miles north of the Tidepool parking area is experiencing an estimated rate of retreat of 0.2 feet (2.4 inches) per year at the base of the cove, and an estimated rate of erosion at the top of the bluff of 0.4 feet (4.8 inches) per year. To address the estimated rate of retreat, the western edge of Tidepool Parking would be set back from the top-of-bluff 20 feet. This would accommodate the expected bluff retreat for an estimated 50 years.

The Preferred Alternative would require the excavation of approximately 4,000 cubic yards of soil to expand the area needed to provide a bus turnaround area while retaining the same number of parking spaces and achieve a slope of not greater than 4.75%. Additional impervious asphalt and concrete surfaces would be installed. These surfaces would block soils from absorbing water or supporting vegetation and may result in the compression of surrounding soils.

Construction would also temporarily expose soils that had been covered by impervious surface. These soils would be protected through mitigation efforts described under the preferred alternative to minimize

potential impacts. Displaced soil would be spread across other locations within the project area or hauled away.

Prior to construction, the contractor would prepare and submit for NPS approval an erosion control plan, which incorporates best management practices. These practices would include implementation of a storm water pollution prevention plan during construction, and soil stabilization and revegetation after construction to minimize erosion. Any adverse impacts to soils would be long-term and of minor intensity.

Cumulative Impacts. Past actions (installation of drainage structures and asphalt curbs along Gatchell Road, widening of the curve where Cabrillo Road becomes Gatchell Road, and the improvement of the Coast View and Sea Cove parking areas) resulted in long-term minor adverse impacts to soils in the area. Reasonably foreseeable actions (e.g. the Metropolitan Wastewater Department's plans to improve access to the Point Loma Wastewater Treatment Plant via Gatchell Road) could result in long-term minor to moderate adverse impacts to soils in the area.

As described above, implementation of the preferred alternative would result in long-term minor adverse impacts to soils. The long-term minor adverse impacts of the preferred alternative, in conjunction with the long-term minor to moderate adverse impacts of other past, present and reasonably foreseeable actions, would result in the long-term minor to moderate adverse cumulative impacts. The preferred alternative would contribute a small, adverse increment to the cumulative impact.

Conclusion. Implementation of the preferred alternative would result in minor, long-term, adverse impacts to soils. The cumulative impact would be long-term, minor to moderate, and adverse; however, the preferred alternative would contribute a small, adverse increment to the cumulative impact.

Because there would be no major adverse impacts to a resource whose conservation is (1) necessary to fulfill specific purposes identified in the monument's establishing presidential proclamation, or those which expanded the monument, (2) key to the natural or cultural integrity of the monument or to opportunities for enjoyment of the park, or (3) identified as a goal in the monument's 1996 General Management Plan or other relevant NPS planning documents, there would be no impairment of park resources or values.

Biotic Communities

The thresholds of change for the intensity of impacts to biotic communities are defined as follows:

Negligible:	There are no measurable or perceptible impacts to native species, their habitats or natural processes sustaining them.
Minor:	Impacts are measurable or perceptible, but would not be expected to be outside the natural range of variability of native species populations, their habitats, or natural processes sustaining them. Mitigation may be needed to offset adverse effects, would be simple to implement and likely to succeed.
Moderate:	Impacts would be readily apparent and would affect some individual species and also a sizeable segment of the species population over a relatively large area within the monument. Mitigation measures would be necessary to offset adverse effects and likely would be successful.
Major:	The effects to biotic communities would be readily apparent and considerably impact species populations over a relatively large area in and out of the monument. Mitigation measures to offset adverse effects would be needed, extensive and their success could not be guaranteed.

NO ACTION ALTERNATIVE. Under the no action alternative, the Tidepool parking area would not be improved. No excavation or revegetation would occur. There would be no impacts to biotic communities.

Cumulative Impacts. Although other past, present, and reasonably foreseeable future actions may affect biotic communities in the area, the no action alternative would have no impacts on biotic communities and

therefore would not contribute to the effects of other actions. Consequently, there would be no cumulative impacts to biotic communities under the no action alternative.

Conclusion. There would be no direct, indirect or cumulative impacts to biotic communities.

PREFERRED ALTERNATIVE. The Preferred Alternative would require the excavation of approximately 4,000 cubic yards of soil to expand the area needed to provide a bus turnaround area while retaining the same number of parking spaces and achieve a slope of not greater than 4.75%. Additional impervious asphalt and concrete surfaces would be installed. These surfaces would block soils from absorbing water or supporting vegetation and may result in the compression of surrounding soils.

Expansion and paving of the enlarged parking area would result in minor, long-term adverse impacts to approximately 0.25 of an acre of maritime succulent scrub, and minor, short-term impacts to approximately 0.14 of an acre more. Revegetation of otherwise disturbed ground with native species (native plants salvaged from the site or those grown in the monument's greenhouse) would begin shortly after construction activities are complete. Revegetation efforts would be directed to reconstructing the natural spacing, abundance, and diversity of native plant species. Impacts to vegetation would be adverse but minor and short-term.

Seven sensitive flora species, Seaside Calandrinia (*Calandrinia maritima*), Cliff Spurge (*Euphorbia misera*), Snake Cholla (*Opuntia californica* var. *californica*), San Diego Barrel Cactus (*Ferocactus viridescens*), South Coast Saltscale (*Atriplex pacifica*) San Diego Sand Aster (*Corethrogyne filaginifolia* var. *incana*), and San Diego Coastal Creeper (*Aphanisma blitoides*) live in the vicinity of the project area, but would not be impacted by construction.

Construction of the bus turnaround and the retaining wall along the sidewalk should reduce "social trailing," as visitors will be directed more effectively away from the surrounding natural landscape to the tidepool trails. Impacts to vegetation would be beneficial, minor to moderate and long-term.

There would also be a temporary increase in dust during project construction. Dust from the movement of heavy equipment and clearing can build up on surrounding vegetation, which can negatively effect plant growth by blocking light and preventing photosynthesis. Fugitive dust on plant communities would be minimized through appropriate operation of heavy machinery and frequent wetting of loose soils, and any adverse impacts would be anticipated to be short-term and negligible to minor.

During construction there would be a temporary disturbance and displacement of wildlife. The surrounding land, however, would continue to provide abundant nesting, escape, and protective cover. Some small animals may be forced to relocate to areas outside the project area, but this would not be expected to have any long-term adverse effect upon local populations. Wildlife would be expected to reoccupy the revegetated sections of the project area following construction. Impacts would be adverse but negligible and short-term.

One sensitive faunal species, the Orange Throated Whiptail (*Cnemidophorus hyperythrus beldingi*), lives in the project area, but likely outside of the construction zone. The California Brown Pelican (*Pelecanus occidentalis californicus*) is observed flying over sea bluffs in the study area. The California gnatcatcher uses the area periodically, but is not confirmed to nest on the peninsula. Restoration of lands containing appropriate habitat for the Orange Throated Whiptail would reduce impacts to a level below significance. Therefore, the preferred alternative would not result in direct impacts to sensitive plants or animals.

Typically, noise levels above 60 dBA are considered a significant impact, particularly on sensitive, nesting songbirds. Ambient noise levels at Tidepool Parking do not often exceed this level. Average noise level at the project site was measured as 70 dBA, with a minimum level of 51 dBA and a maximum of 84 dBA (measured from 9/21/07 to 9/23/07). Construction in this alternative would involve grading, removal and pulverizing asphalt, excavating to establish new grade; spreading base course and compacting, pouring and spreading asphalt, excavating for vault toilet, forming and pouring concrete walks and curbs and gutters. Construction noise would exceed the 60 dBA level for a short period of time, but is not expected to impact nesting birds because of its short duration. Any adverse impact would be expected to be minor and short-term.

Cumulative Impacts. Past actions (installation of drainage structures and asphalt curbs along Gatchell Road, widening of the curve where Cabrillo Road becomes Gatchell Road, and the improvement of the Coast View and Sea Cove parking areas) resulted in long-term minor adverse impacts to biotic communities in the area. Reasonably foreseeable actions (e.g. the Metropolitan Wastewater Department's plans to improve access to the Point Loma Wastewater Treatment Plant via Gatchell Road) could also result in long-term, minor, adverse impacts to biotic communities in the area.

As described above, implementation of the preferred alternative would result in long-term minor adverse impacts to biotic communities. The long-term minor adverse impacts of the preferred alternative, in conjunction with the long-term minor adverse impacts of other past, present and reasonably foreseeable actions would result in the long-term minor adverse cumulative impacts. The preferred alternative would contribute a small, adverse increment to the cumulative impact.

Conclusion. Implementation of the preferred alternative would result in adverse impacts to vegetation that are minor, short-term and long-term, and localized. Adverse impacts to wildlife would be short-term and negligible. The cumulative impact would be long-term, minor and adverse; however, the preferred alternative would contribute a small, adverse increment to the cumulative impact.

Because there would be no major adverse impacts to a resource whose conservation is (1) necessary to fulfill specific purposes identified in the monument's establishing presidential proclamation, or those which expanded the monument, (2) key to the natural or cultural integrity of the monument or to opportunities for enjoyment of the park, or (3) identified as a goal in the monument's 1996 General Management Plan or other relevant NPS planning documents, there would be no impairment of park resources or values.

Visitor Use and Experience

The thresholds of change for the intensity of impacts to visitor use and experience are defined as follows:

- | | |
|-------------|--|
| Negligible: | Changes in visitor use and/or experience would be below or at the level of detection. The visitor would not likely be aware of the impacts associated with the alternative. |
| Minor: | Changes in visitor use and/or experience would be detectable, although the changes would be slight. |
| Moderate: | Changes in visitor use and/or experience would be readily apparent. The visitor would be aware of the impacts associated with the alternative and would likely be able to express an opinion about the changes. |
| Major: | Changes in visitor use and/or experience would be readily apparent and would be severely adverse or exceptionally beneficial. The visitor would be aware of the impacts associated with the alternative and would likely express a strong opinion about the changes. |

NO ACTION ALTERNATIVE. Under the no action alternative, the Tidepool parking area would not be improved. There would be no improvements to access and egress, and no drop-off or turn around area for buses. Vehicular circulation would not be improved and grading for easier accessibility would not occur. A permanent toilet facility for visitors would not be constructed to replace the temporary toilet facility. No additional visitor interpretation regarding the fragility of tidepool life and how visitors may enjoy the tidepools without harming them would be provided. Impacts to visitor use and experience would be adverse, long-term and minor to moderate in intensity.

Cumulative Impacts. Past actions (installation of drainage structures and asphalt curbs along Gatchell Road, widening of the curve where Cabrillo Road becomes Gatchell Road, and the improvement of the Coast View and Sea Cove parking areas) resulted in short-term, minor, adverse construction related impacts to visitor use and experience. Widening of the curve where Cabrillo Road becomes Gatchell Road and the improvement of the Coast View and Sea Cove parking areas also resulted in long-term, moderate beneficial impacts to visitor use and experience. Reasonably foreseeable actions (e.g. the Metropolitan Wastewater Department's plans to improve access to the Point Loma Wastewater Treatment Plant via Gatchell Road) could result in short-term, minor, adverse construction related impacts to visitor use and experience.

As described above, implementation of the no action alternative would result in long-term minor to moderate adverse impacts to visitor use and experience. The long-term minor to moderate adverse impacts of the preferred alternative, in conjunction with the short-term minor adverse impacts and long-term moderate beneficial impacts of other past, present and reasonably foreseeable actions, would result in a long-term minor to moderate adverse cumulative impact. The no action alternative would contribute a small, adverse increment to the cumulative impact.

Conclusion. There would be adverse, long-term and minor to moderate impacts to visitor use and experience. The no action alternative would contribute a small, adverse increment to the cumulative impact.

PREFERRED ALTERNATIVE. Improvements to the parking area's access and egress would enhance visitor safety, as would the provision of a drop-off and turnaround area for buses. A permanent toilet facility for visitors would be constructed. An interpretive kiosk, addressing the fragility of tidepool life and how visitors may enjoy the tidepools without harming them, would be constructed. Impacts to visitor use and experience would be beneficial, long-term and minor to moderate in intensity.

Grading for easier accessibility would occur. The handicap parking space would be a 1.8% maximum grade with a 5% maximum ramp to the tidepool trail, which is also at a 5% maximum grade, would make it easier for disabled visitors to exit and enter their vehicles and access the vault toilet. Impacts to visitor use and experience would be beneficial, long-term and of moderate in intensity.

Improvements to the Tidepool parking area are not anticipated to result in an increase in visitation to the tidepools. The number of parking spaces (44) would remain unchanged. The bus turnaround would allow passengers to enter and egress buses in the parking area rather than along Gatchell Road, where the buses currently park. However, the bus turnaround and the construction of the retaining wall along the sidewalk should reduce "social trailing," as visitors will be directed more effectively away from the surrounding natural landscape to the tidepool trails. There would be no changes to the existing trails from the Tidepool parking area to the tidepools, and any impacts to visitor use and experience would be negligible.

Improvement of Tidepool parking area would result in temporary impacts to recreationists during construction due to restricted access. Visitors would be able to park at Coast View and Sea Cove Scenic Overlooks, approximately 0.5 of a mile and 0.7 of a mile respectively, north of Tidepool Parking. Access to the treatment plant along south Gatchell Road and to Coast View and Sea Cove Scenic Overlooks would be maintained throughout the construction period, which is expected to last 6 months.

While the Tidepool parking area is under construction, all or sections of the parking area would be closed and vehicular traffic along Gatchell Road could be temporarily restricted in the vicinity of the parking area. Every effort, however, would be made to maintain the flow of vehicular traffic along Gatchell Road during the construction period. Any construction associated delays would probably be minimal but visitors caught in the delays would be frustrated and may consider the delays interminable. Visitors stopping at the monument's visitor center would be informed of construction activities. Construction would also introduce visual, audible, and atmospheric intrusions into the setting of the Tidepool parking area. Overall, construction related impacts would be adverse, short-term and of minor intensity, but would end with the cessation of construction.

Cumulative Impacts. Past actions (installation of drainage structures and asphalt curbs along Gatchell Road, widening of the curve where Cabrillo Road becomes Gatchell Road and the improvement of the Coast View and Sea Cove parking areas) resulted in short-term, minor, adverse construction related impacts to visitor use and experience. Widening of the curve where Cabrillo Road becomes Gatchell Road and the improvement of the Coast View and Sea Cove parking areas also resulted in long-term, moderate beneficial impacts to visitor use and experience. Reasonably foreseeable actions (e.g. the Metropolitan Wastewater Department's plans to improve access to the Point Loma Wastewater Treatment Plant via Gatchell Road) could result in short-term, minor, adverse construction related impacts to visitor use and experience.

As described above, implementation of the preferred alternative would result in both long-term, moderate beneficial impacts and short-term, construction related minor adverse impacts to visitor use and experience. The beneficial and adverse impacts of the preferred alternative, in conjunction with the short-term minor adverse impacts and long-term moderate beneficial impacts of other past, present and reasonably

foreseeable actions, would result in a long-term moderate beneficial cumulative impact. The preferred alternative would contribute an appreciable, beneficial increment to the cumulative impact.

Conclusion. Implementation of the preferred alternative would result in both long-term, moderate beneficial impacts and short-term, construction related minor adverse impacts to visitor use and experience. The preferred alternative would contribute an appreciable, beneficial increment to the cumulative impact.

Land Use

The thresholds of change for the intensity of impacts to land use are defined as follows:

- Negligible: There are no measurable or perceptible changes in land use.
- Minor: Impacts would be slight but detectable and would be of a magnitude that would not have an appreciable effect on use of the land.
- Moderate: The effects would be readily apparent and result in substantial change in land use in a manner noticeable to staff and the public.
- Major: The effects would be readily apparent, result in a substantial change in land use in a manner noticeable to staff and the public, and be markedly different from existing uses.

NO ACTION ALTERNATIVE. Under the no action alternative, the Tidepool parking area would not be improved. No impacts to land use would occur.

Cumulative Impacts. Although other past, present, and reasonably foreseeable future actions may affect land use in the area, the no action alternative would have no impacts on land use and therefore would not contribute to the effects of other actions. Consequently, there would be no cumulative impacts to land use under the no action alternative.

Conclusion. There would be no direct, indirect or cumulative impacts to land use.

PREFERRED ALTERNATIVE. The additional paved surface area of the improved Tidepool parking area is within the Point Loma Ecological Conservation Area (PLECA), and under the terms of the current memorandum of agreement with the US Fish and Wildlife Service, that land would need to be removed from the PLECA and replaced with like habitat of equal or higher biological value. Impacts would be negligible.

Cumulative Impacts. Other past, present, and reasonably foreseeable future actions (installation of drainage structures and asphalt curbs along Gatchell Road, widening of the curve where Cabrillo Road becomes Gatchell Road, improvement of the Coast View and Sea Cove parking areas, and the Metropolitan Wastewater Department's plans to improve access to the Point Loma Wastewater Treatment Plant via Gatchell Road) would have no effect on land use in the area. Therefore, there would be no cumulative impacts to land use under the preferred alternative.

Conclusion. Implementation of the preferred alternative would result in negligible impacts to land use. There would be no cumulative impacts to land use under the preferred alternative.

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Consultation and Coordination

Brief History of Planning and Public Involvement

The proposed project has been presented several times at various meetings for the other four property owners on the Point Loma peninsula: the City of San Diego, Department of Veterans Affairs, U.S. Coast Guard, and U.S. Navy. The “Good Neighbors” meetings are held monthly and invitees include representatives from all the landowners. The meetings discuss peninsula-related projects and events to keep all partners informed. Likewise, the Point Loma Ecological Conservation Area Working Group also includes representatives from all five landowners but also includes the U.S. Fish and Wildlife Service. The Working Group meets at least quarterly to discuss proposed projects and other events potentially impacting the Conservation Area. This project to improve the tidepool parking area was first discussed at these meetings beginning in 2006. When the EA is finalized, it will be presented to both groups for their review and comments.

Review from the public will be requested by posting the document on both the park web-site (<http://www.nps.gov/cabr>) and the NPS planning web-site (<http://parkplanning.nps.gov>), as well as placing a copy of the document at the Point Loma public library. A press release will also be prepared requesting review. In addition to being distributed to the partners managing the PLECA, a presentation could be scheduled (pending levels of interest) at the Point Loma Association meeting and we will request a notice to be placed in their quarterly newsletter. This community group serves the residents and businesses of the area (<http://www.plaweb.org>).

Coastal Zone Management

Point Loma is within the California Coastal Zone. In accordance with the Federal Coastal Zone Management Act of 1972, as amended, Section 307(c)(1), Federal agencies must make a determination of consistency with the local (i.e. state) coastal program prior to approving an action that could affect the coastal zone. Chapter 3 of the California Coastal Act of 1976, as amended in January 1992, contains the applicable guideline for determining the consistency of Federal actions. It addresses public access, recreation, marine environment, land resources, development, and industrial development. Section 30212(a) notes that public access shall be provided except where, “it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources.” Section 30240 of the act states: “(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.”

The project site is within the jurisdiction of the California Coastal Commission (CCC). By letter dated February 14, 2005 the California Coastal Commission agreed that the proposed project would not adversely affect coastal zone resources and concurred with the NPS negative determination.

State Historic Preservation Officer

The only known cultural or historic structures near the project area occur to the east, across the two-lane Gatchell Road. These consist of prehistoric cultural resources that lost their scientific research values during the initial construction of the road and are thus not eligible for the National Register of Historic Places (NRHP) (ASM Affiliates, Inc. 2000). Historic military cultural remains (Battery Point Loma) are also present and are eligible for the NRHP. Consultation in 2000 with Daniel Abeyta, then Acting State Historic Preservation Officer was undertaken to ensure that any improvements to Gatchell and Cabrillo Roads would not affect any prehistoric or historic components and to confirm that proposed road constructions would not have an adverse effect on the resources. A 50-meter buffer (except on existing roads and berms) would be established around the structures to ensure this protection (Abeyta, Daniel (State of California, Department of Parks and Recreation, Office of Historic Preservation), Letter to Terry DiMattio (National Park Service, Cabrillo

National Monument), 2000 November 14.). While this buffer around Battery Point Loma does extend slightly to the west of Gatchell Road, no impacts to the resources themselves are expected, either directly or indirectly. The road itself will serve as a barrier and no staging will occur in the area of the cultural resources.

U.S. Fish and Wildlife

Through the PLECA Working Group, this project was introduced to the U.S. Fish and Wildlife Service in 2006. On January 25, 2005, Andrea Compton (Chief, Natural Resource Science Division, CABR) and Kim O'Connor (U.S. Fish and Wildlife Service) conducted an informal visit to the proposed site. Ms. O'Connor indicated that the U.S. Fish and Wildlife Service could comment formally when the EA is released for public comment. Since there are no proposed affects on any threatened or endangered species, concurrence is not needed. Based on that informal discussion, Ms. O'Connor concurred with Ms. Compton that the proposed area of impact consists of both low quality habitat of non-native/native mixed species of coastal sage scrub/maritime succulent scrub, and higher quality native habitat (Lieberman, Carolyn (U.S. Fish and Wildlife Service), E-mail communication with Andrea Compton (National Park Service, Cabrillo National Monument), 2005 March 9.).

List of EA Recipients

California Coastal Commission
California, Department of Fish and Game
California, Department of Parks and Recreation, Office of Historic Preservation
City of San Diego Point Loma Public Library
City of San Diego, Point Loma Wastewater Treatment Plant (PLECA Working Group member)
Department of Veterans Affairs, Fort Rosecrans National Cemetery, PLECA Working Group member
Fort Rosecrans National Cemetery
Heal the Bay
Port of San Diego Commissioners
San Diego Audubon Society
Surfrider Foundation, San Diego Chapter
U.S. Coast Guard (PLECA Working Group member)
U.S. Fish and Wildlife Service
U.S. Navy (PLECA Working Group member)

Libraries Where the EA Will Be Available for Review

Ocean Beach Branch Library
4801 Santa Monica Avenue
San Diego, CA 92107-1606

Point Loma/Hervey Branch Library
3701 Voltaire Street
San Diego, CA 92107-1606

References

Abeyta, Daniel (State of California, Department of Parks and Recreation, Office of Historic Preservation), Letter to Terry DiMattio (National Park Service, Cabrillo National Monument), 2000 November 14.

Abeyta, Daniel (State of California, Department of Parks and Recreation, Office of Historic Preservation), Letter to Terry DiMattio (National Park Service, Cabrillo National Monument), 2000 August 3.

ASM Affiliates, Inc. 2000. National Register of Historic Places Eligibility Evaluation at CA-SDI-11, 935, CA-SDI-11, 936H and CA-SDI-11,937H on Point Loma, San Diego County, CA. June. Prepared for City of San Diego, Metropolitan Wastewater Department.

Atkinson, A. J., R. N. Fisher, C. J. Rochester, and C. W. Brown. 2003. Sampling design optimization and establishment of baselines for herpetofauna arrays at the Point Loma Ecological Reserve. U. S. Geological Survey Western Ecological Research Center Technical Report prepared for Cabrillo National Monument, National Park Service. 39 pages.

Brown, C. and R. Fisher. 2001. Final Report on the inventory and Management Needs Study of Point Loma Herpetofauna (Reptiles and Amphibians) with Comments on Mammals and invertebrates. February. Prepared by U.S. Geological Survey and Department of Biology, San Diego State University.

Cabrillo National Monument Foundation. 2004. Understanding the Life of Point Loma. Cabrillo National Monument Foundation, San Diego, CA.

Edwards, C. 2002. The Birds of Cabrillo National Monument and Point Loma. July. San Diego, CA.

Holland, R. F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame-Heritage Program, State of California, Department of Fish and Game, Sacramento, CA.

Multiple. 2005. Memorandum Of Understanding Between The Federal Land Owners On Point Loma, San Diego, City Of San Diego, and U.S. Fish And Wildlife Service.

Multiple. 2006. Cooperative Agreement Between Southwest Region (Department of the Navy) And Cabrillo National Monument, National Park Service (Department of the Interior). March 4.

Multiple. 2007. Cooperative Agreement Between the Department of the Army and the U.S. National Park Service, Point Loma, CA. March 20.

National Park Service, U.S. Department of the Interior. 1996. General Management Plan, Final Environmental Impact Statement. February. San Diego, CA.

National Park Service, U.S. Department of the Interior. 1998 (draft). Resource Management Plan. Cabrillo National Monument, San Diego, CA.

National Park Service, U.S. Department of the Interior. 2005. Environmental Screening Form, Improve Tidepool Parking Area, Cabrillo National Monument, San Diego, CA. January 12, 2005.

National Park Service, U.S. Department of the Interior. 2006. Management Policies 2006. Washington, D.C.

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Oberbauer, T. 1996. Terrestrial Vegetation Communities in San Diego County Based on Holland's Descriptions. San Diego Association of Governments. San Diego, CA.

RECON. 2002. Naval Base Point Loma Integrated Natural Resources Management Plan. Prepared for U.S. Navy, Natural Resources Office, Environmental Department, San Diego, CA.

U.S. Navy. 2007. License For Use Of Real Property By Other Federal Agencies, NAVFAC 11011/30(6-75), N6247307RP00103, June 15, 2007-June 14, 2012.

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As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historic places, and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people. The department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

NPS 342/ D67 / December 2009