EXECUTIVE SUMMARY

The *Preservation and Public Plan* (*PPUP*) is the second of two phases of the planning efforts of the California Department of Parks and Recreation (State Parks) at the Crystal Cove Historic District (Historic District) in Crystal Cove State Park in Orange County. This Final Environmental Impact Report (FEIR) is being prepared as a separately bound companion document to the *PPUP*. A Draft Environmental Impact Report was circulated to the public on October 15, 2002 and all written public comments are included in Section 8 of this FEIR. Minor modifications and clarifications have been made in the FEIR and are identified by either an outside border or underlining. The FEIR addresses both the long-term planning goals of the *PPUP* and the project level implementation of improvements. Although largely consistent with the existing 1982 Crystal Cove State Park General Plan and the 1982 Public Use Plan, the *Preservation and Public Use Plan* incorporates programs that were not addressed in the previous planning efforts and will require a General Plan Amendment. General Plan Amendments will include cottage modification, limited additional structures, additional adaptive use and facilities, a permanent park satellite office/visitor use area, and updated mapping.

The proposed Vision Statement for the Historic District is:

State Parks envisions working with interested people and groups to renovate and preserve for posterity the Historic District's unique cultural, natural, and recreational resources and to make these values available for the enjoyment and education of all.

The proposed project actions call for numerous improvements to structures, features, and systems in and near the Historic District. The project plan also calls for new uses to nearly all the structures, features, and areas of the Historic District. Project tasks include those for improving circulation, cottage preservation and adaptation, utility systems, geological stability and slope stabilization, site accessibility, and public safety (see Section 2 and Figures 2.2 Sheet S-0 to S-12 for detailed discussion and location of project tasks and improvements). Cottage preservation and adaptation work directed from this plan and project will require undertaking the entire range of historic property treatments (Preservation, Restoration, Rehabilitation, and Reconstruction) to meet project infrastructure and re-use goals, tasks and programs.

The EIR addresses the proposed project and a range of project alternatives that were considered during the planning process in Section 2. The environmental effects of the proposed project are addressed in Sections 4.1 to 4.5 and the Environmental Alternatives Analysis is addressed in Section 4.6 and includes the No Project Alternative and Environmentally Superior Alternatives to the proposed project. The No Project and Environmentally Superior Alternatives do not provide optimal public use and enjoyment of the Historic District, nor do they provide for enhanced historic preservation. The proposed mitigation monitoring program and record is shown in Section 7 and has been finalized in the Final EIR as part of the project approval after the public review and comment period. A separate Statement of Overriding Considerations, Findings, and

Mitigation Monitoring Program and Record package will also be provided to the Parks and Recreation Commission for approval of the project.

The *Preservation and Public Use Plan* will potentially cause significant adverse temporary effects to aesthetics during construction that cannot be fully mitigated. These temporary adverse effects include visual impacts associated with slope reconstruction, temporary relocation and replacement of cottages, construction associated with the historic property treatments, and temporary fencing necessary for health and safety. A Statement of Overriding Considerations will be required for these adverse visual effects. State Parks is committed to reducing permanent adverse aesthetic effects below the level of significance through careful design, choice of compatible materials, and other screening strategies.

Potential significant effects to historic resources, marine and shore habitat, vegetation, wildlife, stream resources including wetlands, paleontology, coastal processes, geology and erosion, archaeology, water quality, and traffic will be mitigated below significance. Potential impacts to public services, land use, planning, air quality, noise, and hazards associated with hazardous waste are less than significant and will be managed according to accepted best management practices and protocols, as necessary.

The proposed project will have little or no adverse effects on water movement, groundwater, energy and mineral resources, agriculture, local plans, housing or employment. Beneficial effects of the project include opening the Historic District to the public and enhance historic preservation. The proposed project will serve the local community, the region, and vacationers as a unique recreational opportunity in a National Register Historic District within a breathtaking natural environment. The importance of natural and historic resources can be shown to a great variety of people using the structures available in the Historic District.

Implementation of the *PPUP* will allow State Parks to rehabilitate, restore and maintain the Historic District in perpetuity while also providing the general public the unique opportunity to experience the Crystal Cove Historic District as a living community.

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1 PURPOSE & NEED

1.1 Introduction

The purpose of the Final Environmental Impact Report is to describe the project, its environmental consequences, and make the public review comments about the Crystal Cove Historic District *Preservation and Public Use Plan (PPUP*) available to decision makers. The California Department of Parks and Recreation (State Parks) is the Lead Agency for this project. This Environmental Impact Report, a separate, stand alone EIR, has been prepared for the Crystal Cove Historic District *Preservation and Public Use Plan,* which determines State Parks ultimate direction for providing full public access to the Crystal Cove Historic District. The development of the *Preservation and Public Use Plan* has been conducted with public participation through a series of scoping meetings and public workshops and continues in this California Environmental Quality Act (CEQA) compliance process. The *Preservation and Public Use Plan* is a companion document to this EIR and is bound separately. Portions of the *Preservation and Public Use Plan* will be summarized in this EIR, but there are references to the *PPUP* for detailed background, objectives, program, and planning information. Although largely consistent with the existing 1982 Crystal Cove State Park General Plan and the 1982 Public Use Plan, the *Preservation and Public Use Plan* incorporates programs that were not addressed in the previous planning efforts and will require a General Plan Amendment.

This EIR will also address implementation of the *PPUP*. Implementation of the *PPUP* will occur in phases of which, the first phase is funded through the 2002 Proposition 40 bond at $9.2 million and a Memorandum of Understanding with the Coastal Commission to provide affordable overnight accommodations at $2.9 million. Detail required for implementation but not included in the *PPUP* will be addressed in the project description within this EIR. Subsequent phases will be implemented as funding becomes available and will adhere to the constraints and mitigation requirements established in the *PPUP* and this EIR.

The project is consistent with the purpose statement for Crystal Cove State Park.

> "The purpose of Crystal Cove State Park is to make available to the people for their enjoyment the natural, cultural, and recreation values of a significant open space area on the Orange County Coast.
>
> Located amidst dense urban development along the coast, the park's relatively large size, more that 3 miles of ocean beach, and some 2,800 acres with expansive marine views and interior canyons have regional and statewide significance. Numerous archeological sites and rare plants are also prime park resources of statewide significance.
>
> The function of the Department of Parks and Recreation at Crystal Cove State Park is to manage, protect, and, where necessary, to restore its natural and cultural resources and values effectively; and to provide facilities and services, consistent with the purpose of the park, that are necessary for full enjoyment of the park."

Because the project proposes changes within the Coastal Zone and within the Pacific Coast Highway (Highway 1) right of way, the California Coastal Commission and the California Department of Transportation are Responsible Agencies. Further, because several of the proposed actions may either permanently or temporarily affect cultural resources, water quality, wetlands, coastal processes, and species listed as threatened or endangered, additional permits or approvals will be needed from the following agencies:

United States Army Corp of Engineers
United States Fish and Wildlife Service
California Department of Fish and Game
State Office of Historic Preservation
California Regional Water Quality Control Board, Santa Ana Region
Natural Communities Conservation Plan (NCCP) Non-Profit Corporation

1.2 Project Background

Crystal Cove State Park is located in Orange County north of the City of Laguna Beach and partially within the City of Newport Beach (Figure 1.1). State Parks began acquiring land from the Irvine Company in 1979. With subsequent acquisitions, the total acreage of the park is currently 2,791 acres. The park was purchased with two existing private leaseholds, the El Morro Village Mobilehome Park and the Crystal Cove Historic District. Naming and classification of the park occurred on April 11, 1980. The General Plan was approved by the State Parks and Recreation Commission on March 12, 1982 and approved and certified as a Public Works Plan by the California Coastal Commission on May 20, 1982.

The park is one of the last remaining natural open space coastal properties in Southern California. It consists of a 3.25-mile coastal section west of Pacific Coast Highway and several inland areas (Figure 1.2). The immediate project area within Crystal Cove State Park is shown on Figure 2.1. The park's outstanding visual and natural resource qualities provide a dramatic contrast to the increasingly urban character of this coastal region. Due to recent urban development, Crystal Cove State Park provides the only direct connection between inland habitats and the coast in Orange County. The park consists of a wide variety of landscape and scenic features. Some of these include underwater reefs, rolling surf, sandy beaches, tidepools, cliffs, wide and narrow marine terraces, oak woodlands, and natural coastal upland habitat. Offshore is a designated underwater park, which is also a part of Crystal Cove State Park. Important cultural resource features of the park include several significant archaeological sites and the Crystal Cove Historic District, a National Register of Historic Places Property.

As part of the preparation of the 1982 Crystal Cove State Park General Plan, an Environmental Impact Report was completed that addressed the Public Use at the Crystal Cove Historic District. This process included a series of five public workshops and two public hearings. The General Plan indicated that the natural, cultural and scenic qualities of the park should be retained, leaving the bulk of the property in its natural state. State Parks unsuccessfully tried to implement the General Plan's vision for the Historic District

through three different plans for preserving the Historic District and opening it to public use. This history is described in detail in the *PPUP,* pages 36-42.

A previous EIR, SCH # 2001031001, the *Investigations and Interim Protection Plan,* was prepared by State Parks in response to the termination of the resort concession contract for the Crystal Cove Historic District and the departure from the premises by the previous lessee tenants. The *Investigations and Interim Protection Plan* represented a series of ongoing small projects and efforts by State Parks to effectively manage and stabilize the historic district in the short-term. Several of the projects identified in the Investigations and Interim Protection Plan are ongoing and funded through the State Parks Deferred Maintenance Program.

In April 2001, State Parks initiated a public planning process to recommend how to best restore, preserve, and enjoy the cultural and natural values of Crystal Cove State Park's National Register Historic District. This plan is, in part, a cumulative summary of many actions, laws, policies, documents, studies, and surveys prepared over approximately twenty years that apply directly to this project. It has been prepared to further define the recommendations in the 1982 Crystal Cove State Park General Plan and Public Use Plan, and to guide the planning and design of future Crystal Cove Historic District implementation projects. Detailed descriptions of the work necessary to provide the Historic District infrastructure including circulation, utilities and cottage adaptation for the first phase of implementation are included in this EIR as well as firm constraint and mitigation requirements for the implementation of later program phases as they are funded.

The 2002/2003 California state budget approved major capital outlay funding through the 2002 bond Proposition 40 in order to allow implementation of the *PPUP*. Design and environmental review are ongoing and construction is anticipated to start early in the 2003/2004 fiscal year. It is anticipated that the *Preservation and Public Use Plan* will be submitted to the California State Park and Recreation Commission in early 2003 for approval. If approved, the proposed plan and improvements would then go to the California Coastal Commission and California State Public Works Board for approval.

1.3 Project Need

As indicated in the *PPUP*, pages 36-42, past planning efforts for the Historic District indicated a new need to bring the public, which represents many diverse interests, into the planning process. The *PPUP* is the outcome of that planning process and seeks to combine State Parks ***Mission*** and operational requirements with programs envisioned by the public. Because it is understood that program needs may change over the years, it is necessary for the *PPUP* to provide firm guidelines and mitigation monitoring/ management to ensure that no significant adverse environmental effects occur while allowing flexibility within the programming objectives and guidelines.

The proposed Vision Statement for the Historic District is:

State Parks envisions working with interested people and groups to renovate and preserve for posterity the Historic District's unique cultural, natural, and recreational resources and to make these values available for the enjoyment and education of all.

This vision will be achieved by these general goals:

- Protecting natural, cultural, and recreational resources.
- Expanding recreational access and opportunities.
- Providing public opportunity to enjoy overnight stays in the Historic District.
- Involving the public in building a new Crystal Cove community.
- Providing opportunities for interaction and learning.

Please refer to the *PPUP,* pages 5 to 14 & 64 to 77, for detailed information on proposed vision, goals, objectives, and guidelines.

The proposed General Plan Amendment incorporates additional, but limited new development in the Historic District and in the Los Trancos area to allow historic rehabilitation and adaptation to public use. The Amendment consists of the following refinements:

- Appropriate cottage modifications.
- Appropriate additional structures.
- Additional adaptive use and facilities.
- Establishment of the Los Trancos temporary park office as a permanent facility to avoid placing additional support facilities within the Historic District.
- Update General Plan language and Land Use and Facilities Plan map.

This Historic District offers the unique opportunity to provide many research-oriented, interactive and educational programs including historic interpretation, upland, coastal and marine environment, and art appreciation in a unique setting. It also offers unique recreational opportunities to the public including affordable overnight accommodations and day use as described in detail in Part Two of the *PPUP*.

Park operations provide the security, safety, resource protection, and sanitation needs that would enable visitors to enjoy their experience at Crystal Cove. This takes the form of ranger and lifeguard services and facility maintenance. Additionally, natural and cultural resources research is also an important aspect of park operations. The project would improve park operations on site including the effectiveness of emergency response, significantly reducing risks to the public by providing a permanent lifeguard presence and office. The existing beach has limited lifeguard facilities. This situation limits lifeguard presence and effectiveness because lifeguards respond to health and safety emergencies. Lifeguards must intervene within minutes to save lives. In order to practice preventative lifesaving, lifeguards must be close to potential victims and have their eyes on the water. Lifeguard support at Crystal Cove is required for safe park operations and public interaction, especially considering the high level of use expected with implementation of the *PPUP*.

Because of the extreme sensitivity of the coastal environment in this location, the project proposes to improve storm water quality. This will be accomplished by minimizing impervious surfaces and treating storm water using bioswales, retention basins, vegetation where appropriate, and filter devices. The Historic District will also be connected to municipal sewer.

1.4 Identified Public Concerns

Through personal contact with Department personnel, correspondence, public meetings, and the local media, many diverse public interests have indicated strong concerns about the future use of the Historic District. This is only natural because it is a public park and, therefore, belongs to the people of California. *The **Mission** of the California Department of Parks and Recreation is to provide for the health, inspiration, and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources and creating opportunities for high quality outdoor recreation."* State Park's ***Mission*** is both truly challenged by the natural and cultural resources present and the need to provide the people of California with the exceptional education and recreation opportunities at the site.

Issues identified by the public include: water quality, preservation of natural resources, beach access, preservation of the cottages, preservation of the cultural landscape, public access to the cottages, the need for cultural events including art appreciation, overuse of the tidepools, coastal armoring or unnatural manipulation of the coastal bluffs, the need for educational programs, the need for affordable overnight rentals, return to a natural setting, return of the previous tenants and the beach culture they represented, whether or not State Parks can adequately preserve the Historic District, and the costs associated with implementation of the *PPUP*. Please see pages 38 & 39 of the *PPUP* for additional information.

2 PROJECT DESCRIPTION

State Park's ***Mission*** includes the protection of natural and cultural resources, therefore, the most effective and appropriate combination of resource avoidance, mitigation, and monitoring will be employed throughout the project design, construction, and operations. Approximately 16 acres will be permanently affected by the project implementation on the west-side of PCH, much of which is already developed. Project implementation on the east-side of PCH would affect about 5 acres of currently developed areas, primarily the Los Trancos parking lot. Please see Figure 2.1.

Resource data, operational support needs, and public desires discovered during the planning, public workshops, and design of the project were incorporated to develop the proposed project. The proposed project is described in Parts Two and Three of the *Preservation and Public Use Plan,* pages 61 to 169, with a summary listed below in Section 2.1. Additionally, the project description for the Proposed project includes design detail for project implementation. This design detail may have minor variations to the plans shown in the *PPUP* and may be further refined during in final plans provided that the refinements decrease potential environmental effects. State Park historians, ecologists and archaeologists will review all final plans prior to construction.

In order to describe the proposed site work the project description has been separated into the following subject areas: circulation, cottage adaptation, utilities, and improvements at Los Trancos and refers to Planning Areas Map in the *PPUP*. The circulation and utility proposals affect areas both within and outside of the Historic District. Cottage adaptation is located within the Historic District and must adhere to State Parks preservation policies which are conducted in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties (Weeks & Grimmer)*. Los Trancos is located east of PCH, outside of the Historic District and adjacent to the Newport Coast Planned Community and golf course.

2.1 Proposed Project

State Park's goal at Crystal Cove has been to provide visitors with broad public access and a unique experience of what a Southern California seaside community was like in the 1920's and 1930's. State Parks intends to provide public access and preserve the character and integrity of the Historic District while converting the buildings to a variety of appropriate adaptive public uses.

The proposed public use program is comprised of four separate yet interrelated subprograms. These programs include the:

State Park Operations Program
State Park Interpretation and Community Arts, Resources and Education Program
Overnight Cottage Accommodations and Rentals Program
Visitor Services Concession Program

The Park Operations Program provides the security, safety, resource protection, and sanitation needs that enable visitors to enjoy their experience at Crystal Cove. The other three programs (education, accommodations, and visitor services concession) could be guided in their development and operation by the following guiding principles and quality of visitor experience. State Parks wants these programs and facilities to be: community-building in nature, flexible in scheduling and use, and to offer a variety of appropriate visitor experiences. Generally State Parks and many local community members want to preserve the Historic District's unique ambiance that seems to be a blend of intangible qualities such as: "low-key," "casual," "rustic," "old-fashioned," "laid-back," "natural," "secluded," "original," "creative," "unpretentious," "informal," "relaxed," "quirky," "cozy," and "welcoming."

As Crystal Cove rehabilitation is completed and Crystal Cove programs are established, periodic reevaluation of the program functions, activities, staffing, facilities, and their location will be needed to assure continued relevant, effective and efficient operations. Periodic reevaluation is also necessary to effectively respond to changing future conditions, resources, and visitor use patterns. As programs and design guidelines are reevaluated in the future, necessary adjustments or revisions should remain consistent with the overall *Preservation and Public Use Plan* vision and concepts.

A portion of the overnight accommodations will meet the requirements for the Memorandum of Understanding (MOU) with the Coastal Commission. The current MOU terms and conditions include:

- A hostel and/or affordable overnight visitor serving accommodations should be established in Crystal Cove State Park.
- Number of beds should not be less than 90 except where costs could not be feasibly be limited to the funding amount and also would prevent reasonable operation as low-cost visitor-serving units. The number of accommodations shall not be less than 65 in any event.
- The overnight rates for hostel or affordable accommodations should be similar to other hostel or low-cost visitor-serving facilities providing comparable amenities (such as plumbing and electricity).

The PPUP planning effort seeks to provide for affordable accommodations partly in the form of hostel or dormitory-style facilities. These facilities may be operated as a hostel or they may be operated as dormitory units that are part of a variety of Crystal Cove overnight accommodations. A certain portion of the overnight individual cottage rentals with limited utilities may possibly also serve as affordable accommodations.

The *PPUP* also establishes Los Trancos as the visitor staging area for the Crystal Cove Historic District and the site of a satellite park office. Designating the Los Trancos parking area on the inland side of PCH as the primary public visitor arrival location for the Crystal Cove Historic District will greatly reduce vehicle use and congestion in the Historic District. This is essential for effective functioning of new Historic District uses and other site concepts because there is insufficient area in Crystal Cove for public, staff and program vehicular access and parking.

Crystal Cove Historic District

MATRIX OF PROPOSED ADAPTIVE USES

	Program Facility	Cottage/Structure																																																
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	42	43	44	45	Y	G	C	N
1	**Operations Program**																																																	
1a	Entrance kiosk																																																	■
1b	Restrooms			■																	■									■																		■		■
1c	Park operations. & maintenance office						■																																							■				
1d	Operations storage																																															■		
1e	Lifeguard substation																							■																										
1f	CCHD park research office														■																																			
1g	Park staff security housing															■							■						■			■		■																
1h	Los Trancos park office																																																	
2	**CCHD Park Interpretation & Community Involvement**																																																	
2a	Visitor orientation center	■																																																
2b	Archive center/docent & park interpreter annex	■																																									■							
2c	Outdoor commons area & support facilities																																										■	■	■				■	
2d	Multi-purpose meeting/classroom facility																																			■														
2e	Park & community exhibit facility (w/ Underwater Park educ. facil.)																																														■			
2f	House museum														■												■																							
3	**Overnight Accommodations**																																																	
3a	Overnight rental office/manager's residence																																				■													
3b	Overnight rental housekeeping/maint./storage																																															■		
3c	Individual-style accommodations		■	■	■	■		■	■	■	■	■	■	■	■			■	■	■	■	■		■	■	■	■	■					■					■	■			■								
3d	Dormitory-style accommodations																														■				■					■	■									
4	**Concession**																																																	
4a	Beach store/food service																■																																	
4b	Concessions storage																																															■		

KEY

■ Recommended PPUP adaptive use

Abbreviations

Y Store

G Garages

C Creekside yard area

N New building

The initial funding will be used to implement the priority components of the *PPUP*. Although the public will have access to the Historic District during implementation of the project, the priority components will provide the basis for opening the *PPUP* programs to the public, which is anticipated in mid 2004. The priority components of the first phase of implementation include circulation and visitor management improvements, public restroom facilities, base utilities, selecting cottages to represent as many overall program adaptations and restorations as possible, and the localized utility improvements to support the adaptations. These include:

1. Water, sewer, and electrical main connections
2. Main system (2) and some localized pump units
3. Entry Kiosk and turnaround
4. Operations parking
5. Parking area abandonment
6. Entrance road widening
7. Bluff Top entrance road widening
8. Resurfacing of some existing roads
9. Park shuttle drop off
10. New trail
11. Pacific Coast Highway stairway
12. Stairway and boardwalk restorations/reconstructions
13. ADA parking/drop off
14. Concessions, operations, dormitory, ADA, education/research, museum, visitor check-in, and community use rehabilitations/restorations
15. Use of seasonal tents to accommodate special events, restrooms, etc. in keeping with the historic period theme of tents intermingled with the cottages.

Future phases will consist of continued cottage adaptation/restoration, utility support and construction of visitor support facilities at Los Trancos.

2.1.1 Circulation

The proposed improvements are intended to establish a contact point outside of the Historic District for effectively controlling vehicular entry, improving emergency vehicle access, providing safe pedestrian circulation separate from the most frequently used vehicular traveled ways, and relocating as much parking as possible to areas outside of the Historic District. This will be accomplished with a new kiosk/turnaround and a drop off area, widening of some existing roads, new trail and stairway, reconstruction of historic stairways and the north beach boardwalk, abandonment of some existing parking areas and new construction of others in the first phase of implementation.

Entrance Road Kiosk/Turnaround

Kiosk - A kiosk will be constructed within the existing main entrance road approximately 150’ from its intersection with the southbound Pacific Coast Highway edge of pavement (Figure 2.2 Sheet S-11). The purpose of the kiosk is to facilitate the management of vehicles attempting to enter the Historic District. The kiosk attendant will direct authorized entries such as ADA, guest check in, emergency vehicles, and operational

related vehicles including delivery of supplies. Unauthorized vehicles will be redirected to the turnaround located immediately adjacent to the kiosk. Kiosk placement maximizes available site distance and provides adequate turnaround space, and avoids impacts to the existing coastal sage scrub mitigation site located approximately 8' from the coastal side of the existing edge of pavement.

The Kiosk is oriented to manage both inbound and outbound traffic and requires shifting the outbound lane of the main entrance road 12' towards Pacific Coast Highway for a distance of approximately 300'(Figure 2.3). Realignment necessitates a corresponding shifting of an existing Class I bike path.

The kiosk is located outside of the Historic District boundary, however, its architecture will be compatible with other elements of the Historic District, including, roof, siding, and window features. Low-level lighting will be incorporated into the kiosk. The kiosk will be ADA accessible and include a self-contained restroom. Water is located in close proximity and electrical conduit currently exists at the proposed kiosk location.

Turnaround - A vehicle turnaround will be constructed adjacent to the kiosk. The area includes space for attendant parking (ADA accessible) at the interior of the turnaround. The turnaround radius is 40' with 16' of traveled way to accommodate the inner wheel track of larger trucks and or motor homes. This configuration efficiently supports the majority of vehicles likely to enter the area from Pacific Coast Highway. The surface of the turnaround will be constructed of a pervious material and include a PCC curb at the outside edge of traveled way.

Bike Path Realignment - Placement of the kiosk/turnaround requires realignment of an existing 10' wide Class I accessible bike path which, is offset from the outbound lane of the main entrance road by approximately 5'. The realignment will join an existing PCC walkway from Pacific Coast Highway at its crest and match the current crossing of the main entrance road. The crossing is not currently striped but pavement markings to delineate this as a pedestrian crossing will be placed. The finished surface will match existing which, is asphalt. Grades will be less than 5% and a 5' min buffer between the top of slope of the turnaround and the bike path will be provided.

Road Widening

Bluff Top Access - The bluff entrance road which, diverges from the main entrance road prior to entering the Village/Hollow, is to be widened from 10'-12' to 20' (Figure 2.2 Sheet S-3, 4 & 9). Widening is needed to accommodate emergency vehicles and two-way to traffic to the Bluff Top. The widening will be placed partly on new fill, a portion of which will be imported from off site, and placed on an existing bench. The surface will be asphalt. A "stop" pavement marking and sign for Bluff Top traffic will be placed at its intersection with the main entrance road.

Entrance Road to Village/Hollow - The entrance road to the Village/Hollow is proposed to be widened by 4'- 9' for a total width of 20' (Figure 2.2 Sheet S-3 & 9) for approximately 300'(Figure 2.4). Widening is needed to accommodate emergency vehicle access and two-way to traffic to the Village/Hollow. With the proposed widening, a

minimum contiguous two way road width of 20' will be provided from the main entrance road to the ADA Parking/Drop Off area. The surface will be asphalt. Within the Historic District Hollow Area, the asphalt should be colored to minimize visual impacts to the District.

Stairways/Trails/Boardwalk/Pedestrian Bridge

Stairway to Pacific Coast Highway - An existing unofficial dirt trail that provides access to the bike path adjacent to Pacific Coast Highway and descends down the Pacific Coast Highway fill slope (Figure 2.2, S-7), will be replaced by a stairway. This path is part of an established pedestrian route and provides a direct and secondary point of pedestrian entry into the Historic District and is beneficial to overall circulation. However, footing is difficult in dry conditions, and inconsistent or hazardous when the trail is wet. Additionally, frequent use of the trail promotes erosion, results in minor slope degradation, and denudes the vegetation. Slope degradations due to the existing trail use will be revegetated. Final design of the stairway may include a bench or small viewing platform with a slightly different configuration over the utility corridor than shown on Figure 2.2, S-7.

The stairway will be constructed on elevated PCC piers, providing vertical clearance from existing ground (Figure 2.5). The framing will be wood and the layout will include intermediate landings. Due to excessive grades the stairway will not be ADA accessible.

Stairway from North Beach and from Hollow - Two existing stairways from North Beach and the Village/Hollow to the Bluff Top will be restored (Figure 2.2 Sheet S-2 & 6). The framing will be configured to the greatest degree possible to match the layout of the existing stairways. Extensions or add-ons to the stairways are not proposed.

New Trail - An existing unofficial, heavily used dirt trail which, provides access to the bike path adjacent to Pacific Coast Highway and merges with the entrance road (Figure 2.2 Sheet S-3 & 9), will be extended into the Village/Hollow (Figure 2.4). This trail is part of an established pedestrian route and provides a direct and secondary point of pedestrian entry into the Historic District and is beneficial to overall circulation.

The existing trail presently merges with the outbound lane of the main entrance road and poses a concern for pedestrian safety and ultimately conflicts with the park shuttle and emergency vehicles. The trail will eliminate potential conflicts by separating the two uses. The path will be constructed of a pervious material. A "parallel contour" versus "rapid switchback" layout was selected to minimize impacts to vegetation, visual invasiveness, and erosion potential. A retaining wall approximately 3' high and 125' in length is proposed as an alternative to placement of fill and a corresponding alteration in topography. The wall will be aesthetically designed to be compatible with existing features in the Historic District. The proposed trail width was limited to 6' to minimize footprint disturbance and is separated form the outbound lane of the entrance road by a minimum of 4'.

Boardwalk - The existing boardwalk fronts the North Beach and joins the existing North Beach parking area. Boardwalk condition and construction varies, but primarily consists

of planks of varied dimension spanned by stringers, which are either placed directly on grade and or spanned between timber pilings.

The proposal is to rehabilitate the boardwalk for its entire length by placing timber piles and stringers similar to the existing configuration (Figure 2.6). The stringers would be embedded below existing grade so as not to inhibit wave overtopping or movement of beach sand. Original materials will be re-used to the greatest extent possible and replacement materials selected to match the original materials in like-kind style, design, and size. Railings are not proposed for portions where such did not exist historically.

Natural processes will likely erode material beneath the walkway for portions of its length, effectively exposing the walkway to drop offs on either side. During these times, it may be necessary to temporarily close portions of the boardwalk, or fit it with wheel curbs, where railings are not provided**.** The unique and undulating nature of this feature will require a close evaluation of potential for accessibility. This may require an alternative programming solution to access to the North Beach boardwalk feature.

Replace Pedestrian Bridge. A single span accessible pedestrian bridge will be constructed across Los Trancos to replace the original structure destroyed during flood staging of Los Trancos in 1997. Replacement of the bridge is proposed to facilitate ease of access to the commons area of cottages #42, #43, #44, and #40 and provides for ADA access to this central area.

The new structure will have a clear deck width of 48 inches to provide ADA accessibility and is approximately 12 inches wider and 4 feet longer than the original structure. Additionally, the working design load for the bridge complies with the 1998 Uniform Building Code.

The new structure will have a wooden exterior and an internal steel frame. The metal substructure will be hidden from view by the exterior framing. The steel substructure allows for the single span design and minimizes the structure's depth. The framing eliminates the need for a mid-span structural "pillar" which was part of the original bridge design. Rather, a façade pillar designed to move freely (attached at the bridge sub-structure and not founded in the stream channel) with stream flows is proposed. Additionally, the abutments will be placed approximately 2-feet outside of the existing channel walls to provide vertical freeboard and lateral separation from possible overtopping of the channel during severe storm events.

The new structure will be supported on 18-inch diameter "cast-in-drilled-hole" (CIDH) reinforced concrete pile footings, which will be approximately 20 feet in depth. Bridge architecture will be compatible with other features in the Historic District and its components will closely resemble those of the original bridge. However, new landings and ramps will be required for reasons of accessibility. Ramp grades will be the maximum allowed to keep the scale of these additions at a minimized.

Construction activities will be limited to areas outside of the stream channel. Groundwater effluent from drilling and concrete pouring operations will be captured and disposed of off-site in an approved sanitary sewer system.

Park Shuttle Drop Off

A drop off directly outside the hollow is proposed (Figure 2.2 Sheet S-3). It will be used by a Park shuttle operating to and from the Los Trancos parking area. It may also be used as a secondary turnaround for errant vehicles not authorized to travel further into the Village/Hollow. The surface should be a soil colored asphalt or like surface and a "stop" pavement marking and sign will be placed at its junction with the entrance road. It is separated from the existing pathway that emerges from the Los Trancos tunnel.

ADA Parking/Drop Off

An ADA parking and drop off is proposed for the Village/Hollow area at the location of the existing parking area (Figure 2.2 Sheet S-3). Access to the area diverges from the entrance road on existing pavement. It will support both parking and drop off activities. All surfaces will be pervious, and will include hardened, but aesthetically compatible, accessible sections. Parking delineation will be accomplished with PCC at grade borders, which will also restrain the hardened sections. To avoid grading impacts to sensitive vegetation, a retaining wall approximately 3' high and 150' in length could be required. The wall will be hidden from view or aesthetically designed to be compatible with existing features in the Historic District.

New Parking

New parking for purposes of maintenance and operations is proposed in an area primarily outside of the Historic District boundary. This area is proposed to support the various programs planned for the Historic District. It will be accessed from the Bluff Top access road and consists of a driveway and a parking pad with a refuse/recyclable collection area. Its positioning places it outside the boundary of the Historic District and provides visual separation for visitors approaching or leaving the Bluff Top area. The parking lot shown on Figure 2.2, Sheet S-4 represents a "worst case" scenario for intrusion into the coastal terrace and may be reduced in size or moved within the Historic District in the final plans. Final design of the parking lot will need to avoid high quality habitat and rare plants. The site for the parking lot was chosen to reduce visual impacts and avoid geotechnical issues associated with the fill slope. Should the parking lot be moved within the Historic District, a retaining wall up to 5' high could be required that would have higher construction costs, associated visual impacts within the Historic District, and possibly require slope remediation.

The portion of the existing dirt bike trail that intersects the Bluff Top access road will be converted to a 20' entry drive to the parking pad and be surfaced with asphalt. Approximately 20 spaces will be provided in the parking area. The pad is recessed approximately 5' feet vertically from surrounding grade (Figure 2.3). The cut slopes will be contoured for reasons of aesthetics and improved erosion control. The pad surface will be pervious. Pervious drainage swales will be constructed at the parking area perimeter to capture runoff from adjoining drainage areas and provide filtering of parking area sheet flow.

In conjunction with this parking improvement, the existing non ADA dirt bike trail that originates at Pelican Point and intersects the Bluff Top entrance road (Figure 2.2 Sheet S-4 & 12) will be realigned and connected to the existing open area, currently used for parking, adjacent to the proposed Multi-Purpose Meeting/Classroom Facility (Cottage #34). The realignment may vary from the alignment shown in order to avoid rare plants, as necessary, or may be placed closer to the proposed new parking lot to provide direct access. The trail surface will be pervious and it will remain non-ADA accessible.

The existing bike trail will be regraded to correct drainage by reestablishing natural sheet flow of surface runoff. The current geometry includes a centerline crown and 18 inch deep swales an each side of the trail which capture run off and redirect it towards the proposed parking area. The natural topographic drainage pattern is sheet flow towards the ocean. The crown will be removed and a cross slope from the inland to the coastal side of the bike trail will be established. All work will be constrained to the existing footprint (Figure 2.10).

Parking Area Abandonment and Resurfacing

Parking areas at the North Beach, and on the Bluff Top (at the Multi-Purpose Meeting/Classroom Facility except for an ADA space) will be abandoned and re-surfaced with a pervious material (Figure 2.2 S- 2 & 4). Parking areas that are not in a high use area or on a grade, (for example, the South Beach) will also be resurfaced with a pervious material that matches historic surfaces.

2.1.2 Cottage Adaptation and Stabilization

Cottage preservation and adaptation work will undertake the entire range of historic property treatments (preservation, restoration, rehabilitation, reconstruction). Factors including the historical significance, amount of existing historic fabric, structural and physical condition, proposed adaptive uses, will all help to determine which of these four historic property treatments will be used. Compliance with the Secretary of the Interior's Standards and Guidelines for Historic Property Treatment is a requirement of both state and federal mandates and DPR resource management guidelines and policies. As such all Cottage preservation and adaptation work will including structural stabilization, acceptable floor plan modifications for adaptive use, and new construction will be in compliance with these Standards and Guidelines. Additionally, sprinklers will be added to the structures for fire protection per Historic Building Code requirements.

Structural Stabilization

Structural Stabilization of the cottages will consist of minor pad alterations to control localized drainage patterns, framing or foundation modifications required to resist dead, seismic/wind, or their combined, loading. Scope may include replacement in-kind of those features and elements impractical or cost prohibitive to preserve due to overly decayed or non-functioning architectural elements and containing un-mitigable, hazardous material. All new features or structures will be hidden from view or designed in a compatible style to avoid adverse effects to historic structures. Structural stabilization may also include replacement or repair of existing landscape features such as

failing retaining walls, new walls to support localized (surficial) slope failures, and slope reconstruction to stabilize global/deep seated slides.

Pad Alterations - Some grade alterations to areas immediately adjacent to building foundations will be required to direct drainage away from these areas. An option to install "french" drains as an alternative to the grade alterations may be employed. All such work will be designed and completed in accordance with the Secretary of the Interior's Standards for Cultural Landscapes to avoid adverse effects to such contributing landscape features.

Framing Modifications - Significant structural systems including portions or complete systems such as foundation, floor, lateral bracing, and roofing will be retrofitted to support imposed seismic and existing/adapted dead loads (Figure 2.8). Additionally, framing components are decayed due primarily to years of termite infestation, and will be replaced on a case by case basis in like-kind, as required by the Secretary of the Interior's Standards.

Foundational supports consist of various concrete stem wall, pier, wood, and direct contact or a combination of these. These supports will be retrofitted by a combination of underpinning existing concrete foundations and the pouring of new ones. Access will be accomplished via crawl spaces, bracing and temporary cottage lifting, removing and replacement, and temporary removal and replacement of siding and or flooring. Existing foundations will be preserved according to their historical contributions to cottage historical integrity and will be evaluated on a case by case basis. An example would be floor posts that serve an aesthetic, but not structural function such as rocks directly in contact with earth. Such features would be kept intact with the goal of preserving those elements that contribute to the integrity of the structure/site.

Flooring support will include the addition of floor joists/beams and associated postsas necessary and should be designed so as to not adversely affect appearance or other elements of integrity.

Lateral bracing in the main could consist of new interior walls outside of the contributing cottage core, retrofitting of existing exterior walls which are non contributing, collar ties added to existing rafters that will appear distinctively different than existing historic ties (if they exist), and/or the addition of interior moment frames whose elements are distinctively different than existing historic interior framing members. These would be required in the main to provide lateral stiffness not present in the prevailing single wall type construction. Hold downs, and shear frames may also be added where they would not impact core elements and historic integrity. A seismic resistance of up to 75% of that required by the 1998 Uniform Building Code, or it necessary to provide alternatives that will not adversely affect historic integrity, the State Historic Building Code, will be pursued.

Roof system modifications could include adding rafters where existing spans are deficient, adding connections to plates (if they exist), and roof sheathing.

Replacement of Architectural Elements

All treatments requiring replacement will involve the use of in-kind or like-kind replacement of cottage features that are degraded and must be replaced in order to preserve the cottage. . In the main this would include siding, rafter tails, and fascia. It would also include the addition of weather-related components such as drip edges and weather-stripping. Windows that are currently inoperable would be repaired and or restored at a minimum of one operable window per room.

Existing chimneys, if contributing features, will be restored or stabilized on a case by case basis. However, future use of these units is not planned due to the inherent fire threat they pose. This may require a locking device to keep patrons from inadvertently or intentionally attempting to make use of these elements.

Existing electrical systems will be abandoned in place. A minimum new 100 amp service panel and drops will be installed. Interior devices will be in the main surface run to avoid impacts to interior contributing features. Heaters will be forced air surface mount wall units.

Replacement of plumbing lines will be evaluated on a case by case basis in consideration of preservation of cottage fabric and condition.

Retaining Walls/Slope Reconstruction

Several of the existing retaining walls and other historic landscape structures or features which consist of rock (including dry stack), wood, brick, block, stacked cell, and pored in place concrete are failing and will need replacing in order to preserve the cottages. Wall stabilization might require building new replacement structures that (Figure 2.2 various sheets) will primarily be either poured in place, block, or soil nail type walls, all of which will be restored or reconstructed to best match the original wall finish and character.

New walls may be required to retain slopes exhibiting failure or sloughing. These walls would be of the soil nail type (Figure 2.11) and restored to a surface compatible with slope surfaces in that area of the Historic District.

Potential of a global slope failure (Figure 2.9) was identified at North Beach and extends from cottage #9 to cottage #36. A section of this slope slid in the recent past. The preferred correction method would be a combination of slope reconstruction that would require the removal of existing material and placement of an engineered type soil and placement of soil nail walls. Reconstruction would require the temporary removal and replacement of these cottages. The cottages would likely be stored within the existing North Beach parking area and their removal would take place in the summer months in order to avoid cottage exposure to winter storm activity and associated higher tides. During this process the cottage foundations could also be reconstructed. Slope reconstruction would be contoured so as best to replicate the pre-existing land form. However, some slope flattening woulb be required. In areas where flattening would conflict with cottage pads, a soil nail wall place partially up slope would be preferred.

Such walls would need to be disguised to make them compatible with the historic character of the District.

Other alternatives considered for mitigating this type of slope deficiency were a soil nailed wall and buttressing of the slope. Neither are preferred due to the visual invasiveness or topographic alteration that would result.

Floor Plan Modification

Cottage adaptation should consist of minimal modification of existing floor plans for all program uses but the single unit non-ADA type accommodation. The adaptation effort preserves contributing elements of the "core" or original cottage floor plan while modifying some elements that took place as part of non-historic alterations to the original structure (Figure 2.8, Sheets 1-4). Such modifications should be done only when changes are documented to be modern, non-contributing features. For example, Cottage #34, was formerly a Japanese school house. This cottage could be adapted to service as a multi-use/meeting facility for 20 to 30 (or fewer) people without altering contributing historic features.

New Structures

A new general use accessible public restroom is recommended to be constructed within the footprint of the existing garage structure located adjacent to cottage #5 (Figure 2.8, S-4). The garage was evaluated and determined to be non-contributing to the cottage fabric or to that of the Historic District. The new restroom will be the main public restroom within the Historic District. The exterior of the restroom will be designed to replicate the exterior (including roofing) of the garage unit it replaces. The location is ideal in that it is situated in close proximity to the representative entry/exit point of the Historic District.

A new accessible restroom will serve the Outdoor/Multi-use Commons and is proposed as an addition of the garage of cottage #1. It would require the removal of a non-contributing shed that is a recent addition. The restroom will primarily be used to serve public group activities held within the Outdoor/Multi-use Commons. Portable restroom units will be placed along the existing North Beach parking area during the summer months. The units could be modified to closely simulate the "beach tent structures" that were prevalent during the historic period of the Historic District. Additionally, a portable accessible key operated unit with running water may be placed within the existing asphalt parking space behind cottage #15 to serve the concessions operation.

Additionally, some cottages or other structures may be adapted to house new restrooms or other facilities for the overnight accommodations based on the ability to hide the new use, accessibility, and availability of utility connections. This need would be determined by how many cottages are used as rustic overnight rentals.

2.1.3 Utilities

Connections to municipal utilities are located adjacent to Pacific Coast Highway. A longitudinal utility easement may be required from Caltrans. Currently, gas and water

connections to the Historic District exist within Caltrans operating right of way. The corridor lies within and adjacent to a section of Pacific Coast Highway fill slope that has been evaluated and is considered to be stable in both the lateral and vertical directions.

Fire fighting support appurtenances are included within the scope of utility improvements.

The utility corridor connecting to municipal services is routed longitudinally beneath the existing paved recreational trail which is offset approximately 13' from the Pacific Coast Highway edge of pavement, and is routed transversely on the existing Pacific Coast Highway fill slope (Figure 2.2 Sheet S-7).

Sewer

The municipal sewer line for the Historic District is located adjacent to Pacific Coast Highway. Sewage will be lifted from the Historic District to the municipal sewer gravity line via two pump stations. A 48" diameter manhole will be constructed to connect the force main from the Historic District to the municipal gravity line. The Orange County Sanitation District has issued a permit to discharge up to 13,800 gallons per day (gpd) to DPR. The Irvine Ranch Water District (IRWD) will oversee connection to the municipal system. Cumulative discharge will be monitored at the pump stations. The estimated maximum demand for the Historic District is less than the 13,800 gpd per the current agreement with IRWD.

Pump stations are located to independently serve the Hollow/ Bluff/North Beach (Station 1) and the South Beach (Station 2). The stations will have pump duplicity for purposes of maintenance and pump redundancy. They may be equipped with a backup diesel power unit to maintain operation in the event of power outage. Additionally, Station 1 will have overflow capacity via two 7' diameter above ground polyethylene storage tanks, which will be visually screened. Small pump units at low points (cottages 9, 13, 15, and 43) will be required to move sewage to the pump stations. Wet wells for the stations will be constructed of reinforced concrete and their interiors will be lined with a non-pervious reinforced membrane with high elastic properties. Geotechnical and archaeological investigations for the proposed sites have been performed to establish geology, resource constraints, and ground water elevations. Both are located out of the Los Trancos floodplain and the zone of wave uprush.

The sewer force mains will traverse Los Trancos Creek. The lines will be jacked or directionally drilled at least 48 inches below the depth of creek bed scour.

There are special considerations for sewer at the North Beach cottages. Only 6 of the 17 cottages in this sub planning area are positioned at an elevation where sewer can be gravity collected and pumped to a gravity system on the Bluff Top without threat of system exposure due to wave up rush. Options for protected placement of local pump equipment or identifying one of the 6 above mentioned cottages to serve as a centralized community shower, bathroom, and kitchen unit for the remaining North Beach cottages will be explored as an adaptive use.

Water

A new 8"minimum water line will be provided to serve water demands within the Historic District. This line will satisfy domestic and fire fighting needs. Additionally, a separate non-potable irrigation line may be placed and connected to the same at Pacific Coast Highway.

The water line could be secured to the existing auto bridge, but likely will be jacked below Los Trancos Creek at least 48" below the depth of bed scour. A non-potable line, if introduced in the Historic District, will be jacked below the creek bed as well.

Electrical

The Southern California Edison Company serves the Historic District with underground single phase power which, is distributed overhead to individual cottages. The current overhead configuration will have new wire strung as needed, while replaced lines will be de-activated and abandoned in place. New three-phase underservice will be routed in existing conduit to serve the pump stations. The existing pad mounted transformer in the Village/Hollow will be removed and replaced with a slightly larger three phase unit. A new line will be jacked below Los Trancos Creek at least 48" below the depth of creek bed scour to serve the pump station located at South Beach.

Gas

All existing gas lines have been abandoned in place. There are no plans to re-introduce natural gas within the Historic District

Fire Equipment

Fire fighting equipment including hydrants will be located at strategic locations with input from the state park historian, Newport Beach Fire Department and as directed by the State Fire Marshall. Such features will be placed/designed to minimize adverse effects to the historic district setting while providing access to fire personnel. Additionally, sprinklers will be added to the structures per Historic Building Code requirements.

2.1.4 Los Trancos Parking, Visitor Orientation, and Park Office

As previously discussed, the Los Trancos area will serve as a support area to the Historic District while physically and visually separated from it. No new facilities will be constructed outside of the existing developed footprint of the parking lot, park office, restroom, and trail system. The existing park office trailer will be left on site until funding for a permanent building can be developed. As the programs at the Historic District are implemented, the need for a new visitor center/park office will be evaluated. If necessary, such a center would be constructed within the footprint of the existing parking lot and may require further environmental documentation depending on the scope and scale of the proposal. Other work within the Los Trancos area would include

restriping and signs for the proposed shuttle pick up and for staff and overnight visitor parking and possible security fencing.

Overnight guests will be encouraged to check in during daylight hours and State Park operations personnel will greet the majority of these guests at the Los Trancos kiosk. Vehicles of overnight guests (other than ADA) will receive a dated window pass and park in a section of the Los Trancos parking lot. A four-pin combination lock will be installed to allow overnight guests the ability to leave for the evening and return after the day-use parking lot is closed.

2.2 Construction Management

The most effective and appropriate combination of resource avoidance and monitoring will be employed by State Parks during all phases of project construction and cottage adaptation. Construction timeframe windows will be placed on the project to prevent disturbance of nesting birds.

Best Management Practices (BMPs) will be used to protect the resources on site and nearby for all phases of work activity. Environmentally Sensitive Areas will be fenced and/or avoided.

Sediment control during construction will be implemented through a variety of erosion control features or construction BMPs identified as part of the comprehensive *Stormwater Pollution Prevention Plan* which will prevent or minimize the potential of sediment leaving the project site. The major principles that will be incorporated into the erosion control and grading plans include: 1) minimizing the extent of the disturbed area and duration of exposure, 2) stabilizing and protecting the disturbed area as soon as possible, 3) keeping runoff velocities low, 4) protecting disturbed areas from contact with runoff, and 5) retaining sediment within the construction area. The construction BMPs that will be applied to the project may include: 1) temporary desilting basins, 2) silt fences, 3) gravel bag barriers, 4) temporary soil stabilization through mattress or mulching, 5) temporary drainage inlet protection, and 6) diversion dikes and interceptor swales 7) containment of removed lead paint or other hazardous substances per State statutes and protocols.

The Stormwater and pollutants will be contained on site and/or evacuated offsite to an appropriate, approved facility. No pollutants or sediment will be allowed to enter Los Trancos Creek or the ocean. Disposal of potential pollutants will be conducted according to accepted protocols. Due to the sensitive nature of surrounding land uses and natural and cultural resources, all work will be coordinated to reduce impacts whenever possible.

In order to eliminate public safety and fire hazards, State Parks proposes to block off rehabilitation sites, construction areas, unsafe/unrepaired stairways, tripping hazards, or overhead obstacles; and prune vegetation to keep fire hazards reduced. Closures will be temporary and State Parks will endeavor to keep as much of the Historic District open to public as possible during the implementation of the *PPUP*. The first phase of construction and implementation of the priorities identified in Section 2.1 should be complete and open to the public in mid 2004. However, the treatment plan for all the

cottages will be implemented as funding is approved and may take up to ten years to fully complete.

Additionally, the final site plans must be approved by a qualified state historian, state resource ecologist and state archaeologist prior to implementation.

Construction staging areas will be located in existing or proposed parking areas. Also, work on the realigned bike path will be staged to keep the path usable during construction.

2.3 Project Alternatives Considered

The following actions were considered during the *PPUP* planning process. These alternatives were either brought forward by the public during the public and scoping meetings, during the public workshop, or by the park staff working on the *PPUP*. The alternatives range from large concepts to detailed design options. They are not proposed as part of the Proposed project due to potential resource impacts, inconsistency with State Parks ***Mission***, policies and regulations, or conflicts with the operations and vision for the Historic District as described in the *PPUP*.

2.3.1 Cottage adaptive use variations

A wide range of individual and combinations of adaptive uses were considered during the planning and public involvement process. The following is a summary listing that was developed during the PPUP planning process and refined at the public meetings/ workshop.

Proposals that involved more than 10 cottages during public input to the planning process included:

- Combination of classrooms, lodging, and offices for local historic, art, environmental, and research non-profits.
- Combination of park operations, classrooms, house museums, art studios, lodging, and a café
- Combination of partially continued tenant occupancy and overnight lodging.
- Combination of lodging, visitor center, ranger housing, and hands on building internship program
- Combination of rustic lodging, house museums, art education, marine research, and park support.
- Combination of lodging, nature center, and ranger housing.
- Combination of Interpretation, youth outreach programs, marine research, and park support.
- Combination of youth hostel, small campground, art and children's programs.
- Modified general plan mix (with rustic cottages and tents).

Many of these proposals are incorporated into the proposed project programs with the exception of tent camping and partial continued tenant occupancy. During the public workshop process, there was limited support for continued tenant occupancy. None of

the working groups during the second public meeting/workshop proposed tenant occupancy or tent camping as a preferred plan for the Historic District.

Initially, some members of the public requested State Parks to consider proposals involving less than 10 cottages. These proposals included:

An art gallery, country store, soda fountain, cottage café, tent campground, marine & cultural interpretation and education, dolphin birthing sanctuary and natural preserve, and day programs for children with special needs.

These proposals were not chosen due to the policy directives discussed in Section 2.3.8 and public interest in utilizing more of the cottages for overnight use and educational programs. Many of the programs identified above will be part of the proposed project programs except for the tent campground. A tent campground will be available nearby when the El Morro Village mobilehome park is converted to public park use. Additionally, vehicular access would remain a concern with a tent campground.

2.3.2 No Overnight Use

Members of the public and state park staff also proposed an alternative that would eliminate overnight use at the Historic District. Eliminating overnight use would change the historic use of the site as a vacation site. Additionally, many members of the public were in favor of short-term, affordable vacation rentals at the Historic District. Should the overnight use program fail during implementation of the PPUP, it would be important to retain and emphasize public use in the other programs. Although overnight use will create greater "wear and tear" on the cottages, it is the intention of State Parks to manage the overnight use such that the cottages are well maintained and respected by the future concessionaire and users.

2.3.3 New multi-use meeting facility building to support CCHD programs

This alternative would develop a multi-use meeting facility (30-person capacity) in the Hollow area as a part of the visitor-serving village center area. Location of the meeting facility in the Hollow would integrate the facility into a mutually supportive relationship with the other visitor serving programs in the village center and increase its accessibility and availability for village center activities and events. The development of the potential Hollow area location, however, may adversely affect archeological resources, alter the building mass and spatial arrangement of the CCHD (historic character and integrity of the District), and alter the arrival experience into the historic area. Therefore, it was determined that using a combination of the Los Trancos park office facility and restoring the former Japanese classroom (Cottage 34) would have fewer impacts and could provide the necessary facilities.

2.3.4 New public restroom buildings along beachfront

This alternative would provide new restroom facilities along the length of the Crystal Cove Historic District beachfront to support beach recreation and beachfront overnight rustic cottage rentals in accordance with State Parks standards. Visitor capacity studies

indicate a need for additional restroom facilities. This alternative is not preferred due to the intrusiveness that its mass and footprint would have on the District's character and integrity, the limited seasonal need for beachfront restroom facilities, and due to its coastal exposure. The proposed project is to provide portable units camouflaged in historic period style tents during the summer season. These seasonal restrooms would be located in the existing North Beach parking area. Additionally, some cottages may be adapted to house new restrooms based on the ability to appropriately integrate the new adaptive use and obtain utility connections.

2.3.5 New shoreline armoring to protect CCHD areas.

This alternative would develop new shoreline armoring to protect historic structures, sites, and access (i.e., beachfront boardwalk) to those historic resources from wave up rush during major storm events. This alternative would inhibit natural processes and therefore is not preferred as it is contrary to Department policy for coastal protection. It appears to be superior for protecting the historic resources present within the beach front areas of the Historic District. However, the armoring may have adverse visual effects to the integrity and character within the District as well.

2.3.6 Intensive slope buttressing to protect cottages in global slide areas of CCHD

This alternative is not preferred due to its visual invasiveness. The proposed project is a combination of slope reconstruction with engineered soil materials, as required, and soil nailed walls placed on slopes that would be visually screened. The combined of these two approaches will result in a more natural slope appearance but possibly less protection for the cottages. The reconstruction slope stabilization approach would include temporary removal and replacement of cottages that will pose some risk to historic structures and landscape features.

2.3.7 No slope remediation in global slide areas

This alternative would place at risk cottages # 9 to # 36 on the North Beach and it would eliminate the option to adapt these cottages to overnight use. Since at least half of these cottages could be served with a full range of utilities, and the public has expressed a strong emphasis for overnight use, the proposed project would reconstruct the slopes to accommodate this use. However, there is some risk with slope remediation due to the required removal and replacement of the cottages for work access. This risk is considered to be significantly less than damage that would result due to a global slide.

2.3.8 Public vehicular access to beachfront areas

This alternative would provide for public vehicular beachfront access for drop off and ADA parking. This would allow visitors to conveniently drop off passengers, beach gear, and diving gear close to the beach and underwater park. This would eliminate the pedestrian character of the existing beach access road and introduce significant vehicular traffic congestion in the Village/Hollow area including the potential to interfere with emergency vehicle response. In particular, the fire department requires a standard 20 feet

minimum width to accommodate passing fire trucks and other vehicles. In order to avoid substantial adverse impacts to the character of the Historic District through road widening and other vehicular access improvements, it is necessary to minimize the number of vehicles that can be in the Historic District. The proposed project is to restrict all vehicular access to emergency vehicles, operations and support staff, deliveries (set hours of the day), Park shuttle, and ADA. Access management will be accomplished with the construction of a vehicular turnaround and kiosk located at the main entrance road.

2.3.9 No new parking lot west of PCH

The proposed project proposes to construct a new parking lot as shown on Figure 2.2, S-4. This alternative would eliminate this parking lot and be an environmentally superior alternative (please see Section 4.7), but it would fail to provide for anticipated parking needs near the Historic District for emergency response, staff and program participants. By providing parking close to the Historic District, fewer vehicles would be left in the Historic District, even temporarily, creating a preferable aesthetic environmental and improved fire safety.

2.3.10 Alternative entrance circulation configurations

Three variations of an entrance turnaround near PCH with a coastal terrace loop road and blufftop parking improvements were considered. This alternative would create an additional access road with associated footprint impacts. It is located adjacent to and within sensitive habitat. It would not reduce impacts associated with the proposed parking area. Minimal disturbance is achieved by locating the parking entry from the Bluff Top entrance road. The Bluff Top entrance road would still require some widening at its upper end to accommodate two traffic and emergency vehicles. Widening of this entrance road per the proposed project does not impact any known sensitive habitat. Finally, the loop road is unnecessary and its access is remote to the preferred location of the kiosk and difficult to control.

Two variations of an entrance station and turnaround in Hollow with blufftop access and parking improvements were also evaluated. This alternative does not provide for adequate vehicular entry control because vehicles would have uncontrolled access to the Bluff Top via its entrance road which is located upstream of the kiosk. Additionally, cars would come down the hill to the Historic District only to be turned around again at the kiosk, creating unnecessary traffic congestion on the entrance road that could hinder emergency vehicles.

Three variations on the turnaround near PCH with blufftop access & parking improvement were studied. These variations of the Proposed project entrance alternative were eliminated due to greater impacts to sensitive resources that the Proposed project.

2.3.11 Beach access improvements only, no circulation or utility improvements

This alternative would stabilize and preserve the Historic District structures and site with no rehabilitation/adaptive uses and provide public beach access improvements only. This is the so called “Arrested Decay or Bodie” Alternative. The historic structures and

features of the District would be permanently stabilized with only public beach access improvements. This alternative would not provide for the full restoration and continued preservation of significant historic features that are in poor condition, nor allow the public the opportunity to experience the character of the Historic District as a living community. Public input clearly demonstrated that the goal should be to provide for more public use, not less. This alternative may be preferable for natural resources but would not allow for the thorough rehabilitation and restoration of the historic resources. This alternative may be partially implemented for select cottages in the interest of public safety or phased implementation. However, it is the goal of State Parks to fulfill all the programs in the *PPUP*.

2.3.12 Remove the Historic District and rehabilitate site as a natural area

This alternative would delist the Crystal Cove Historic District from the National Register of Historic Places and remove all development. This alternative conflicts with Public Resources Code 5024.5 for State agencies and with State Park's ***Mission*** to preserve California's most valued natural and cultural resources. While preferable for natural resources, this alternative would have significant adverse environmental effects on historic resources.

2.3.13 Bike Path Realignment

This alternative would realign existing bike path at the turnaround to a more direct layout that crosses the proposed turnaround and passes immediately adjacent to the outbound lane of the main entrance road. This alignment would reduce the construction footprint in an area with sensitive habitat. This layout is not preferred due to the conflicts it would create between vehicles using the turnaround and pedestrians. The preferred layout is to separate pedestrian traffic from vehicles by shifting the bike path around the inland side of the turnaround.

2.3.14 Variations to the Proposed project New Trail

This discussion refers to alternatives to the new pedestrian trails shown on Figures 2.2 S-3, S-7 & S-9 in the proposed project. They range from an environmentally superior alternative (please see Section 4.7) to alternatives that cause a greater footprint in sensitive habitat. The proposed project was selected to provide pedestrians a walkway separated from the entrance road to enhance their experience as they enter the Historic District while minimizing environmental impacts.

New Trail and PCH Stairway

This alternative would not improve pedestrian access and leave the existing unofficial trails as they exist. This is not the proposed project because it does not insure safe access for pedestrians entering the District from Pacific Coast Highway. Additionally, these routes should be separated to the greatest degree possible from vehicular traffic in order to avoid use conflicts. Finally, the proposed access points are pre-existing pedestrian routes which, would be difficult to effectively restrict. Placement of barriers or other

control measures would likely be circumvented resulting new degradations to existing terrain.

New Trail-Fill versus Retaining Wall

This alternative would place fill versus using a retaining wall to support the trail. This is not the proposed project because it would impact additional native vegetation and alter existing land forms. The proposed project is to construct a maximum 3' high wall for a portion of its length. The wall height is minimal and its finish would be compatible with other wall finishes within the Historic District.

New Trail-Switch Back versus parallel Slope Alignment

This alternative would place the trail on a series of switchbacks down a steep slope impacting native vegetation and significantly altering existing topography. Although, this alignment would provide a larger buffer between the trail and the entrance road and would not require construction of a retaining wall, it would have a significantly larger footprint and greater visual impacts.

2.3.15 ADA Parking/Drop Off Cut Slope versus Retaining Wall

This alternative would cut an existing fill slope in the Hollow at its base to achieve required slope grades for the ADA Parking/Drop off Area. This alternative would destroy existing mature native vegetation that may also be contributors to the historic landscape. The proposed project is to construct a 3' high retaining wall of circular timbers that is distinctive, yet compatible with other wall material found in the Historic District.

2.3.16 Pile Supported/Beach Situated Pump Stations

An alternative utilizing placement of sewage pump stations in close proximity to or within the zone of wave up rush and attack was considered. The advantage is that this would eliminate the need for smaller pump units to transfer sewage from low points and associated maintenance/ operational costs, and would serve the sewage needs of all the North Beach cottages. This is not the preferred location because the stations would be visible during storm events due to coastal erosion, the potential for corrosion would be greater due to exposure to the marine environment including a high ground water table, the wet well would have to be shallower due to the proximity of bedrock requiring a greater footprint. The proposed project locates the pump stations out of both the coastal attack and flood zones. Although, this requires the support of additional small pump units, its dependability would be greater with perhaps equivalent maintenance costs. However, power costs will be greater.

3 ENVIRONMENTAL SETTING

3.1 Location and Description

The project site is located within Crystal Cove State Park. The park is located at the southwestern edge of the City of Newport Beach and north of the City of Laguna Beach. Corona Del Mar and the rapidly developing community of Newport Coast are located nearby. Downtown Los Angeles is approximately 50 miles to the north and San Diego is approximately 70 miles to the south. The climate is Mediterranean-type within the maritime fringe with average temperatures ranging from 50 degrees (F) to 72 degrees (F). Rainfall averages about 12 inches annually but varies from as little as 4 inches to as much as 30 inches. In fall and winter, strong, dry winds from the desert occasionally occur that can spread large wildfires as in the Laguna Beach Fire of October 27, 1993.

Pacific Coast Highway, the parallel Bikecentennial Bike Trail, and public transportation provide access to the park. The highway and bike trail divide the park into two parts: the coastal strip of about 448 acres and the inland area of about 2,343 acres. The coastal strip consists of the coastal terrace, bluffs, strand and pocket beaches, facilities at Pelican Point and Reef Point, Moro Beach, and the Crystal Cove Historic District. The inland area consists of the parking area at Los Trancos, farther down the coast, the park headquarters and visitor center, the lower reaches of the Muddy Creek drainage, and most of the Moro Creek watershed.

In the immediate vicinity of the project area (Figure 2.1), there is the Los Trancos parking lot with 425 spaces, a temporary park office in a trailer, a restroom, and pedestrian access trails on the inland side of PCH. On the west side of PCH there is an entrance road, the Bikecentennial Bike Trail, the Shake Shack concession, and the Historic District. Currently, Caltrans operating right-of-way lies at the southbound PCH edge of pavement immediately south of the Los Trancos intersection, and transitions away from PCH bisecting the existing PCH fill slope approximately at its midpoint. With the widening of PCH which was administered by Orange County, Caltrans has proposed to transfer its existing on slope right-of-way to DPR, establishing a new line at the southbound PCH edge of pavement. This proposal is part of a broader transfer of easements and right-of-ways within the Crystal Cove State Park boundary. There remain issues with the proposal including the need for stabilization by Caltrans of its fill slope. DPR and Caltrans are working to resolve this and other issues.

3.2 Community, Land Use and Planning

Orange County has the second highest population in California, trailing only Los Angeles County. It has the sixth highest population in the nation. It ranks 5th in terms of numeric population growth between 1990 and 2000, adding over 435,000 people. The population of Orange County is projected to rise to 3.3 million by 2020. It is one of the most densely populated areas in the United States. It covers 798 square miles of land and includes 42 miles of coastline. Employment projections are expected to outpace housing construction. Nearly 91,000 housing units are expected to be constructed in the next ten years.

The Newport Coast Planned Community development is located immediately adjacent to Crystal Cove State Park. As of December 31, 2001, there were 1086 single family homes, 477 multi-family homes, and 3.8 acres of commercial resort. At buildout, there will be 2093 single family homes, 507 multi-family homes, 10 acres of commercial, 353 acres of golf course, and 201 acres of commercial resort. The urban portion of the property will be a minimum of 2,433 acres. The Marriott Hotel, golf course, and the residential community overlooking the Historic District have already been constructed. Since Irvine Company retained an easement when State Parks acquired the property in 1979, there is a direct trail from the residential community to the pedestrian path that provides access through the Los Trancos Creek tunnel to the Historic District.

The Crystal Cove General Plan is the Public Works Plan, as certified by the Coastal Commission in 1982, that provides the Department's guidance for issues that pertain to the Coastal Act within Crystal Cove State Park. A Public Use Plan for the Historic District was also approved in 1982. Several actions directly affecting the proposed uses at the Historic District occurred subsequent to the approval of the General Plan and Public Use Plan. These include the approval of an MOU with the Coastal Commission, changes proposed by the public, and the annexation by the City of Newport Beach of the Newport Coast Planned Community and the portion of Crystal Cove State Park west of Muddy Creek in January, 2001. The Coastal Commission is directly responsible for coastal permitting.

Additionally, in December of 1999, State Parks issued Departmental Notice No. 99-18 for Coastal Erosion, which directs that structural protection and re-protection of developments shall be allowed only when the cost of protection is commensurate with the value (physical and intrinsic) of the development to be protected, and when it can be shown that the protection will not negatively affect the beach or the near-shore environment. These planning tools, along with departmental guidance for the protection of natural and cultural resources and provisions for safe recreation, guide the placement and type of improvements within the project area.

3.3 Historic Resources

3.3.1 Historic Significance

The Crystal Cove Historic District was listed on the National Register of Historic Places in June of 1979. It is an enclave of 46 seaside cottages in a historical landscape filled with rustic charm (see *Oversize Photo 1: Aerial View of Crystal Cove Historic District and Los Trancos* on Page 3). It was listed because of its exceptional significance as a unique self-contained Southern California coastal community with a vernacular character as well as architectural and construction style that has remained intact since the 1930s.

Crystal Cove Historic District's architectural period of significance is 1927 to 1950 and the General Plan's period of historical focus is stated as 1921-1940. Although some remodeling of individual cottages has taken place, no new buildings have been constructed in Crystal Cove since the late 1940s.

The majority of the buildings were first built as single-wall cabins between c. 1924-1936. The original cabins evolved over the decades into cottages with plumbing, gas, and electricity. Thirty-four cottages are one-story, ten are two-story, and two are one-and-a-half-story. Cottage #45, a one-story building erected in the mid-1920s directly adjacent to the beach in the central section of the Historic District, was used seasonally as a soda fountain, grocery store, hamburger and hotdog stand. This establishment served members of the seasonal tent community, inhabitants of the original cottages, and the visitors who made the three-hour automobile journey from the Los Angeles area in those days. This structure was moved and renovated into a cottage. During the period of significance, another building, the "Yacht Club," was constructed on the original store site and was also used as a store and hamburger stand.

Each cottage reflects a unique vernacular architectural design statement and constitutes "architecture without architects." Each builder constructed and adapted their cottage to suit their own needs and imagination. There are literally no property lines within the Historic District as all cabins evolved from use leases and not fee ownership. Remarkably, the Historic District retains much of its original character, structures, and areas of access that existed when the last cottage was erected in the late 1940s. Palm fronds which originally thatched the roof and outside walls of each cottage are still to be found on parts of some of them. Distinctive character-defining features such as palm fronds similar to the ones that thatched original roofs, and intact exterior wall-cladding provide the District with exceptional historic integrity.

3.3.2 Synopsis of Local History

European occupation of present-day Orange County began in 1776 with the founding of Mission of San Juan Capistrano by Spanish missionaries. In 1833 the Mexican Government secularized the missions and began to grant former mission lands to private individuals. The first grant of the land on which Crystal Cove is located, was awarded to Jose Andres Sepulveda in 1837. After considerable protests from the missionaries of San Juan Capistrano, Sepulveda acquired a second grant which, combined with the first, became a unit known as Rancho San Joaquin. An adjoining tract, Rancho Santiago de Santa Ana, was in the possession of the Yorba and Peralta families. Following the American Conquest of California in 1848, many similar Mexican Era rancho-owning families would lose their land holdings through an onerous and unscrupulous land confirmation process. By the 1860s these three grants had come under the control of James Irvine, Benjamin and Thomas Flint, and Llewellyn Bixby. These lands would subsequently become the largest portion of the Irvine Ranch of Orange County.

In 1864, *Rancho San Joaquin* on which present day Crystal Cove is located, belonged to James Irvine and his three partners as tenants in common. In 1867-68, 30,000 head of sheep grazed on the hills where cattle had previously fed. Irvine bought out his three partners in 1876. Operation of the ranch focused on the inland agricultural areas. The coast was not utilized. In 1907, the Irvine management considered selling "a mile" of coastal property between Newport and Laguna for $200 an acre. By the 1920s the Irvine company was leasing land along the coastal bluffs in this area to Japanese truck farmers who established a small settlement on the hills behind Crystal Cove.

During the second decade of the 20th century the movie industry discovered and began to use the beach and bluffs at present-day Crystal Cove. As early as 1917 palm trees had been planted and a "paradise of the south seas" set created for the benefit of film-makers who could easily reach this location by rail. It appears that the very early history of Crystal Cove is so integrally interwoven with the burgeoning motion picture industry that it is difficult to determine whether the Cove was first used as an Irvine Company beach camp or first discovered as an ideal location for south sea film sets. An early version of "Treasure Island" was filmed at the Cove and released in 1920. Early versions of "Rain" and another version of "Treasure Island" were supposedly shot along this stretch of coast as well as "Half a Bride" and "White Shadows of the South Seas." At Table Rock, located adjacent to the Parker cottage at the southernmost end of the Cove, the film "Storm Tossed" was made in 1921. Film-makers continued to use the location throughout the decade. Small cottages were built and thatched with palms and the Cove took on the exotic appearance of Hawaii or Tahiti. For years every cottage built at the Cove kept its palm thatch to comply with the needs of the movie industry.

Following the completion of Pacific Coast Highway, private cottages began to be built during the 1920s especially at the end of the decade. Crystal Cove's owners James Irvine II and James Irvine III, spent much time enjoying the beach setting. They generously allowed employees and friends to tent camp and to build small shelters and cottages along the beach and against the bluffs. Some current cottages began as one-room tents with canvas walls. Houses often began as one room with canvas walls. The "palm thatched twenties" gave way slowly to wooden structures. Additions were made as families grew and needed more space. Part of the boardwalk was salvaged from the teak deck of a wrecked ship. In 1927, regular visitor Elizabeth Wood named the beach Crystal Cove. By this time the unique seaside community was becoming well known. On August 14, 1927 The *Los Angeles Examiner* noted "On the Coast Highway between Balboa and Laguna is a bathing resort that has the atmosphere of a South Sea atoll. Touring along the highway recently, a party from the Paige Company of Southern California . . . saw thatched huts and long-fronded palms marking the beach of Crystal Cove."

During these years the cottages were close to the creek that drained Los Trancos canyon. Tents were pitched on the beach. A parking area for cars was developed at the foot of the canyon. Sometime in the 1920s a lumber ship capsized and wood suitable for the construction of more cottages drifted ashore. Early in the 1930s and throughout the decade, cottages began to be built up against the northern bluffs towards Balboa (Newport Beach) where there was no room for automobiles. Provisions had to be carried in along the beach until the narrow boardwalk was built.

It had become a tradition in many families who had enjoyed the Cove since the 1920s to return to this favored place each summer. The Irvines had been generous with permission for the construction of the cottages that still line the beach, relatively unchanged. As the cottage owners made improvements and lengthened their stay, the Irvines became concerned about squatter's rights. In the late 1930s, it was decided that those with cottages must make a choice. They were invited to either move their cottages elsewhere or to relinquish ownership to the Irvine Company.

The short term leasing system instituted by the Irvine Company actually served to preserve Crystal Cove in its original form. Private property ownership by the occupants would likely have led to code updates and regulations that would have resulted in major improvements, discontinuity of the vernacular style, and loss of the character of the community. Under the Irvine leases it was possible to paint, resurface, or change a water heater or a light fixture, but no changes in dimensions or additions of rooms were technically allowed after 1950. As a result, the area appears much as it did in the 1930s and 40s, with the exception of the absence of seasonal visitors who are no longer allowed to pitch tents on any of the Orange County beaches. Together the Crystal Cove cottages and, associated historical landscape features and elements constitute a unique historical resource.

3.3.3 Site, Landform, and Historical Landscape

The Historic District was established in 1979 to protect and preserve Crystal Cove's basic characteristics and to maintain the scale and character of its cottages. The Historic District was found to possess a significant concentration of buildings that together create a sub-area of architectural and environmental uniqueness and importance that contributes to the overall history and ambience of the Corona del Mar-Laguna Beach locale. The overall character of the site and its development is derived from the mosaic of individual vernacular seaside cottages nestled against and on natural coastal bluffs that converge at the mouth of Los Trancos Creek. This site development is oriented towards the sea. The natural open space coastline that isolates it from the nearby coastal communities accentuates the prominence of Crystal Cove as a unique coastal location.

The site characteristics that are considered important are: the unique history of Crystal Cove as a seaside recreation area; the attractive small scale; the concentrated, but still secluded layout with its diverse but compatible patterns of wood-framed buildings; the use of vernacular single-wall style construction to build the inexpensive summer cottages; the homogeneity of topographic siting; the unity of visual elements around the focal points of the creek outlet and bluffs; and the dynamic continuity through time of the cottages nestled against, on, and into coastal bluffs, and of the Historic District itself.

In addition to the cottages themselves, historic cultural landscape elements such as topography, roads, footpaths, stairs, boardwalks, paving materials/details, fences, bridges, streets, ornamental and native vegetation, telephone poles, and cottage yards, gardens, and decks are important character-defining features of the Crystal Cove Historic District. These features and elements contribute to the cultural landscape of the National Register property.

Since the first cottages were built in the 1920s, significant modifications have occurred to the general landform at Crystal Cove and the surrounding lands. These contribute to the historic character of the historic landscape at CCHD. These modifications have included:

- The construction of Highway One in the 1920s has permanently altered the natural stream channel of Los Trancos Creek and all other drainages between Corona del Mar and Laguna Beach. Widening of the highway in the 1990's added more changes.

- The stream channel in Crystal Cove Hollow has been moved twice from the far west side of the Hollow: once in the late 1920s to the middle and again by 1937 to the east side of the Hollow at the base of the highway fill slope. Stream flow has been constricted by the highway arch culvert and by upstream modifications.
- Extensive flooding, seen in a 1937 aerial photograph, washed out the mouth of the creek. By 1939, the creek outlet from the highway fill slope to the beach was completely rebuilt and channeled. Tidal flow to the Hollow area has been permanently restricted.
- In 1937, the northern blufftop was graded off and the resulting soil material was dumped off into the Hollow, further filling and modifying the stream channel area. The graded blufftop is visible in the 1937 aerial photograph.
- The southern coastal terrace area was also graded and re-contoured for the access roadway and the hillside was terraced for the southern grouping of cottages.
- Jetties at Newport Bay to the north have limited natural beach sand replenishment and Crystal Cove Beach has retreated from its prehistoric and historic configurations. The vegetated beach area with access steps visible in front of the northern beachfront cottages in the 1937 and 1939 aerial photographs was gone by 1998. Current conditions consist of a boardwalk that provides access and a buffer for shoreline wave action.

In summary, extensive historic modifications have taken place on the original natural landform that existed at Crystal Cove prior to its establishment as a summer cottage enclave. Most of these reflect the evolution of the historic landscape at Crystal Cove and have become a part of the landscape features of the district. Recent additional modifications of major portions of the Newport Coast watershed have altered the natural open space character of the surrounding region.

3.3.4 Community as Cultural Value

Community values combine with Crystal Cove's historic, natural, and recreational values to create a truly unique and treasured place that people want to enjoy and protect. Crystal Cove has experienced at least five different kinds of community across the years: Native American hunter gatherers, Japanese truck farmers, automobile tent campers, summer cottage vacationers, and year-round tenants. Native American peoples hunted, gathered, and built villages in this area for at least 2,500 years until they were dispersed or relocated to nearby Spanish missions two centuries ago. Japanese truck farmers leased Crystal Cove bluff land near today's Historic District from the Irvine Company as early as 1927. The Japanese farms evolved into a small hard-working and close-knit community that included a one-room public school and a Japanese Language School. The 1942 wartime evacuation program abruptly ended Crystal Cove's Japanese farming community.

Crystal Cove's evolving beach recreation community is an expression of the 1920s nationwide availability and popularity of the family automobile-oriented vacation. At that time many Southern Californians acted on the opportunity to take advantage of newfound leisure time and the personal freedom afforded through the automobile to temporarily escape the routine patterns of the city's urban landscape. The mass production of automobiles and the improvement of the road and highway system providing access to

weekend vacation trips that once required extensive travel time. As such the popularity of camping and second, or vacation homes, grew exponentially during this period. Ironically, the very means used to escape industrialized urban life were two of the chief products of 1920s industrial society— the automobile and the modern highway.

Reflecting these trends, and looking to scenic and undeveloped open space areas as an antidote of the real, and perceived, evils of urban existence, more and more city dwellers yearned for rustic experiences in natural surroundings—if even for a short period. Especially in Southern California, where year round good weather and a growing transportation system allowed easy access to mountains, deserts, and beaches, the concept of the weekend getaway flourished. Soon local urbanites from many walks of life discovered isolated, undeveloped spots such as Crystal Cove as an attractive and inexpensive beach vacation destination. Beginning with the opening of the Pacific Coast Highway in 1926, autocampers arrived in large numbers to pitch tents on Crystal Cove's beach. The camping experience at Crystal Cove has been described as a democratic and cooperative village community. Reflecting its status as a family-oriented camping and vacation cottage destination, Crystal Cove was once referred to as "Family Cove."

Seeking more comfort, returning autocampers improved their tent sites with each passing summer. Tent pads became foundations for semi-permanent thatched huts and then rustic cottages. By around 1936 there were 47 cottages at Crystal Cove and in 1938, the Irvine Company began formalizing cottage leases with individuals. Under these leases the tenants had little incentive to invest in expensive improvements because the Irvine Company retained ownership of both the land and the cottages. This situation is largely responsible for preserving the original flavor and appearance of this early beach recreation community. Former Crystal Cove resident Christine Shirley wrote in 1979, "We have literally been locked in the past here since we have not been allowed to change or add to our cottages by the short term leases with the Irvine Company."

After the war, more and more cottages were occupied year-round until Crystal Cove became a community of part-time and full-time tenants. This was the situation when California State Parks purchased the property from the Irvine Company in 1979 to form Crystal Cove State Park. The *1982 Development and Public Use Plan* identified 21 of the 46 cottages as being used for "weekend or summer use" only and 25 cottages being used "all year."

3.3.5 Historic Recordation - *Investigations and Interim Protection Plan*

Recordation and inventory of historic structures, features, and objects of the historic landscape district was one of the major tasks accomplished after the long-term residents left the Historic District in July, 2001. This recordation and inventory work consisted of several specific tasks associated with goals and mitigation measures outlined in the *Investigations and Interim Protection Plan*. The first was the monitoring of refuse removal from the district. Cultural resource monitors were in place to assure that any removed materials, objects, or features were not contributing elements or associated collections of the historic district. Such features and objects were collected, inventoried, and placed in storage. This work also included the recordation and monitoring of vegetation removal that was necessary to protect cottages, structures, and features from

threat of fire and for access to implement interim stabilization and protection measures. Other recordation work was accomplished to assist with protection of cottages during interim adaptive uses for operations and staff residence. An ongoing review process by Departmental senior-level cultural resources staff to evaluate all improvements associated with the interim uses was also implemented in addition to standard department project review processes as part of the mitigation monitoring measures outlined in the environmental document for the interim use. This included, for example, recordation of historic features and finishes during hazardous material abatement and stabilization and rehabilitation for the new uses. All work was monitored to assure compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties and Cultural Landscapes.

3.4 Aesthetic Resources

The dominant visual feature in the coastal portion of Crystal Cove State Park is the ocean and its shoreline. From the rim of the bluffs extended views are available down the coast to Abalone Point and upcoast and inland to the urban areas in Corona Del Mar and around Newport Bay. During favorable weather the Santa Catalina and San Clemente Islands can be seen off the coast. The ocean can be viewed at nearly all points along Pacific Coast Highway. Except for the southern portion of Moro Beach, the beach is not visible from the highway although offshore rocks can occasionally be seen. The beach zone is attractive with its contrasting colors of white beach and surf, blue ocean, and buff-colored bluffs with occasional mats of green vegetation. This section of coastline is unique in Orange County because it is the only location where the coastal side of the highway is primarily undeveloped.

Although the area immediately east of the Historic District is now developed with large homes in close proximity, once one descends into the Historic District, time seems to disappear into the past because neither PCH or the urban development can be seen. The visual character of the Historic District cannot be separated from its historic or breathtaking natural setting. The area is prized by artists and photographers for its subject matter as well as the passing recreational user. Please refer to the *PPUP* for the many photos that show the various faces of the Historic District.

3.5 Landform & Geology

The project site is within the Peninsular Ranges Geomorphic Province and is located at the base of the coastal flank of the San Joaquin Hills. This small range of hills reaches 1,164 feet in elevation and is bounded on the east by Salt Creek, on the north by the Los Angeles Basin and Newport Bay and on the west and southwest by the Pacific Ocean. The project is located where Los Trancos Creek reaches the ocean and extends along the adjacent wide sandy beach, and up to the adjacent coastal bluffs. Inland from the project site, the Newport Coast Planned Community has graded extensively to build a golf course, hotel and residential housing.

The predominant rock types in the project area are marine sedimentary rocks of Tertiary age. The sedimentary assemblage is locally intruded by Miocene dikes and sills of andesite and diabase. Quaternary slope-wash deposits, slope-failure deposits, terrace

deposits, and beach sands form a relatively thin cover over the older units. Slope failure and earthquake damage are probably the most significant potential geological hazards in the project area. Slope failure, including landslides, earthflows, creep, rockfalls, and rilling and ravelling, may be the most critical geologic problem on the Irvine Coast. Past landslides have occurred within the project site.

A geotechnical evaluation was performed which, expanded previous studies and reports including information recently developed by Caltrans for its fill slopes that border/reside within the boundaries of the Historic District. The impetus of the evaluation was to determine potential, in degree and extent, of global slope instabilities that may pose risk to existing cottages or proposed infrastructure improvements. Additionally, subsurface information in support of Coastal/Hydraulic studies, stability of utility corridors, slope creep, surficial slope instabilities, and slope stabilization alternatives were developed.

The first phase of the study evaluated deep seated slide potential. Potential for this slide type is limited to North Beach. Prior studies concluded that potential exists but varies along the North Beach bluff face. Additional testing and evaluation indicates that slide potential exists for the westerly half of the area. For this portion, a factor of safety (FS) of 1.3-1.4 was arrived at indicating that while a slide is not imminent, remedial action is recommended (FS≤1.5). Therefore, the project proposes to stabilize the section by combining slope reconstruction with soil nail walls that would be visually screened.

Historic District

The potential for global slope failure at North Beach extends from cottage #36 to cottage #9 (Figure 2.9) for a total of 10 cottages. Other sites are subject to minor surface slides.

Caltrans Pacific Coast Highway Fill Slope

A report generated by the Caltrans Geotechnical Branch-South for District 12 Maintenance indicates the existence of surficial or localized slope instabilities for a portion of its Pacific Coast Highway slope that is parallel to and integral with the stream bank of Los Trancos Creek. In its report, Caltrans recommends retaining the slope with a soil nail type wall.

A second report generated by Caltrans for the its fill slope located immediately south of the Shake Shack, did not address the surficial slope instabilities that are currently exhibited. Future discussions with Caltrans regarding this issue are planned.

The likelihood for a broad failure of the slope and the corresponding movement of material is unknown. The risk posed by localized slope failure coinciding with or caused by a storm event, and a subsequent damming of Los Trancos with its possibility of redirecting flow outside of the current floodway was not addressed.

The project site lies within a seismically active region. The fault zones in the region most likely to generate damaging earthquakes are: the San Andreas (52 miles to the northeast), the San Jacinto (45 miles to the northeast), the Whittier-Elsinore (35 miles to the northeast), and the offshore Newport-Inglewood (1 mile to the west). Recently a blind-

thrust fault was discovered under the nearby San Joaquin Hills that may have been responsible for a 7.3 quake in the late 1700's.

The existing topography reflects the building of Pacific Coast Highway in the 1920s that permanently blocked the natural stream channels of the park's three primary creeks: Los Trancos Creek, Muddy Creek and Moro Creek. Doubling the lanes in the 1990s has added to the change. Within the project site, construction of the cottages and Pacific Coast Highway severely altered the natural topography by creating artificial slopes within the Los Trancos Creek drainage and redirecting the creek.

3.6 Coastal Process

The Corona Del Mar/Laguna Beach coastline is characterized by rocky bluffs with small to moderately large size pocket beaches.

The frequency and extent of episodic marine erosion is site specific and is directly related to weather/climate patterns, especially those originating in the south (Shepard and Kuhn, 1983), to which the site is particularly susceptible. The frequency of these storms from the south (called "southeasters") is not well known, however, they entered the southern California Bight with great regularity until 1863, and ceased approximately in 1895. Only one tropical event entered the region in this century, in September of 1939. It must also be pointed out that the period between 1947 and 1977 was the most benign, quiescent period since the 1500's (Kuhn and Shepard, 1984), and coincided with the development boom following World War II. We appear to entering a period of acute storm climate from the south which began in 1978 (Kuhn and Shepard, 1984). Mean retreat rates in the historic past in nearby areas may be on the order of 0.2 per year (City of Laguna Beach, 1988). Because of the unique site geological conditions, the bluff retreat rate at the site may exceed those rates under extreme meteorological events.

A coastal study was performed to determine credible wave height, wave-up rush, scour, and sand balance distribution within the Historic District limits. The study included both offshore, nearshore, and beach profiling and depth to bedrock determination.

The limit of wave up rush exposure varied from approximately 9 feet MSL for a typical year to approximately 18 feet MSL for a 100 year event. The corresponding threat to cottages ranged from first floor flooding potential to foundation exposure (Figure 3.1). The location of critical exposure due to a combination of swell direction and lower floor elevation is South Beach cottage # 13,(Figure 3.2) which is protected by an existing timber wall This section of South Beach also exhibits the greatest seasonal/storm flucuation in beach profile. Other areas of critical exposure are the North Beach cottages #11, 20, 25, and 28. This section of North Beach has lower floor elevations but in turn also exhibits the least flucuation in beach profile. Other cottages in the Village/Hollow, South Beach, and North Beach have vegetated sand berm protection, wider beaches, and have a greater separation from the design water elevation of 3.2 feet MSL.

3.7 Hydrology

A hydrology/hydraulic study of Los Trancos Creek was performed to determine risk to infrastructure and cottages due to the 2, 5, 25, 50, and 100-year storm events. Information gathered from studies performed by Tettemer and Associates in 2000 for the Los Trancos drainage area, which is approximately 2.2 square miles including both offsite and onsite areas that drain to Los Trancos within the Historic District, were used to estimate flows. The boundary condition for control of the predominate flows to the Los Trancos drainage within the Historic District is a 10 feet wide by 9 feet high arch culvert structure that crosses below Pacific Coast Highway. The capacity of this culvert at the given inlet demand was used to determine outlet flows. Another smaller culvert which, captures run off from Pacific Coast Highway and out falls at the auto bridge will be abandoned by Caltrans in the near future as part of its compliance with water quality requirements.

Cottage/Structure exposure to food staging for the 50 and 100-year storms is shown on Figure 3.3.

3.8 Biological Resources

Crystal Cove State Park (CCSP) contains some of the last remaining undeveloped coastal property in Southern California and features approximately three miles of Pacific coastline, wooded canyons, brush-covered bluffs, and offshore waters designated as an Underwater Park.

The Park is located within the Reserve System identified in the Natural Community Conservation Plan & Habitat Conservation Plan, County of Orange, Central Coastal Subregion (NCCP/HCP). The purpose of NCCP/HCP is to provide long-term regional protection and perpetuation of natural vegetation and wildlife diversity, while allowing compatible and appropriate development and growth. NCCP/HCP requires that construction-related minimization measures be integrated to minimize impacts to gnatcatchers and other NCCP/HCP "Identified" coastal sage scrub (CSS) species (Table B.3). New facilities in accordance with the adopted 1982 General Plan are authorized within the Reserve System. NCCP/HCP requires that any impacts to habitats within the Reserve System that occur in accordance with the adopted CCSP General Plan be evaluated by the regulatory agencies and appropriate mitigation be determined.

The marine and shore habitat immediately adjacent to the Historic District, is classified as the Irvine Coast Marine Life Refuge by the Department of Fish and Game; an Area of Special Biological Significance by the State Water Resources Control Board; and as an Underwater Park by the State Parks and Recreation Commission. Many species of marine and shore birds, as well as other marine life are frequently seen utilizing the area.

The Crystal Cove Historic District project area of CCSP is located at the mouth of the Los Trancos Creek watershed west of Pacific Coast Highway (PCH). Public access to the Historic District and the offshore Underwater Park is available from the inland Los Trancos parking lot, just east of PCH, via the Los Trancos pedestrian trail to the Pacific Coast Highway undercrossing. Los Trancos Creek bisects the Historic District, and a

single-lane bridge provides access across the creek. The creek has been highly modified from the Pelican Hills Golf Course on the east side of PCH to its outlet at the ocean as described in Section 3.3.5.

3.8.1 Plant Communities

Habitat types within and surrounding the Historic District include Diegan coastal sage scrub, disturbed southern foredune, southern willow scrub, and disturbed riparian with cattails. In addition, exotic ornamental landscape vegetation occurs around the structures within the District.

The coastal sage scrub community for Crystal Cove corresponds to the description of CSS in the NCCP/HCP as a more or less open community composed of low, drought deciduous shrubs, with a sparse understory of annual and perennial grasses and forbs. "Scrub" as defined by NCCP/HCP roughly corresponds to Holland's (1986) descriptions of Diegan/Venturan sage scrub. Coastal sage scrub is a native plant community composed of a variety of soft, low, aromatic shrubs, characteristically dominated by drought-deciduous species such as California sagebrush (*Artemisia californica*), flat-top buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia* spp.), with scattered evergreen shrubs, including lemonadeberry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), and toyon (*Heteromeles arbutifolia*). It typically develops on south-facing slopes and other xeric situations. The understory is variable, and frequently includes annual and perennial grasses and annual wildflowers. There are approximately 20 acres of CSS located within the 50 acre project area (Figure 3.4) (Figure 3.5).

A disturbed coastal dune habitat area is located west of the historic district. Coastal dune communities may have sparse to dense vegetation growing in wind-blown sand deposits, primarily along the coast. Beach dune species at CCSP include sand verbena (*Abronia* spp.), coastal saltgrass (*Distichlis spicata*), and beach primrose (*Camissonia cheiranthiforia*). However, vegetation in the disturbed coastal dune habitat area of the District is dominated with non-native plants, sea fig (*Carpobrotus* spp.), sea rocket (*Cakile* spp.), and other planted ornamentals.

The southern willow scrub riparian community includes winter-deciduous, broad-leafed willows (*Salix* spp.), shrubs, and herbs growing along watercourses and water bodies. Los Trancos Creek has been highly modified west of PCH. The creek has been channelized, armored, and planted with non-native vegetation. However, the riparian habitat between the PCH undercrossing and the garage area of the Historic District maintains a small community of southern willow scrub. Approximately 0.2 acres of southern willow scrub riparian habitat occurs along Los Trancos Creek, between PCH undercrossing and the garage area of the Historic District (Figure 3.4). The vegetation includes a mix of willow (*Salix* spp.), sycamore (*Platanus* spp.), poison oak (*Toxicodendron diversilobum*), and non-native eucalyptus (*Euclyptus* spp.).

Vegetation near the mouth of Los Trancos Creek can be described as a disturbed riparian community with cattails (*Typha* spp.) (Figure 3.4). Los Trancos Creek has been highly modified west of PCH and the vegetation near the bridge crossing and the mouth of the creek is primarily non-native species with some cattails occurring in wet areas of the

creek. Currently, much of the non-native vegetation along this stretch of riparian corridor includes nasturtium (*Tropaeolum majus*), bougainvillea (*Bougainvillea* spp.), castor-bean (*Ricinus communis*), exotic grasses, and a variety of exotic garden ornamentals. Approximately 0.3 acres of this type of disturbed riparian habitat occurs with the study area.

3.8.2 Rare Plants

There are thirteen sensitive plants identified by the California Department of Fish and Game's Natural Diversity Database (Rarefind 2000) that may occur in the Laguna Beach U.S.G.S 7.5' topographic quadrangle map. Several rare plants are known to occur within Crystal Cove State Park including, many-stemmed dudleya (*Dudleya multicaulis*), a CNPS list 1B species, and Turkish rugging (*Corizanthe staticoides* spp. *chrysacantha*), a species of local concern (Table B.2). Both of these species are documented to occur along the bluffs of the Pelican Point area of the park, north of the Historic District. Small populations of both species occur at the northwest edge of the project area, on and just outside the Historic District boundary.

3.8.3 Wildlife

The area provides habitat for a variety of wildlife species. Coastal sage scrub habitat on the bluffs and coastal terraces currently support the NCCP protected and Federally listed threatened coastal California gnatcatcher (*Polioptila californica californica*).

The Federally threatened coastal California gnatcatcher is an inhabitant of coastal sage scrub. Gnatcatchers are non-migratory, territorial songbirds that are generally considered an obligate resident of coastal sage scrub. This species is threatened with extinction due primarily to the loss and fragmentation of habitat and the continued threat of habitat destruction and fragmentation (Federal Register 2000). Dispersal of juveniles generally requires a corridor of native vegetation to link larger patches of sage scrub. However, the gnatcatcher, while dependent on coastal sage scrub within its range, may use non-CSS habitats for dispersal. Juvenile dispersal is the primary means by which genetic diversity and interpopulation movements are maintained in non-migratory, territorial birds, especially those occupying a highly fragmented landscape (Galvin 1998). NCCP reserve design planning has resulted in the protection of connectivity linkages between core habitat and peripheral areas including the linkages between Crystal Cove State Park to the San Joaquin Hills via Los Trancos Canyon and Muddy Canyon. Gnatcatcher breeding areas have been documented throughout the bluffs and coastal terraces surrounding the Historic District (Miner, Wolf and Hirsch 1998; California Department of Parks and Recreation 2000). They have also been observed crossing the highway and moving through the Historic District (Miner unpubl. data). Based on banding studies, California gnatcatchers disperse through the Historic District and across the highway but have not been documented breeding in the Historic District to date (Miner, Hirsch, Kamada pers. obs.). However, given that this species appears to utilize every bit of CSS habitat along the coastal terrace at some time during the year, it would not be unexpected to find that coastal sage scrub plants occurring on the south side of PCH along the inland edge of the Historic District are incorporated into gnatcatcher territories.

Another federally threatened bird, the western snowy plover (*Charadrius alexandrinus nivouis*), is a small pale colored shorebird that has been found during the winter, or non-breeding months (from August to February), on the beaches of Crystal Cove State Park. The Pacific coast population extends from Washington State to Baja California, Mexico, with the majority of breeding birds found in California. They winter primarily in coastal California and Mexico. The decline and loss of western snowy plovers along the Pacific coast have been attributed to habitat loss throughout their range and disturbance caused by urbanization (U. S. Fish and Wildlife Service 2001). Snowy plover's have been observed on the beaches of Crystal Cove State Park during the wintering (non-breeding) season, but not during the breeding season (U. S. Fish and Wildlife Service 2001). In addition, no western snowy plovers were observed during focused surveys conducted during the 2002 breeding season for this project.

Other sensitive birds detected in the project area include California brown pelican (*Pelecanus occidentalis californicus*) which utilized the off shore area, and Osprey (*Pandion haliaetus*) which have been observed perched on utility lines within the District. No nesting colonies of these birds occur within the Historic District project area.

The monarch butterfly (*Danaus plexippus*) is a milkweed (*Asclepiadaceae*) butterfly in the family Nymphalidae. The caterpillars rely on milkweeds as their sole source of food. During migration, the monarch butterfly escapes the freezing winter temperatures that accompany winter in their breeding grounds. Groves of trees along the California coast that provide suitable microclimate conditions, and nearby water and nectar sources are threatened by urban and agricultural development (Sakai 1991). Within Crystal Cove State Park, monarchs have been observed roosting in eucalyptus trees in the hollow area of the Historic District (Figure 3.4).

Additional wildlife observed during project surveys included cottontail rabbit (*Sylvilagus audubonii*), California ground squirrel *(Spermophilus beecheyi)*, dolphins, dragonflies, water boatman, and western fence lizard (*Sceloporus occidentalis*). Bobcats have been seen regularly in Los Trancos Canyon east of the highway and are known to cross the highway to gain access to the coastal terrace. Sensitive reptiles known to occur within CCSP include orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*), Northern red-diamond rattlesnake (*Crotalus ruber rubber*), and San Diego horned lizard (*Phrynosoma coronatum blainvillei*) (Table B.1).

3.8.4 Stream and Watershed Resources

The Los Trancos Canyon watershed encompasses approximately 1,180 acres, and is comprised of CSS, riparian woodland and grassland habitats, with steep cliff canyons. The original water source is from natural seeps. According to the 1988 Irvine Coast EIR (SCH# 88012010), pre- and post-development peak discharges of Los Trancos Creek were calculated using the County of Orange's hydrology manual to be 1,171 cfs and 1,815 cfs, respectively. Most of the watershed is included in the Orange County Reserve System, and is largely surrounded by existing or planned urban development with the exception of a linkage corridor to the rest of the Reserve system. The Pelican Hills Golfcourse and the Los Trancos parking area of Crystal Cove State Park (including public restrooms and temporary office trailers) lie on the north side of the mouth of the

canyon east of PCH, and west of PCH the Historic District encompasses the outlet of the creek to the ocean. Los Trancos Creek from the canyon mouth to the ocean was modified in the 1920's to pass under PCH through a concrete arch culvert and the creek outlet from the highway fill slope to the beach was rebuilt and channeled during the 1930's. Near the beach, a small (28-foot-wide) wooden bridge was built across the creek to provide access to the cottages on the south side.

Riparian habitat between the PCH undercrossing and the garage area of the Historic District maintains a small southern will scrub community, while most of the vegetation along the banks of the creek around the bridge are non-native species. Los Trancos Creek does not support native fish populations nor any sensitive amphibian species. The failing septic system has been abandoned, and temporary above ground holding tanks and portable toilets are being used until the sewer is tied into the municipal system.

3.8.5 Marine and Shore Habitat

Tide pools

The Pacific shoreline through this reach of coast is characterized by rocky headlands and sandy pocket beaches. The beaches consist of beach sands of well sorted grains of quartz, feldspar, quartzite and lithic materials coming from the sediment loads of the streams and eroding sea cliff. The cliffs are a complex folding and warping of sedimentary layers. Where the base of the cliffs meet the rocky headlands, the tide pools form providing important habitat for intertidal species. There is a tremendous diversity and abundance of marine life in the shore area defined by the 10' tidal range. Intertidal life zones refer to the occurrence of characteristic plants and/or animals existing at specific tidal level. The zonation or horizontal grouping of intertidal organisms result from organisms growing within a certain set of physical parameters of inundation periods, food, light, oxygen, etc. Certain species become characteristic of a particular zone, thus are referred to as zone indicators, such as barnacle, rockweed and mussels. Only during the lowest low tides can you view some of the richest assemblages of intertidal life where there are thousands of organisms living on each square meter of space. Tidepools occur along the coastal points of Crystal Cove State Park, including Rocky Point and Pelican Point. Within the study area, a small tide pool area is located at the south end of the Historic District beach at Rocky Bight (Fig. 3.5)

Coastal bottlenose dolphin (*Tursiops truncates*) can be found in small groups very near shore, often just outside the breaking surf at Crystal Cove State Park. Dolphins were observed near shore during September, 2002, field visits to the Historic District. In addition, Dennis Kelley (2000), a Professor at the Marine Science Department at Orange Coast College in Costa Mesa, California observed what he describes as "nursery" behavior off the coast of Crystal Cove in December of 1982. He theorized that the observed behavior was part of a birthing process. Nine additional observations of this type of behavior have been recorded along the shores of Crystal Cove State Park.

Underwater Park

The subtidal area of the underwater park is generally sand dominated with a wide diversity of patch reefs and pinnacles and it is here that the high abundance of invertebrates and vertebrates live. They are bathed in nearshore upwelling events, and combine with sunlight penetration, and are highly productive. The marine life within the park is considered to be slightly tropical in character where both the warmed back-eddy of the California current and the southerly Davidson current both tend to influence local water conditions.

The highest biological productivity within the underwater park is associated with the rocky bottom environments. The nearshore subtidal reefs are dominated by lush growths of surf grass and vertical forests of brown feather-boa algae. Patch reefs starting at depths of approximately 20' begin to show greater diversity of organisms including giant kelp, gorgonians, sponges, small algae, bryozoans, and shellfish. Because the reef structure and algae provide food and shelter, an abundance of fin fish species congregate around subtidal reefs.

In 1985, the Department initiated an underwater research program at Crystal Cove to inventory the intertidal and subtidal biological resources. Permanent transects on both underwater and intertidal rocky reefs were established in 1985-1986, which provided the opportunity to identify changes in the marine biological community over the long-term and to discover abnormalities early enough to effect remedies. In addition, the Department joined other coastal landowners (cities, county, and state) to form the Regional Marine Life Refuge group, a subcommittee of the Orange County Coastal Coalition, whose goal is to help protect this resource.

3.9 Archaeology

Native American History

The coast of southern California was occupied for up to 10,000 years before the arrival of the Spanish Missionaries in 1769. Various scholars have proposed chronological schemes to represent the prehistory of the Southern California coastal region (Wallace 1955, 1978; Warren 1968; Rice & Cottrell 1976; Koerper 1981, 1983). Each has suggested somewhat different dates for major cultural shifts and there is variation in the number of phases proposed. The temporal divisions currently being applied in Orange County are Wallace's (1955) horizons, as modified by Koerper and Drover (1983). These are based on over 300 radiocarbon dates from Newport Bay and the Los Trancos Canyon area, and are as follows:

Paleocoastal period (Prior to 8000BP)
Millingstone period (8000-3000BP)
Intermediate period (3000-1350BP)
Late Prehistoric period (1350-200BP) (Mason 1994)

Little is known archaeologically about the earliest occupants of the Southern California coast. What evidence does exist suggests a subsistence pattern based primarily on the

hunting of large game. Between about 8000 and 3000 BC, there was an apparent shift from game hunting to a reliance on wild seeds, shellfish and a variety of large and small vertebrates. This change occurred throughout western North America and is reflected archaeologically in an increase in tools associated with grinding seeds and processing of other vegetable foods. In Southern California, the change may have been associated with an increase in population.

The period between about 3000 and 1350 BP is characterized by the first appearance of the mortar and pestle, associated with the processing of acorns. Populations continued to increase during this period. Villages were concentrated around bays and inter-montaine drainages. Fishing as a means of food procurement took on a greater importance and coastal shell middens became larger. Small projectile points began to appear, suggesting use of the bow and arrow in addition to spears, and the number and variety of items of ornamentation increased. This period in Orange County is not well known (Mason 1994).

After AD 1000-1350, archaeological reconstructions are similar to ethnographic descriptions of the Gabrielino and Luiseño material culture. The differences between the culture of this time period and earlier periods are sufficient to suggest a new population coming into the area from elsewhere. This has been called the "Shoshonean intrusion" after the Uto-Aztecan speaking Shoshone of the Great Basin (Kroeber 1925). The Gabrielino and neighboring Luiseño, Juaneño, and Serrano spoke languages of the Uto-Aztecan stock separating them linguistically from the Hokan speaking peoples to the north and south. Archaeological evidence places this intrusion possibly as late as AD 700, whereas linguistic studies suggest Southern California Uto-Aztecan languages separated as much as 4000 years ago (Barter 1983:5).

While most published accounts (Barter 1983, 1991; Bean and Smith 1978; Kroeber 1925; Strudwick 1998) have traditionally included Crystal Cove within the Gabrielino (Tong-Va) culture area, recent research (DPR 1982; Earle and O'Neil 1994a, b; O'Neil and Evans 1980) and contemporary Native Californian consultants (David Belardes, personal communication 2001) indicate that the park may actually lie within the traditional Juaneño (Acagchemem) territory (Figure 2). Mission San Juan Capistrano baptismal records list neophytes from as far upcoast as Newport Mesa (Boscana 1978).

As the Gabrielino and Juaneño spoke related languages and lived a very similar lifeway, the following discussion applies to both culture groups. For most of the year the Gabrielino and Juaneño occupied village sites in large domed circular structures thatched with tules or ferns. The villages were located near the coast or watercourses. The people traveled to various gathering sites within their territory as various resources became seasonally available. Kroeber (1925:649) names twenty varieties of seeds and six varieties of acorns used by the neighboring Luiseño. It is assumed that the Gabrielino and Juaneño exploited similar vegetable resources. Fish and shellfish were a primary source of protein. Fishing implements included spears, nets and fishhooks. Like the Chumash to the north, they used large, wooden plank vessels called *tomols* to travel to the Channel Islands and to exploit deep-water marine resources. Additionally, a variety of large and small terrestrial vertebrates was hunted with bow and arrow or trapped with nets.

The climate was undemanding, and clothing was simple. Men typically wore loincloths and women the double apron commonly found throughout California. All wore deerskin, fur, or bird skin capes when weather was poor. The Gabrielino and Juaneño manufactured steatite bowls and decorative items, stone mortars and pestles, manos, drills, knives, and projectile points. Bone was utilized to manufacture fishhooks, needles, and awls. Shell was made into fishhooks, beads and spoons. They also manufactured baskets, nets, and coiled paddle and anvil pottery (Barter 1983).

The Gabrielino and Juaneño participated in an extensive exchange network, providing them access to exotic resources such as obsidian, certain foods, and other commodities that were unavailable within their own territory. The most intensively used source of steatite in prehistoric California was within Gabrielino territory on Santa Catalina Island, and both manufactured goods as well as raw materials were exchanged with other groups. Additionally, shell beads, dried fish, and sea otter furs were traded with inland peoples for deerskins, acorns, and seeds from the interior (Macko 1987).

Spanish colonization permanently and completely altered the cultures of the people inhabiting Southern California, removing them from their villages and incorporating them into the labor pool necessary to maintain the mission system (Barter 1983).

Survey

The area of Crystal Cove State Park has been the subject of archaeological investigation from at least the early twentieth century. Nels Nelson and the University of California, Berkeley, may have been the first to survey the area in 1912, although records of this trip are unavailable. Richard Van Valkenburg surveyed the coastal strip in 1929, as did Herman Strandt on several occasions between 1921 and 1966. R.J. Briggs surveyed the area in 1949, recording sites CA-Ora-1 (CA-Ora-280), CA-Ora-147, and CA-Ora-323. University of Southern California expeditions in 1956 and 1957, led by William Wallace, recorded six sites, which he labeled Cameo Cove (CC) 1-6 (DPR 1982:99). Three of these, CA-Ora-130, CA-Ora-147, and CA-Ora-661 are located within current park boundaries.

An avocational group, the Pacific Coast Archaeological Society, has surveyed the park several times since 1960, publishing numerous reports in the *Pacific Coast Archaeological Society Quarterly* and the *PCAS Newsletter.* The Irvine Company began contracting archaeological survey and excavation on their properties in 1971, hiring Archaeological Research, Inc. (ARI) and Archaeological Resource Management (ARM) to conduct investigations in the Crystal Cove area. A survey Led by Roger Desautels and Steven Colgrove in 1971 re-recorded sites CA-Ora-280 and CA-Ora-323, as well as identifying ten new sites in the park (CA-Ora-324-333). Three sites, CA-Ora-1, CA-Ora-130, and CA-Ora-147 were re-recorded by Marie Cottrell and ARI in 1977; three new sites, CA-Ora-660, CA-Ora-661, and CA-Ora-685, were identified as well (DPR 1982:100).

DPR Archaeologists John Kelly and Joe Hood, and Historian John McAleer surveyed the park upon State acquisition of the property in 1980. They recorded or re-recorded 31 sites (DPR 1982:105).

Testing and Excavation

John Winterbourne and the Works Progress Administration conducted the earliest known excavation in the park in 1936. Excavations at CA-Ora-280 (Morro 1) took place in July and August of that year. Winterbourne noted evidence of previous excavation at the site, in that "this location is an ideal place for a burial, and from all indications there has been a burial taken out (Winterbourne 1936)." He speculated that a German anthropological museum had studied the site in 1879-1880; however, inquiries to the Staat Museum for Volkerskunde and Institut fur Museumwesen were both negative. Thirty artifacts are reported from the 1936 excavations, including a steatite bowl, abalone bead, asphalt applicator, and a stone ball.

Winterbourne returned two years later to excavate CA-Ora-281 (Morro 1). Fourteen large excavation units, some measuring up to 450 square feet, were excavated along with numerous test holes and trenches. Nine burials were located and removed, along with 150 artifacts. The Bowers Museum, in Orange County, currently possesses 12 artifacts from the Winterbourne collections (Alice Bryant, personal communication 2001).

The University of Southern California, led by William Wallace, excavated three sites in 1956-1957. Although site records are sketchy, it appears that the sites were CA-Ora-1, CA-Ora-130, and CA-Ora-147. No documentation of these excavations has been located.

DPR initiated a testing program in the mid-1980s for purposes of resource management. Barter (1983, 1991) was assisted by DPR staff and the Pacific Coast Archaeological Society in testing and excavation projects at sites CA-Ora-130, CA-Ora-280, CA-Ora-281, CA-Ora-323, CA-Ora-324, CA-Ora-327, CA-Ora-331, CA-Ora-965, and CA-Ora-968.

Various projects from the 1970s were undertaken as student research. Orange Coast and Saddleback Colleges reportedly excavated CA-Ora-323 in 1972. A California State University - Fullerton field school, led by Jack Zahnizer and Christopher Drover, excavated CA-Ora-327 that same year. Twenty-five students excavated thirty-four 1x1 meter units, and seven 2x2 meter units. Many units were not excavated to sterile. As no site map, analysis, or report was produced, DPR later contracted with Constance Cameron (1985) to complete the analysis and write up a report.

Field classes from Orange Coast and Saddleback Colleges conducted excavations of CA-Ora-130 in 1976 and 1977, conducting only preliminary analyses. DPR later contracted with Marie Cottrell of ARM to finish the analysis and prepare a report of the findings (Cottrell 1983).

Subsurface investigations in the late 1980s and early 1990s were generally related to maintenance of the Pacific Coast Highway. Road widening in 1989 was preceded by excavations at CA-Ora-246 by Roger Mason of the Keith Companies (Mason et. al 1992). Two radiocarbon dates from these studies, 8550±80 and 7720±80, are among the earliest on the Newport Coast. Materials are curated at the Natural History Foundation of Orange County.

Installation of a storm drain in 1995 located site CA-Ora-1429, a coastal shell midden identified under 130 centimeters of overburden. Paul Chase (1995), archaeologist for the Keith Companies, conducted investigations at the site for the purpose of regulatory compliance. Chase identifies CA-Ora-1429 as a summer fishing camp, utilized approximately 3,700 years ago.

Site CA-Ora-1482 was tested in 1997 in anticipation of a proposed land-swap (since dropped) between DPR and the Irvine Company. Ivan Strudwick (1998) of LSA Associates led surface collection and the excavation of 36 shovel test pits, three 1x1 meter units, and twelve backhoe trenches on the site, determining that the deposit is a low-density shell midden and lithic reduction site. Materials are curated at the California State University, Fullerton, Anthropology Department.

State Park archaeologists conducted testing at the Historic District since the purchase of the property from Irvine Company in 1979 and in conjunction with the implementation of the *CCHD Investigations and Interim Protection Plan* as part of the studies for this EIR. These tests were conducted primarily to determine the location and extent of three previously identified subsurface deposits.

The first of these sites, CA-Ora-1429, was identified in 1997 during construction of a drain system for Pacific Coast Highway (Chase 1997). The site was reported to be covered by 1.3 meters of overburden and was only tested within the area affected by installation of the drain. Extent of the site was not determined.

The second deposit was reported by a State Park archaeologist. In the early 1990s she noted shell and flaked stone eroding from a developed area. Auger testing at that time was inconclusive, due to the difficulty of augering through the hard packed surface.

The third deposit, was also identified in the early 1990s. Dark midden soil, shell, and bone was identified at approximately 18" below the present ground surface, terminating at 1.5 meters below surface. Testing of this area in April 2002 (Shabel 2002) failed to locate any cultural deposits.

Augering was begun on the morning of July 29, 2002 adjacent to site CA-Ora-1429. Results were mixed. Small quantities of fragmented shell were found in most units, however, no midden soils were noted. Possible lithic flakes were identified in three units. Additional testing nearby identified a sparse concentration of shell. However, there were no midden soils or artifacts to indicate that this deposit is cultural. The sparseness of the deposit and proximity to the beach would tend to indicate a natural deposit.

An additional site excavated in the early 1990s appears to have been at least partially destroyed since that time. Soils in this area are highly disturbed and augering earlier in the spring (Shabel 2002) identified the remains of sandbags in some units. It is very possible that high surf and flooding from El Niño storms in the 1990s destroyed this deposit.

3.10 Paleontology

Fossil sites occur in several locations within the area and include mollusk, echinoids, and foraminifera. The primary fossil-bearing sedimentary rock unit at Crystal Cove State Park is the Middle to Late Miocene Monterey Formation, which is approximately 14 to 18 million years old at this site. The Monterey Formation has consistently produce fossils wherever it is encountered in California. Such fossils include marine plants, invertebrates and marine vertebrates. In Orange County, the Monterey Formation has yielded fossils of land plants, marine plants, fishes, sea lions, whales, and dolphins. The smaller fossils are usually found in laminated shales and the larger marine specimens in large nodular concretions (Barnes). Monterey Formation shales have been observed within the project site. There is also the potential to find Late Pleistocene fossils such as mammoth, mastodon, horse, camel, bison, sloth, various small mammals, reptiles, birds and plants in any intact alluvial deposits near Los Trancos Creek. All of these fossils have scientific and interpretive values.

3.11 Traffic

Existing traffic on Pacific Coast Highway is shown on the table below. The Level of Service (LOS) is an estimate of traffic flow with LOS A being the highest rate of flow and LOS F the slowest. LOS capacity on Pacific Coast Highway currently ranges from LOS E in Newport Beach to LOS B at Newport Coast Drive and the project area, to LOS C in Laguna Beach. The long-range circulation system, which assumes full build out of the County of Orange Master Plan of Arterial Highways, projects average daily traffic counts of 40,000 on Pacific Coast Highway.

Pacific Coast Highway (Route 1)
Existing 2000 Average Daily Traffic

Route	Segment	ADT
Route 1	North of PM 11.5	36,000
Route 1	South of PM 16.25	48,000
Source: Caltrans - 2000 Traffic Volumes on the California State Highway System.		

*The proposed project is located between these post miles

A traffic analysis of the Los Trancos/Historic District signalized intersection was performed to determine signal operations. The Caltrans Intersecting Lane Vehicles Hour method was used. Intersection demand on Pacific Coast Highway was extracted from the April 1998 Traffic Analysis reported by Austin-Foust Associates for Irvine Company Newport Coast Phases IV-3 and IV-4, and from rates observed for the Los Trancos parking area acquired by DPR in a report generated by RBF consultants, dated August 12, 2002.

The long-range analysis numbers of the Austin-Foust report incorporates “buildout conditions and assumes completion of the project and build out of surrounding land uses”. The horizon condition uses build out data from the Cities of Newport Beach and Irvine General Plans and year 2020 projections consistent with the OCP-92 model. The

report evaluates intersection demand on Pacific Coast Highway from the McGarthur intersection located north of Newport Coast Drive (NCD) and Historic District/Los Trancos, to Laguna Canyon Road located to the south. The numbers used to estimate traffic demand at the Crystal Los Trancos /Historic District intersection were the NCD/Pacific Coast Highway through, the WB NCD to SB Pacific Coast Highway, the EB NCD to SB Pacific Coast Highway, and the estimated demand for Los Trancos parking including an estimated "turn away rate".

DPR conducted a weekend traffic count on August 3 and 4, 2002 for the Los Trancos parking area to determine turnover, peak hour, peak period, and vehicle occupancy rates. Los Trancos can accommodate up to approximately 400 visitor vehicles and its peak use is on weekends during the summer months. It was determined that the peak hour of generation is from 2:30 PM until 3:30 PM where activity totaled 212 vehicles (113 entering and 99 exiting), while the highest peak period was between 4 pm and 6 pm where activity totaled 184 vehicles (84 entering and 100 exiting).

4 ENVIRONMENTAL EFFECTS & MITIGATION

This section describes the probable impacts of the Proposed project in Sections 4.1 through 4.5. The environmental impact analysis and the proposed mitigation measures are based on preliminary project design and current information and circumstances. Technical reports and analyses were prepared as part of the environmental studies for the proposed action. These reports analyze existing conditions and identify potential impacts for the Proposed project. This section summarizes the findings of these reports and analyses and incorporates information that may be more current that the information contained in the technical studies. The following studies were conducted for this EIR: wave runup & hydrological study, biology report, archaeological resources analysis, hydraulic study, traffic analysis, structural evaluation, and geotechnical studies. These studies were made available for public review at three public libraries and three park offices and upon request for interested agencies.

4.1 Statement of Overriding Considerations

There will be significant temporary visual impacts associated with cottage removal and replacement for slope stabilization & the preservation, restoration, rehabilitation and reconstruction of the cottages for adaptive use. These impacts will also include temporary fences or closures, tenting for termites, and other construction related impacts. Although State Parks will endeavor to mitigate these impacts by disguising them with bamboo fencing, they cannot be mitigated below significance. It is the position of State Parks that implementation of the *PPUP* including the ultimate public use and preservation of the historic resources outweighs the adverse significant effects of the temporary visual impacts despite the fact that they may occur intermittently over a period of years.

4.2 Potentially Significant Impacts & Proposed Mitigation

4.2.1 Historic Resources

Impact: Project actions to preserve, restore, rehabilitate, reconstruct, and provide new uses and improve support systems have the potential to adversely effect or substantially change the contributing historical buildings, structures, and cultural landscape features that provide historic integrity to the CCHD. Additionally, new uses also may alter use patterns and require additional new structures that could adversely alter the spatial arrangement, setting, and character of the CCHD.

Discussion: The proposed project actions call for numerous improvements to structures, features, and systems in and for the historic district. The project plan also calls for new uses to nearly all the structures, features, and areas of the CCHD. Project tasks include those for improving circulation, cottage preservation and adaptation, utility systems, geological stability, site accessibility, and public safety (see Section 2 and Figures 2.2 to 2.10) for detailed discussion and location of project tasks and improvements).

Cottage preservation and adaptation work directed from this plan and project will require undertaking the entire range of historic property treatments (preservation, restoration, rehabilitation, reconstruction) to meet project infrastructure and re-use goals, tasks, and programs. Factors including the historical significance, amount of existing historic fabric, structural and physical condition, proposed adaptive uses, all will help to determine which of these four historic property treatments will be used at a specific structure or landscape feature. Existing cultural resources studies and documents such as the National Register nomination form (1979), legislative report (1994), and building inventories and evaluation report (1999), will be supplemented with additional information gathered during the *Investigation and Interim Protection Plan*'s mitigation monitoring program, project implementation monitoring tasks, and the on-going historic landscape management plan (see PPUP Part Two). Such data will allow department cultural resource specialists the opportunity to access potential impacts, suggest avoidance of impacts through re-design, implementation of treatments in compliance with the Secretary of the Interior's Standards and Guidelines for Historic Properties and Cultural Landscapes, and direct any mitigation measures necessary to reduce impacts to a level below significance.

Adaptive uses in the historic district also have the potential to create additional use impacts through new regular use in any of the four proposed PPUP Public Use Programs. Regular group activities and special events also have the potential to impact structures, features, or areas of the CCHD. Although it is the intention of State Parks to manage the adaptive uses of the cottages to avoid adverse impacts to these historic resources, not all risk can be eliminated during the rehabilitation and use of these structures. For example, there may be a fire accidentally caused by an organization or individual using one of the structures or there may be a severe coastal flood event or other "act of god" that damages historic fabric.

Mitigation/Treatment: Every effort in control of State Parks has been, and will be, made to avoid adversely impacting or effecting eligible historic resources or features in the Crystal Cove National Register Historic District. Cultural resource specialist staff has worked closely with project design staff to eliminate impacts through project re-design, implementation of appropriate historic property treatments, and preservation practices.

Compliance with the Secretary of the Interior's Standards and Guidelines for Historic Property Treatments is a requirement of both state and federal mandates and State Park's resource management guidelines and policies. As such all proposed and future work tasks will be designed and implemented in compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties and Cultural Landscapes (Weeks and Grimmer 1995; Birnbaum and Peters 1996). Applicable state mandates for historical resources such as CEQA and PRC 5024 et al. utilize these standards and guidelines as the benchmark for appropriate treatment to reduce potential effects and/or substantial changes to historical resources to a level below significance. In order to implement the Secretary's Standards for all actions proposed in this plan, a mitigation program has been outlined to assure that all potential impacts from project improvements and programs will be addressed and treated (see Section 7).

For all subsequent actions and phases, State Parks will use its project planning and project review processes for obtaining compliance with CEQA, PRC 5024.5 and other cultural resource mandates. These reviews are the formal process for implementing cultural resource specialist input and direction into Departmental actions. The review process also implements State Park's Memorandum of Understanding with the California Office of Historic Preservation in reference to the PRC 5024.5 process. PRC 5024.5 requires state agencies such as California State Parks to consult with the State Historic Preservation Officer (SHPO) on any actions that could affect historical resources. The MOU provides State Parks, due to the presence of qualified cultural resources staff, the authority to review and determine appropriate treatment measures internally. In this way cultural resource preservation guidance is inserted into all department project design and reviews.

In addition, State Parks is in the process of completing a Historic Landscape Management Plan for the CCHD (see PPUP Part Two). The CCHD historic landscape management plan will result in a document that identifies the historical significance and integrity of the contributing cultural landscape features and elements, an inventory and documentation of the existing condition of the landscape features, and an analysis that will lead to specific historic property treatment recommendations. In addition the HLMP will develop a recordation and monitoring program for implementation of treatments and a preservation maintenance guide for directing on-going work and programs from the proposed PPUP.

Finding: All together, State Park's cultural resource specialist design input and review processes, proposed mitigation program, and HLMP will provide necessary guidance and oversight to ensure that no significant adverse effects or substantial adverse changes to historical resources will result from the implementation of the PPUP and its improvements and programs.

4.2.2 Vegetation

Impact: Actions involving the manipulation of vegetation to accommodate an entrance road kiosk/turnaround, road widening, stairways, and trails to improve circulation have the potential to affect special status CSS habitat and sensitive plant species. The proposed 100-foot wide vegetation transition zone, which will serve as a fuel modification zone for the Historic District, may also affect special status CSS habitat.

Discussion: The proposed project improvements within the entrance circulation planning area (Figure 2.2 S1-S11) includes construction of a new kiosk/turnaround and a drop off area, widening of some existing roads, new trail and stairway, reconstruction of stairways and the boardwalk, abandonment of some existing parking area and new construction of others. In addition, a vegetation transition zone 100 feet around the inland Historic District perimeter is proposed to minimize fire risks to historic structures. State Parks will consult with the Newport Beach Fire Department, and as directed by the State Fire Marshall, to develop an appropriate native plant palette for CSS habitat within the transition zone. This buffer zone will impact less than 2 acres of CSS habitat. Grading and disturbance associated with construction will involve the manipulation of vegetation, which will reduce the amount of CSS vegetation. NCCP/HCP focuses on the protection

of CSS habitat and adjacent habitats to address long-term biological protection and management of multiple species, including habitat for the Federally threatened coastal California gnatcatcher. Proposed improvements, including the 100 foot transition zone, will affect 6 acres or less of CSS habitat. Temporarily disturbed areas will be replanted with appropriate plant species, either historic landscape plantings or CSS species depending on the pre-construction composition, location, and historic landscape plan. The proposed project will not impact the southern willow scrub habitat on site.

Of the thirteen rare plants identified in Rare Find, only many-stemmed dudleya is known to occur in the bluff top area. In addition, Turkish rugging (a plant of local special interest) also occurs on the bluff (Figure 2.2 S-7)(Figure 3.4). Construction activities associated with the new parking area and trail realignment on the coastal terrace may impact many-stemmed dudleya (Figure 2.2 S-4) (Figure 3.4).

Mitigation Veg-1: To the maximum extent practicable, project design will avoid or minimize impacts to CSS. All grading proposed in CSS habitat will be monitored by a qualified biologist as required by the NCCP/HCP construction guidelines in Appendix C. Staging and/or stockpile areas will be confined to designated disturbed areas outside of sensitive resource areas. Crystal Cove State Park currently has mitigation credit in the amount of 18 acres. "Take" of CSS habitat as a result of this project anticipated at 6 acres or less will be mitigated by deducting acreage at ratio of 1:1 from this mitigation credit. Temporarily disturbed CSS habitat areas will be revegetated in accordance with NCCP/HCP reserve standards.

Mitigation Veg-2: Focused surveys for many-stemmed dudleya and Turkish rugging will be conducted in the spring, prior to construction, to document specific rare plant locations in the northwest corner of the project site. Sensitive plants found adjacent to the project area will be fenced prior to construction to avoid impacts. If many-stemmed dudleya is detected within the parking lot footprint, the parking lot will be redesigned to avoid impacts to this rare plant. The proposed trail realignment will also be routed to avoid direct impacts to these sensitive plant species.

Finding: The project will have significant impacts to coastal sage scrub that have been mitigated below a level of significance though previous mitigation banking and the deduction of mitigation credits and other landscape revegetation. Potentially significant effects to two rare plants will be avoided with project design.

Impact: Actions involving the manipulation of soils and vegetation with construction activities for connections to municipal utilities including sewer, water, and electrical utilities, could create temporary adverse impacts to coastal sage scrub and disturbed riparian vegetation.

Discussion: Currently, gas and water connections to the Historic District exist within Caltrans operating right of way. The utility corridor connecting to municipal services is routed longitudinally beneath the existing paved recreation trail, and is routed transversely on the existing PCH fill slope (Figure 2.2 S-7). Sewer force mains will traverse Los Trancos Creek near the single lane bridge (Figure 2.2 S-2). The lines will be jacked or directionally drilled at least 48 inches below the depth of creek bed scour.

Sewage will be lifted from the Historic District to the municipal sewer gravity line (Figure 2.2 S-7). Vegetation around the bridge is primarily ornamental exotic species (Fig 3.4). Vegetation on the fill slope is comprised of CSS and exotic plant species. The proposed sewer force mains will traverse Los Trancos Creek at a location devoid of native riparian vegetation and up the fill slope, possibly into CSS habitat. In addition, a new 8 inch water line will be provided to serve water demands within the District (Figure 2.2 S-7) and will be routed through exotic vegetation along the fill slope to connect to the municipal water system. The water line will also be secured to the existing auto bridge, or be jacked below Los Trancos Creek (Figure 2.2 S-2). Geotechnical investigations for the proposed sites have been performed to establish geology and ground water elevations. Temporary impacts to exotic vegetation could occur should the drilling occur within the non-native riparian vegetation within Los Trancos Creek. Connection to the municipal sewer and construction of a 48 inch manhole will impact less than 0.5 acres of CSS habitat.

Mitigation Veg-3: Every effort will be made to avoid or minimized impacts to Los Trancos Creek vegetation. All grading proposed in CSS habitat will be monitored by a qualified biologist as required by the NCCP/HCP construction guidelines in Appendix C. Staging and/or stockpile areas will be confined to designated disturbed areas outside of sensitive resource areas. Crystal Cove State Park currently has mitigation credit in the amount of 18 acres. "Take" of CSS habitat as a result of this project anticipated at 6 acres or less will be mitigated by deducting acreage at ratio of 1:1 from this mitigation credit. Temporarily disturbed CSS habitat areas will be revegetated in accordance with NCCP/HCP reserve standards. Temporarily disturbed areas will be replanted with appropriate plant species, and may include, historic landscape plantings, native riparian species or CSS species depending on the pre-construction composition, location, and historic landscape plan. The proposed project will not impact the southern willow scrub habitat on site. All activities will be subject to conditions/measures set forth in the Coastal Commission, Fish and Game, and Army Corp. of Engineers permits and the NCCP/HCP agreement.

Finding: Avoidance or minimization of impacts to southern willow scrub habitat and other Los Trancos Creek vegetation will reduce impacts below the level of significance for riparian vegetation. Coastal sage scrub in the area is included in the overall "take" of mitigation credit for CSS habitat and was mitigated below significance through previous mitigation banking efforts.

4.2.3 Wildlife

Impact: Actions involving the manipulation of vegetation to accommodate an entrance road kiosk/turnaround, road widening, stairways, and trails to improve circulation have the potential to affect threatened or rare wildlife species, their habitats, or wildlife movement in the Los Trancos drainage area. Replacement of the temporary buildings with permanent buildings in the Los Trancos Parking, Visitor Orientation, and Park Office area could create temporary noise disturbance impacts to nesting coastal California gnatcatchers.

Discussion: The NCCP/HCP protected and federally threatened coastal California gnatcatcher is known to nest along the bluff top adjacent to the proposed project and to occur in the Coastal Sage Scrub (CSS) area within the project area (Figure 3.4). Unknown populations of other sensitive wildlife species (Table B.1) may also be affected. As noted in the discussion for vegetation impacts, grading and disturbance associated with construction will involve the manipulation of vegetation, which will reduce the amount of CSS vegetation, and hence habitat for sensitive species.

As previously discussed in Section 2.1.4, the Los Trancos area will serve as a support area to the Historic District. Replacement of temporary building with permanent buildings in the Los Trancos Parking, Visitor Orientation, and Park Office area could create temporary noise disturbance impacts to nesting coastal California gnatcatchers.

The Statewide Monarch Butterfly Management Plan (Sakai 1991) has identified the small group of eucalyptus trees bordering Los Trancos creek in the Village/Hollow area as a probable autumnal site. Monarch butterfly's have been documented in the area during migration (Fig. 3.4). While the project does not propose to remove these eucalyptus trees or associated sycamores, there is a potential that increased foot traffic from visitor use in the vicinity, and tree maintenance could degrade the vigor of these trees or reduce their suitability for the monarch butterfly.

Vegetation within the historic district, whether native or ornamental, provides cover for documented wildlife movement both along the coastal bluffs and inland to Los Trancos Canyon. Construction will not substantially reduce cover for wildlife movement, but the increase in public use could reduce use of this movement corridor by some species of wildlife, such as bobcats, particularly if cover density is not maintained.

Mitigation Wild-1: Direct and indirect effects to sensitive wildlife species will be minimized through preservation of habitat and thoughtful design of the facilities. To minimize impacts to sensitive species, their habitat, and movements, the proposed improvements will be the minimum feasible to accommodate the proposed use and minimize disturbance and impacts to sensitive resources in accordance with NCCP/HCP reserve standards. Removal of CSS vegetation will occur during the non-breeding season (September 1-February 14) to avoid direct impacts to nesting pairs of gnatcatchers. A qualified monitoring biologist will be onsite during any clearing of CSS in accordance with NCCP/HCP construction guidelines (Appendix C). To the maximum extent practicable, minimization measures outlined in the NCCP/HCP construction guidelines will be adhered to. The new entrance kiosk shall be designed to minimize light impacts to sensitive birds by incorporating low level lighting for the facility and minimize light projecting toward any CSS habitat. No new facilities will be constructed outside of the existing developed footprint of the Los Trancos Parking, Visitor Orientation, and Park Office area.

In addition, construction activities producing noise levels in excess of 60 decibels within 300 feet of CSS habitat, will be scheduled to take place during the non breeding season (September 1-February 14), to the maximum extent practicable. A qualified biologist will monitor during the nesting season (February 15 – August 31), as appropriate, to assure avoidance of indirect impacts to nesting birds. If the biologist determines that

project activities are disrupting nesting behavior of California gnatcatchers, the impacting-activities will be redirected, rescheduled or modified to avoid impacts. Staging/stockpile areas will be confined to designated disturbed areas outside of CSS habitat areas during all phases of construction.

Mitigation Wild-2: Since monarch butterflies will use both eucalyptus and sycamore trees, a retaining wall will be constructed in the parking area, to reduce potential impacts to the sycamore trees by visitors in the ADA Parking/Drop Off area (Fig. 2.2, S-3).

Mitigation Wild-3: The Historic Landscape Management Plan being prepared for the Crystal Cove Historic District will incorporate measures to ensure that pruning or removal of vegetation does not 1) reduce cover required for movement of wildlife through the area, and 2) modify the eucalyptus and sycamore trees in such a way as to modify microclimate conditions required by roosting monarch butterflies.

Finding: The project has the potential to impact endangered, threatened, or rare wildlife species but through avoidance and mitigation these impacts are reduced below a level of significance.

Impact: Actions involving the manipulation of soils and vegetation with construction activities could create temporary adverse impacts to sensitive animals in the riparian corridor.

Discussion: Sewer force mains will traverse Los Trancos Creek near the single lane bridge (Fig 2.2, S-2). The lines will be jacked or directionally drilled at least 48 inches below the depth of creek bed scour. Geotechnical investigations for the proposed sites have been performed to establish geology and ground water elevations. Migratory birds occasionally utilize the landscape vegetation of the Historic District as they move up and down the coast. The vegetation around the bridge is primarily ornamental exotic species and is not likely to be used by sensitive nesting birds. However, impacts to nesting birds could occur should they nest in the degraded riparian habitat within Los Trancos Creek.

Mitigation Wild-4: If known sensitive species (Table B.1) are discovered nesting within the area of potential impact, surveys will continue through the nesting period during construction. If the biologist determines that project activities are disrupting nesting behavior of a sensitive species, the impacting-activities will be rescheduled or modified to avoid significant impacts. Following completion of construction, any areas with disturbed soils will be replanted. All activities will be subject to conditions and measures set forth in the Coastal Commission, Fish and Game and Army Corp. of Engineers permits and the NCCP/HCP agreement.

Finding: Actions involving the manipulation of soils and vegetation with construction activities could create temporary adverse impacts to sensitive animals in the riparian corridor.

4.2.4 Stream Resources

Impact: Potential impacts to Los Trancos Creek from project related soil erosion and runoff related to activities associated with removal of structures and debris, and installation of the sewer force main that will traverse Los Trancos Creek either above or below the existing streambank. Adverse impacts are temporary.

Discussion: Los Trancos Creek flows into the Pacific Ocean via a tunnel that runs under PCH. The public also uses the tunnel to access Crystal Cove Beach. Los Trancos Creek is already heavily disturbed and invaded by numerous invasive plant species including, giant reed (*Arundo donax*), periwinkle (*Vinca major*), castor-bean (*Ricinus communis*), and nasturtium *(Topaeolum majus*). Nevertheless, there are potential short-term impacts that may cause soil erosion during removal of structures and debris, and construction. Sewer force mains will traverse Los Trancos Creek near the single lane bridge (Fig. 2.2, S-2). The lines will be jacked or directionally drilled at least 48 inches below the depth of creek bed scour of added to the bridge (less desirable due to flood risk). Geotechnical investigations for the proposed sites have been performed to establish geology and ground water elevations.

In order to control surface runoff generated from the parking lots, buildings, roads, paths, and other active use areas, various structural Best Management Practices have been developed. Runoff collected from the developed portion of the park will be collected and treated in a variety of ways, as described in Section 2.1.1 and Section 2.2.

Mitigation SR-1: All soil disturbing activities, including grading and excavating, associated with road construction and other construction activities, will be subject to restrictions and requirements set for in permits. To ensure that the project would not result in adverse effects to water quality due to storm runoff, activities are subject to the requirements of the Clean Water Act and National Pollution Discharge Elimination System (NPDES). State Parks will use Best Management Practices throughout construction to avoid and minimize indirect impacts associated with the proposed project.

Finding: All potentially significant effects to wetlands and streambed water quality will either be avoided or mitigated below the level of significance.

4.2.5 Marine and Shore Habitat

Impact 1: Trampling, collecting, and manipulation of intertidal rocks and organisms by visitors could create adverse impacts to tide pool organisms. Increased visitor use of the tidal and subtidal areas may result in adverse impacts to organisms.

Discussion: Anticipated increases in visitation may result in adverse impacts to tidepool and subtidal organisms. The Underwater Park has been a popular location and with an increase in local population and park visitors, an increase in SCUBA and skin diving is anticipated. In addition to natural disturbances, such as major storm events, Murray (1997) and Valencic (1988) have identified human activities including, lawful and unlawful harvesting, visitor foot traffic, and human manipulation of organisms to be damaging southern California's heavily-used intertidal systems, including Crystal Cove.

Valencic further noted potential impacts to the subtidal areas through SCUBA, and skin diving. Sensitive to these potential impacts, the Department initiated an underwater research program at Crystal Cove in 1985 to inventory the intertidal and subtidal biological resources. Permanent transects on both underwater and intertidal rocky reefs were established in 1985-1986, which provided the opportunity to identify changes in the marine biological community over the long-term and to discover abnormalities early enough to effect remedies. Murray's (1997) analysis of the effectiveness of California Marine Life Refuges including the Irvine Coastal Marine Life Refuge concluded that as currently designed and patrolled, the Refuges are ineffective in protecting coastal populations in regions of high visitor density.

In response to Dr. Murray's findings, State Parks joined other coastal landowners (cities, county, and state) to form the Regional Marine Life Refuge group, a subcommittee of the Orange County Coastal Coalition, whose goal is to help protect this overused resource. They have secured grant funds from the California Coastal Conservancy for a project leader and volunteer coordinator, created signage for use throughout the county, developed and distributed an interpretive tide pool visitor video for classrooms, created a pamphlet and identification guide for tide pool classes, conducted annual teacher orientation on marine sciences, conducted several resource code violations trainings to county, city and state peace officers, and developed an Orange County intertidal monitoring program with protocols of sampling for comparable measures throughout the county. The Crystal Cove State Park interpreters, lifeguards, and rangers will use these resources to educate visitors how to be a responsible user of the coastal intertidal areas. Additionally, it is the intention of State Parks to bring the tidepools and offshore marine environment to the classroom through the use of interactive internet/satellite technology.

In addition to a 2001-2002 monitoring project by Dr. Murray, Crystal Cove has procured funds from the Coastal Impact Assistance Program for a 2002-2003 intertidal monitoring contract that will replicate Valencic's 1986 methodology. Comparing recent monitoring results to earlier studies will enable the Department to identify abnormalities and incorporate additional protection as necessary.

The Preservation and Public Use Plan proposes use of one of the buildings within the Historic District as a Park Operations/maintenance office that would include office space for Park Rangers. This facility would enhance natural resource protection by providing on-site law enforcement. Not only would this be a deterrent to violation of Park regulations, but it would also facilitate response by enforcement officers.

Mitigation MSH-1: The Crystal Cove State Park interpreters, lifeguards, and rangers will use educational resources to educate visitors how to avoid or minimize impacts to the intertidal areas. A SCUBA/skin diver pamphlet will be developed for distribution to divers using the Underwater Park. State Parks will continue monitoring efforts and compare results with earlier studies to determine if additional protection measures are needed. Additionally, it is the intention of State Parks to bring the tidepools and offshore marine environment to the classroom through the use of interactive internet/satellite technology. It is anticipated that the above management efforts will provide adequate protection to the Parks intertidal and subtidal resources, however, State Parks will consider a variety of alternative management options if current management efforts

cannot maintain a healthy system. Additional management actions may include increased Ranger patrol of sensitive marine resources, seasonally restricting public access to supervised visits or guided tours to tidepool and subtidal areas, and temporary and/or permanent closure of impacted areas.

Findings: There are significant adverse environmental effects associated with overuse of the tidepools that are aggravated by population growth in the area as a cumulative impact and by the proposed program uses associated with the *PPUP*. Long term adaptive management actions by State Parks will mitigate these impacts below a level of significance.

Impact: Construction activities and increased public use in the Crystal Cove Historic District have the potential to affect the Federally threatened western snowy plover.

Discussion: The federally threatened western snowy plover has been observed on the beaches of Crystal Cove Beach during the winter (non-breeding) season. There is very little native vegetation in beach area of the Historic District and the available nesting habitat for the snowy plover is of low quality. No nesting plovers have been previously documented at Crystal Cove and none were detected during 2002 surveys and field investigations. The beach is currently open to public recreation, however, implementation of the Preservation and Public Use Plan is anticipated to increase the number of visitors, particularly during the summer season. While it is not anticipated that project implementation will significantly affect wintering behavior, if the plovers are found nesting on the beach in the future, there is potential for demolition and construction activities, as well as human use to adversely affect plovers.

Mitigation: If nesting plovers are detected adjacent to the project area, project activities will be scheduled to avoid the nesting season.

Finding: The project has the potential to impact endangered, threatened, or rare species but through avoidance these impacts are reduced below a level of significance.

4.2.6 Paleontology

Impact: Grading and excavation for utility installation for the proposed project, particularly near Los Trancos Creek and on the coastal bluffs, may affect paleontological resources present in the project area.

Discussion: Paleontological resources are likely to be present on the project site in areas where slope stablization, sewer and utility excavation are proposed. Any areas that are undisturbed may contain paleontological resources since Monterey Formation is present. Minor grading for trails and paths and excavations for the sewer and utility lines may also impact paleontological resources, particularly near coastal bluffs. These resources are important for their scientific and educational values and shall be salvaged and/or protected for study and display.

Mitigation: A qualified paleontologist will develop a plan for salvaging and/or protecting paleontological resources during the construction phase of the project. If paleontological

resources are discovered during excavation or grading, work will be redirected at that site until the resource(s) can be protected, recorded and/or recovered.

Finding: Potentially significant impacts to paleontological resources will be mitigated through recordation, protection and/or recovery. These impacts will be reduced to a level below significance.

4.2.7 Coastal Processes, Geology and Erosion

Impact: Due to the project's coastal location, coastal bluffs and erosion impacts are very sensitive and potentially significant within the entire project site. The project proposes to reconstruct slopes in select locations where cottages are at risk. The project also proposes minor new road construction and installation of sewer and utilities on and near coastal bluffs and fill slopes. Use of the Historic District for program uses, particularly for overnight accommodations, may pose some risk to the public during major storms, tsunamis, floods, and other natural events.

Discussion: Modification to the existing channel of Los Trancos Creek to better control flood events is not proposed because the required channel widening/deepening would encroach into the structures intended for protection, alter stream mechanics, impact wetland vegetation, and require a retaining wall to restrain the existing PCH fill slope.

Mitigation of wave up rush by constructing new hardened protection devices is not proposed because it would be a contradiction to the state park coastal protection policy as it would inhibit natural beach erosion and depositional processes. Redistribution of seasonal sand deposits to construct protective berms is not proposed due to the disruption to natural beach profiles/formations that would result. However temporary sandbagging would be utilized during threatening events to protect historic features.

A potential for global slide at North Beach would prevent the use of 10 cottages for overnight accommodations unless the slope is reconstructed in this area. Early construction of the Bluff Top building site and the access road to upper North Beach in part contributed to this condition due to cut and fill operations at that time. The landform is not in a natural state. Therefore mitigation is recommended to reduce both the health and safety risk and the risk to the historic features. This would inhibit natural coastal bluff appearance and sloughing. The preferred corrective measures are a combination of material removal and replacement and soil nail wall construction . Construction access for slope reconstruction will likely require the temporary removal and replacement and/or reconstruction of the cottages and landscape features. The reconstruction would be approved by the state park historian to reduce visual changes to the historic landscape below a level of significance.

Mitigation : Reconstruction of the slopes would require a combination of removal and replacement of the cottages, replacement with an approved soil type, and soil-nail or tie-back walls that are visually hidden. Final design of these elements would be reviewed by a state park historian and State Parks will endeavor to construct the least invasive design while meeting the department's ***Mission***. On site lifeguards and state park rangers will

evacuate people, if necessary, to avoid placing the public at risk to major storms or other natural events to which the Historic District is susceptible.

Finding: Because the coastal bluff at North Beach is not entirely in a natural state and visual impacts will be mitigated, potentially significant effects to coastal bluff will be mitigated below a level of significance. State Park law enforcement personnel will prevent significant risks to the public.

4.2.8 Archaeology

Impact: Construction of circulation or utilities for the project may adversely affect archaeological resources in several locations.

Discussion: The boundaries of site CA-Ora-1429 remain fully unidentified. The geologist working on site for the geotechnical studies stated that he believed the entire area between the entrance road and tunnel had been cut and filled, making discovery of intact deposits unlikely in that area. The disturbed fill soils revealed during State Parks archaeological testing tends to support this assessment. However, the site is known to be covered by approximately 1.3 meters of overburden in the area excavated by Chase in 1997. It is entirely possible that intact deposits do remain under the layer of fill that we augered through, but are too deep to be reached by our equipment. Additional testing near CA-Ora-1429 showed that there were no midden soils or artifacts to indicate that this deposit is cultural. The sparseness of the deposit and proximity to the beach would tend to indicate a natural deposit. (Carver 2002)

Mitigation: Any future trenching or excavation anywhere in the Historic District that would extend more than one meter below the surface will be monitored or pre-tested by a qualified archaeologist to assure no impacts to any previously unknown deposits. All excavation within or near the boundaries of CA-Ora-1429 will require archaeological review and testing or monitoring as appropriate due to the possibility of encountering intact deposits. A test excavation unit is recommended prior to construction in one specific location of the proposed underground utility routes to assure appropriate treatment plans are implemented. Additional testing will determine if the site identified in the early 1990's has been destroyed and to better define the boundaries of CA-Ora-1429 and any newly discovered resources.

This, and all subsequent, archaeological research and treatment will be used to direct future project actions to reduce potential effects and/or substantial changes to archaeological resources to a level below significance. In order to achieve this, a mitigation program has been outlined to assure that all potential impacts to archaeological resources from project improvements and programs will be addressed and treated (see Section 7).

State Parks will also use its project planning and project review processes for obtaining compliance with CEQA, PRC 5024, and other cultural resource mandates in reference to archaeological and cultural resources. These reviews are the formal process for implementing archaeological expertise, treatment, and mitigation measures to avoid adverse effect during Departmental actions. The review process also implements the

Department's Memorandum of Understanding with the California Office of Historic Preservation in reference to the PRC 5024.5 process. PRC 5024.5 requires state agencies such as California State Parks to consult with the State Historic Preservation Officer (SHPO) on any actions that could adversely affect historical resources. The MOU provides State Parks, due to the presence of qualified cultural resources staff, the authority to review and determine appropriate treatment measures internally. In this way cultural resource preservation guidance is inserted into all department project design and reviews.

Finding: Potentially adverse impacts to archaeological resources will be mitigated below a level of significance.

4.2.9 Traffic

Impact: The project proposes changes in land use through cottage adaptation and the proposed programs or special events that will generate different estimated traffic volumes and types of vehicles than currently or previously existed.

Discussion: Special events are anticipated to be held at the Historic District on a permitted basis. The scope and scale of any special events will be limited by the parking at Los Trancos and the numbers of people that the Historic District can accommodate. These limitations are expected to largely prevent significant traffic impacts. However, certain special events, such as film shoots, may require large vehicles including buses or trailers to park at Los Trancos and many people to enter the lot within a short period of time. These special events could cause temporary traffic delays on PCH.

The change in land use for the programs and operations is expected to only generate a nominal change in traffic volumes and operations on Pacific Coast Highway. Peak hour and period demand for Pacific Coast Highway and that for the Los Trancos/Historic District parking area do not occur simultaneously. Weekend projections for Pacific Coast Highway were not available. Therefore, for the purposes of this analysis 75% of the projected peak hour afternoon weekday traffic for Pacific Coast Highway was assumed to conservatively represent the estimated weekend demand. Additionally, since Los Trancos provides the only significant parking capacity serving the Historic District, the worst case scenario of a full parking area was assumed. This resulted in an extrapolated preliminary estimate of 225 VPH entering and 200 VPH exiting during the peak hour. Finally, a conservative estimate of 20% "turn away" due to a full Los Trancos was assumed increasing the estimate for entering/exiting traffic in the peak hour from 225 to 270/200 to 240 VPH. This reflects an increase of approximately 160/150 VPH entering/exiting vehicles above what is observed today. Therefore, per the analysis only this increase was added to that projected for Pacific Coast Highway in the Austin-Foust Associates report.

The Los Trancos/Historic District intersection is configured with a protected left turn pocket striped into a 12 foot median, three through lanes, and one right turn lane in both the NB and SB directions. The entrance to Los Trancos/Historic District is striped as a right turn lane and a through/left turn option lane in both the WB and EB directions. The percentage of SB and NB vehicles entering Los Trancos was generated using the ratio of

NB and SB traffic distributed at the Newport Coast Drive intersection. The ILVH calculated for the peak hour was approximately 985, which is significantly less than the 1200 ILVH threshold used to define stable operations for a signalized intersection (Figure 4.1).

The project will require an encroachment permit from the California Department of Transportation for several improvements including utilities. This temporary construction is not anticipated to generate significant traffic impacts.

Mitigation: Traffic control for special events will be provided by Park operations or the event sponsor, as needed. No other mitigation required because traffic impacts are not anticipated to be significant unless there is a special event.

Finding: Traffic generated by special events will occasionally generate significant traffic impacts on PCH. Traffic control for special events and the limitation of the types of special events permitted will mitigate this impact below a level of significance.

4.2.10 Aesthetics

Impact: Although the project will result in a long-term improvement in aesthetic values within the Historic District, there will be temporary adverse impacts associated with construction and minor impacts with the entrance road changes and kiosk installation.

Discussion: The Crystal Cove State Park General Plan lists preservation of the outstanding scenic quality and open space character of the park as a Plan Objective. The Crystal Cove Historic District has a unique visual ambiance within the spectacular natural setting of Crystal Cove. Construction within the Historic District, including partial slope buttressing and reconstruction, and the restoration, removal, replacement and renovation of the cottages will cause substantial disruption within this setting. Although all of the construction and disruption will be temporary in nature, implementation of the *PPUP* will occur in stages over a period of years. This will create significant visual impacts, some of which are expected to occur during the peak season in order to prevent storm damage to the cottages. The new parking lot proposed on Figure 2.2, S-4 will cause visual impacts. Although a worst-case design for natural resources, the current design tucks the parking lot into a depression where it is not highly visible and there is existing erosion damage. This design is preferable for historic resources but may need to be modified during final design. Should the parking lot be moved closer to or within the Historic District, there would be adverse aesthetic impacts associated with construction of a 5 foot high retaining wall and the non-historic presence of the parking lot and cars.

The reconstruction of the Pedestrian Bridge will allow ADA access into the Multi-Use commons but will have new ramps that will have a minor adverse visual effect on the Historic District. The pedestrian bridge, first identified in the *Investigations and Interim Protection Plan*, will closely follow the design of the original bridge but be wider and constructed to reduce the potential for loss (see Section 2.1.1).

The County of Orange has designated PCH as a Scenic Viewscape Corridor, however, much of the project area cannot be seen from the highway. The primary change within

the highway viewshed will be at the entrance where the road will be realigned and the Kiosk installed. This impact would not be significant due to the minor modifications and presence of other park facilities nearby.

Mitigation: Bamboo fencing or a similar material will placed around the construction sites when feasible. Compatible building materials, approved by a state park historian would be used for any improvement within the Historic District.

Finding: Implementation of the proposed project will cause significant aesthetic impacts during construction that cannot be fully mitigated. A statement of overriding considerations will be prepared.

4.2.11 Water Quality

Impact: The project is located in an area of extreme sensitivity to water quality impacts. Construction and park interpretive and recreational activities may adversely impact water quality.

Discussion: Changes to Surface Hydrology

Changes to surface hydrology within the project limits are primarily the result of new circulation elements and the widening/altering of existing ones. The result is no net gain in impervious surfaces as shown in the table below. Criteria used to select surface material were cultural significance, grade, frequency/traffic loading, and accessibility. Where grade and traffic frequency or loading are key design considerations, durable and low maintenance surfaces such as asphalt are preferred. Where grade and or traffic activity will be minimal, and thus low maintenance, permeable surfaces are the preference. Where accessibility is a design requirement, both pervious and impervious surfaces will be employed. The net result will be no net or only a minimal increase in impervious surfaces within the project limits.

Changes to Ground Water Hydrology

With the abandonment of existing septic systems, and no or minimal increase in irrigated landscape, interflow to Los Trancos Creek is expected to remain unchanged or be reduced.

Circulation Element Surface Run Off

Run off from proposed or select existing circulation elements will be treated by a combination of bio and mechanical filters (Figure 2.2 sheet S-3 & 9)**.** Pervious swales or sheet flow through vegetated areas, and inclusion/addition of mechanical filters at drainage inlets will be used to achieve filtering of run off. All drainage inlets will discharge directly into Los Trancos creek through an existing rock lined spillway type energy dissipator.

Los Trancos Creek

The Health Department of Orange County regularly samples outflow of Los Trancos Creek and contact warning postings have occurred. Run off and sub surface flows from Pacific Coast Highway, Irvine Ranch Development and the Historic District are tributary to Los Trancos. The Irvine Ranch Development has constructed filtration features for management of its run off. This project will abandon existing septic tanks and/or cisterns, and provide filtration of runoff from the widest circulation elements.

Cleanup of Los Trancos Creek will be limited to periodic removal of trash and debris. The creek river mouth traps debris left on the beach or washed to shore during high tides. The clean up effort may include volunteer assistance. Between clean-up operations, the unsightliness of trapped refuse may serve as an educational case in point to promote recycling and responsible refuse disposal.

Caltrans is currently diverting and centralizing surface run off from a portion of Pacific Coast Highway to the Los Trancos Drainage. Caltrans will operationally abandon two existing culverts. Caltrans is seeking funding to physically abandon and restore landforms at these and other culvert locations within the CCSP. However, one culvert, located downcoast of the Shake Shack, will remain operational to capture and deliver subsurface flows from the inland areas to South Beach.

Mitigation: All soil disturbing activities, including grading and excavating, associated with road construction and other construction activities, will be subject to restrictions and requirements set for in resource agency permits. To ensure that the project would not result in adverse effects to water quality due to storm runoff, activities are subject to the requirements of the Clean Water Act and National Pollution Discharge Elimination System (NPDES). State Parks will use Best Management Practices throughout construction to avoid and minimize indirect impacts associated with the proposed project.

State Parks will coordinate with and comply with Regional Water Quality Control Board (RWQCB) criteria as follows:

- Preparation of a Stormwater Pollution Prevention Plan, if required.

- Best Management Practices for construction including silt fencing, sand bagging, and erosion control measures for disturbed surfaces.

State Parks will implement BMP's similar to those in place at Reef Point. These BMP's include a vacuuming program of twice per month (June – October) and once per month (November – May), daily litter removal from all parking areas, and inspection and removal of litter from culverts, drainages and other areas.

Finding: Potential impacts to water quality will be mitigated to a level below significance.

NET IMPERVIOUS SURFACE GAIN
CRYSTAL COVE

					IMPERVIOUS SURFACE ADDITION/ELIMINATION	
CIRCULATION ELEMENT	SUBPLANNING AREA	NEW/EXISTING ELEMENT	SITE PLAN DESIGNATION	SURFACE	Length (FT)	Impervious Area (ACRE)
ENTRANCE FROM PCH						
Bike Path Realignment	Entrance/PCH Edge	N	TR1	Impervious (AC)	328	0.075
Bike Path Abandonment		E		Impervious (AC)	260	-0.060
Walk		E		Impervious (AC)	15	0.002
Entrance Road Realignment		N	ER1	Impervious (AC)	282	0.078
Turnaround		N	TD	Pervious		0.000
BLUFF ENTRANCE ROAD	Bluff Top	E	BL	Impervious (AC)	283	0.065
OPERATIONS PARKING	Entrance/ PCH Edge					0.000
Parking Area		N		Pervious		0.000
Entrance to Parking Area		N	BL1	Impervious (AC)	125	0.057
ENTRANCE TO HOLLOW	Village/Hollow	E	ER2	Impervious (AC)	320	0.066
SHUTTLE DROPOFF/PICKUP	Outside Village/Hollow	N	HT	Impervious (AC)	112	0.031
ADA PARKING	Village/Hollow					
Parking Area		E		Pervious		0.000
Accessible Islands		N		Pervious		0.000
GUEST CHECK-IN	Bluff Top	E		Pervious		0.000
MULTI-PURPOSE MEETING/CLASSROOM	Bluff Top					
*Parking Area		E		Impervious (AC)		-0.122
ADA Parking		N		Impervious (PCC)		0.012
NEW RESTROOM	Village/Hollow					
Restroom		N		Impervious	8x8	0.001
Shed		E		Impervious	6x12	-0.002
BOARDWALK and STAIRWAYS	Various	N,E		Pervious		0.000
ENTRANCE TO ADA PARKING	Village/Hollow	E	ER3		75	0.008
*EXISTING PARKING (North Beach)	North Beach	E		Impervious (AC)		-0.143
				NET GAIN (Acre)		**0.069**

*Element surface to be removed

4.3 Impacts that are Less than Significant

4.3.1 Public Services/Schools

Impact: Potential conflicts with public services due to project construction and implementation.

Discussion: Planning for the proposed project has been conducted in coordination with the California Department of Transportation (Caltrans), the Irvine Ranch Water District, and the Newport Beach Fire Department. A site meeting was held in early October 2002 with the Newport Beach Fire Department, which is the responding entity for emergencies within the Historic District. Issues discussed were vehicle and personnel access routes, vegetation management, sprinkler devices, and fire fighting appurtenances. As proposed by the project, some main roads within the Historic District will be widened to 20' to address the Department's concern regarding providing adequate access for its vehicles. Other access routes will be resurfaced to an all weather condition. Additionally, fire hydrants will be strategically placed to best support the Department in its fire fighting capacities should such be needed within the Historic District. Fire hose storage boxes placed adjacent to hydrants is not considered an effective substitute for fire vehicle access where such access is inadequate.

The proposed project will not significantly affect operations for the Irvine Ranch Water District. The entrance road realignment will need encroachment permits and approval from Caltrans. State Parks will continue to coordinate with all public services, as needed, throughout the planning and construction of the project.

4.3.2 Land Use & Planning

Impact: The proposed project would require a General Plan Amendment for changes identified in the *PPUP* in Part Three, pages 161 to 169. Local Coastal Plans will also need to be updated by local agencies to incorporate the changes to the Crystal Cove General Plan, an adopted Public Works Plan, and the recent annexation to the City of Newport Beach.

Discussion: The coastal terrace and beach upcoast from Muddy Creek, including the Historic District, was annexed into the to the City of Newport Beach effective January 1, 2002. State Parks Crystal Cove General Plan was certified as a Public Works Plan by the California Coastal Commission in 1982, therefore, State Parks does not fall under the jurisdiction of the LCP for permitting purposes at this time. The California Coastal Commission indicates that coordination with the County of Orange should be conducted regarding the *PPUP*. This will enable the County, or ultimately the City of Newport Beach, to update their LCP, if necessary, to reflect the changes to our Public Works Plan.

With the exception of those issues identified in Part Three of the *PPUP*, the proposed project is consistent with the Crystal Cove State Park General Plan, the public works plan with current jurisdiction over the site, and State Park's Coastal Erosion Policy. A Coastal Permit will be required from the California Coastal Commission for all improvements.

4.3.3 Air Quality

Impact: Project operation and construction has the potential to cause new adverse air quality impacts due to minor grading, restoration and reconstruction. Use impacts will be similar to past uses and could include barbeques and cooking at the concession.

Discussion: The proposed project in is an air quality non-attainment area. However, the proposed project is consistent with air quality management policies in the current Air Quality Management Plan and its emissions would be below the emissions thresholds established in the South Coast Air Quality Management District, *CEQA Air Quality Handbook*, April, 1993. Barbecues will be allowed at designated areas picnic areas but will be located in joint use areas creating only nominal effects on air quality. The food service concession would need to abide by current regulations for food service establishments. No significant effects to air quality are anticipated to occur from implementation of the proposed project.

Potential air quality impacts during construction include fugitive dust from removal and restoration/replacement of cottages, grading and emissions from utility engines, generators, and construction vehicles and heavy equipment. Nearby sensitive receptors, such as wildlife, pedestrians or bicyclists may be exposed to blowing dust or odors associated with asphalt paving, depending on the weather and prevailing wind conditions. Standard specifications for construction equipment and processes, including frequent watering and containment of hazardous wastes, will reduce fugitive dust and other emissions below a level of significance.

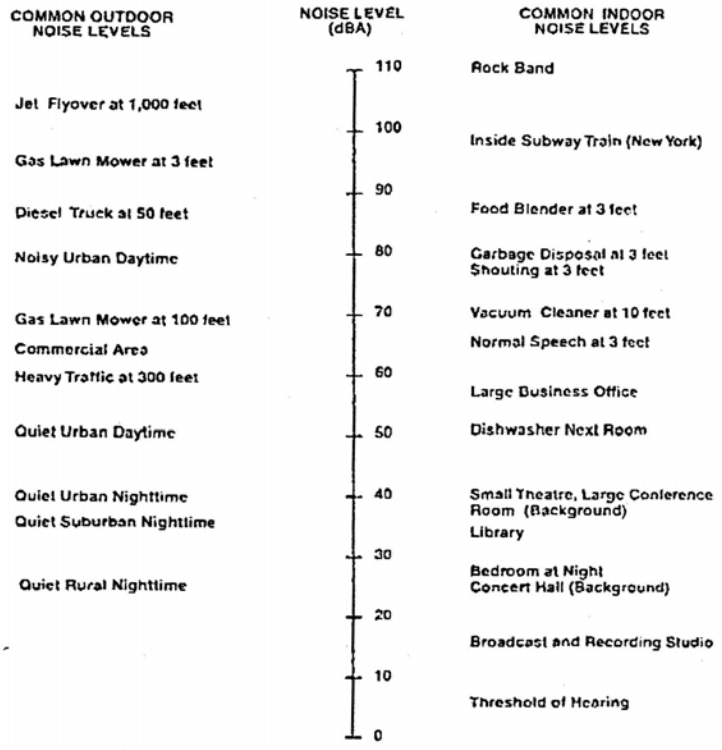
The area disturbed by earthmoving equipment or excavation operations shall be minimized at all times. On-site vehicle speed shall be reduced to 15 mph. Storage piles of material and graded areas shall be either watered twice daily or covered to prevent fugitive dust emissions. Coastal Sage Scrub located within the likely dust drift radius of construction areas shall be periodically sprayed with water to reduce accumulated dust on the leaves as recommended by monitoring biologists in accordance with NCCP/HCP construction guidelines. All mechanical equipment shall be operated in compliance with appropriate air quality controls.

4.3.4 Noise

Impact: Potential impacts of proposed program noise and construction noise on sensitive receptors including wildlife and visitors.

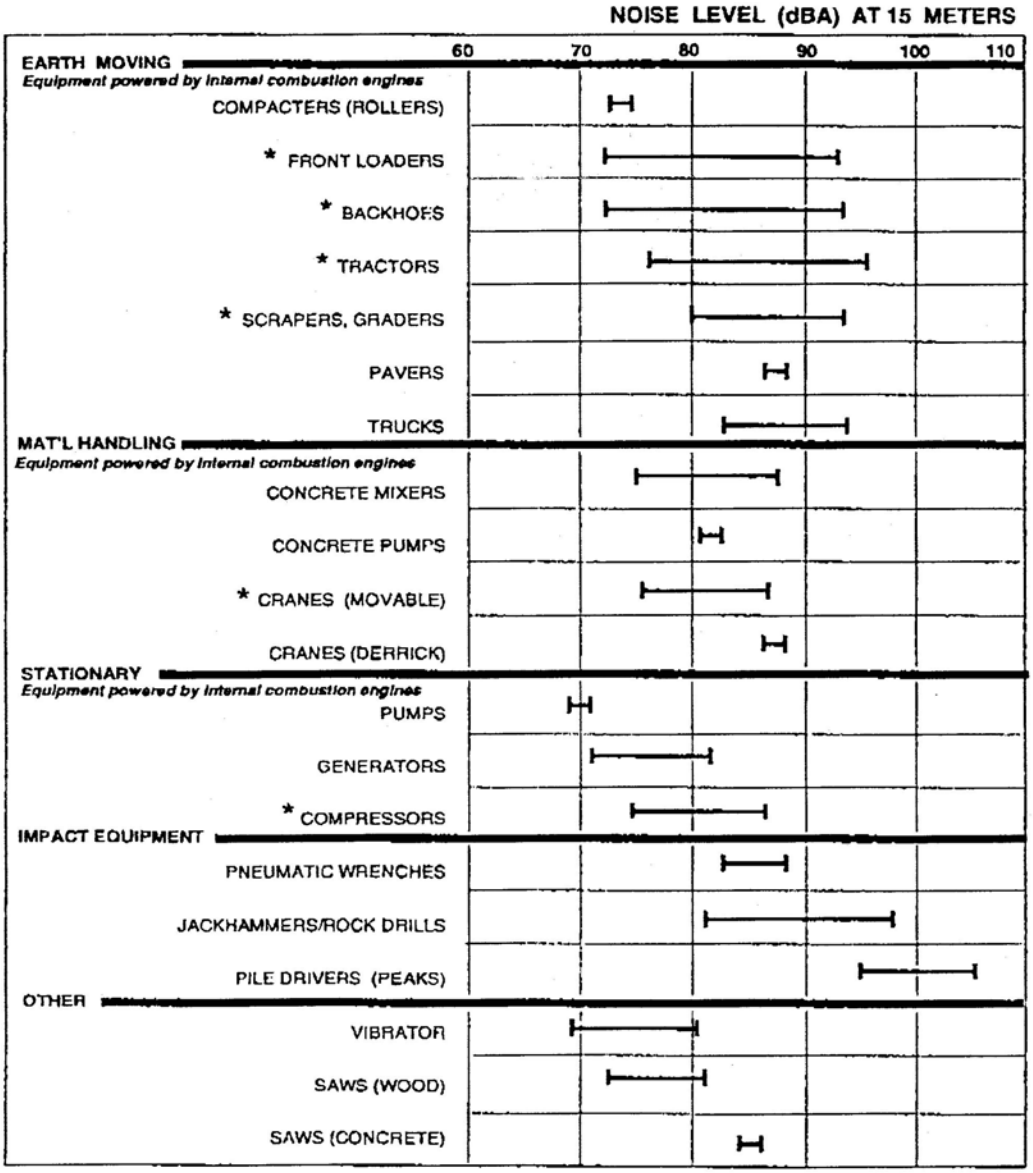
Discussion: Noise associated with the program operations is not expected to be significant due to the presence of law enforcement personnel on site to prevent excessive noise and the separated topographical nature of the Historic District. Familiar noise levels are shown on the Comparative Sound Level table below. The operation of the Historic District programs should alternate between 50 decibels and 65 decibels depending on the level of activity. The noise generated by the surf will prevent the Historic District from reaching the Quiet Urban Nighttime levels of 40 decibels. Typical noise levels associated with construction is shown on Construction Equipment Noise Ranges table. Some of the project construction will be very close to sensitive receptors

COMPARATIVE SOUND LEVELS



COMMON INDOOR AND OUTDOOR NOISE LEVELS

CONSTRUCTION EQUIPMENT NOISE RANGES



* The noise emission levels listed for various types of construction related machinery are based on limited samples. The values are presented in order to give the reader a basic understanding of where particular pieces of machinery fit on a noise-range spectrum. The equipment with an asterisk were provided by the American Road Builders Association, 1973.

such as the program and beach users and/or wildlife, and can be quite disruptive. However, much of the project construction will be in areas that will have little or no noise effect on sensitive receptors due to the nature of the project site's varied topography. Similarly, the loudest activities such as drilling should occur outside of the peak season for beach users in that location.

Due to topography and distance the construction activities will not exceed limits comparable to the County's noise limit of 75dBA except with the Caltrans Right of Way or within Crystal Cove State Park. Housing in Newport Coast should have no perceivable effect due to the distance between the project and the new development. Additionally, PCH creates noise between the majority of the project site and the housing. Noise at Los Trancos should be similar to the existing use but may be heard at the golf course should a permanent Visitor Center be constructed. Construction near sensitive birds will be avoided during nesting season or will be monitored by a qualified biologist to determine whether or not construction noise is adversely affecting nesting birds. If the biologist determines that project activities are disrupting nesting behavior of a sensitive species, the impacting-activities will be redirected, rescheduled or modified to avoid significant impacts.

4.3.5 Hazardous Waste

Impact: The project proposes the restoration and/or reconstruction of structures which are likely to require the removal of hazardous substances.

Discussion: Structures on-site are expected to have some asbestos containing materials; lead-based and/or lead containing paints, coatings and or ceramics; ballasts containing PCBs, mercury vapor in light tubes and mercury in thermostat switches; motor oil staining of the soil; and potential organochlorine pesticides. All hazardous substances must be contained, cleaned or removed and disposed according to accepted Federal, State, and Local protocols specific to each type of substance. This will reduce the potential impact to a level below significance. Accepted Federal, State, and Local protocols will be followed for the containment, cleaning, removal and disposal of all hazardous substances.

The cottages are known to contain lead paint and asbestos. Lead paint is limited gemerally to exterior finishes and interior/exterior window frames and casings. Asbestos in the main exists in some of the flooring materials. The Interim Stabilization Project in part stabilized lead surfaces for 5 cottages in the Historic District.

The two methods of lead abatement control practiced in the State are wet film stabilization and abatement. The prior method prepares a lead surface with controlled scraping and wet sanding/washing, and then seals the surface with either a minimum of two coats of latex paint, or a single coat of a specialized material formulated to stabilize lead surfaces. The latter is the complete removal of lead paint by pressure washing which is unacceptable treatment for historic structures and not recommended by the Secretary of the Interior's Standards. A preferred method is yet to be determined and a combination of methods may be used on a case-by-case basis according to the type of siding or substrate.

The containment of asbestos may be achieved by the placement of new flooring material over existing or removal of the asbestos flooring, depending on the historical significance of the original floor finishing. A cottage specific hazardous material report will be generated prior to or during the working drawing phase.

4.4 Effects with Little or No Impacts

The project will not adversely affect water movement, groundwater, energy and mineral resources, agriculture, local plans, housing or employment.

4.5 Beneficial Effects

4.5.1 Public Park & Recreation

Current public recreational opportunities in this area are limited. The proposed project would fully open the Historic District to public use. The proposed project will serve the local community, the region, and vacationers as a unique recreational opportunity in a National Register Historic District with pristine natural resources located in the immediate area. The importance of natural and historic resources can be shown to a great variety of people using the structures available in the Historic District.

4.5.2 Historic Resources

The ending of the tenants occupation of the cottages has added several benefits to the long-term management of the historic resources at the CCHD. The most direct benefit is in State Parks ability to fully access these historic structures and features. This access has provided previously unavailable opportunity to more thoroughly study and evaluate the historical and structural condition of these resources. State Parks managers, technical specialists, and consultants now have direct oversite to identify and implement historic property treatments that were previously the responsibility of the tenants. For example, comparison of the evaluation of the historic structures in 1999 and the in-depth recordation in 2001 under the *Investigations and Interim Protection Plan* indicated substantial decline in the recorded condition of some of the cottages. Therefore, implementation of the *PPUP* will allow State Parks to rehabilitate, restore and maintain the Historic District in perpetuity while also providing the general public the unique opportunity for personally experiencing the CCHD.

4.6 Environmental Alternatives Analysis

4.6.1 No Project Alternative

The No Project Alternative would continue the status quo. The State Park operations under the Investigations and Interim Protection Plan, SCH # 2001031001, would continue indefinitely. These operations include a small amount of staff housing, lifeguard operations and maintenance operations and minor repairs. The District is open to the public, but access to the historic cottages is limited. Those buildings not identified for operations would be stabilized indefinitely but not restored or rehabilitated, similar to

the alternative identified in Section 2.3.10. The No Project Alternative would fail to fully open the Historic District to the public or provide the adaptive uses envisioned in the *PPUP*. It would also fail to restore or rehabilitate many of the unique historic features within the Historic District and fail to implement a cultural landscape plan. Therefore, the proposed project is superior for cultural resource and recreational and educational uses. The No Project Alternative would not implement the circulation changes that impact up to 5 acres of Coastal Sage Scrub, so it would be preferable to the proposed project from a natural resource standpoint.

4.6.2 Environmentally Superior Alternatives

The vision for the *PPUP* is to protect natural and cultural values while opening the Historic District to public use. The range of alternatives discussed in Section 2.3 was chosen based on public comment received during public meetings in the development and planning of the *PPUP*. These alternatives represent both large and small scale concepts. For the most part, the Proposed project incorporates the best compromise of reducing impacts to natural and cultural resources while providing the public with the opportunity to fully utilize the Historic District.

According to CEQA guidelines (Sec. 15126.6 c & f), only those alternatives that could feasibly accomplish the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects are required to be analyzed in detail. For this project, there are alternatives that are superior from a natural resource standpoint but would cause significant adverse impacts to historic resources and vice versa. The alternatives (Sections 2.3.5 & 2.3.6) that would provide new shoreline armoring and intensive slope buttressing could protect significant historic resources from loss. These alternatives could, however, adversely affect historic character due to visual impacts, are in conflict with State Parks coastal erosion policy, and conflict with natural coastal processes. The no slope remediation alternative (Section 2.3.7) would allow natural processes to resume but place the historic structures at extreme risk of loss and prevent the use 10 cottages for overnight use, a use for which the public has expressed a strong interest. Although the slopes appear natural due to minimization of the cottage's building pads and time of placement, they were modified when the Historic District was built, and that modification is contributing to the risk of a global slide.

The alternatives (Sections 2.3.11 and 2.3.12) that either remove the Historic District entirely or restrict the improvements to beach access with arrested decay of the structures, would be superior from a natural resource standpoint. These alternatives do not impact Coastal Sage Scrub and provide the opportunity to allow the area to return to a more natural setting. However, delisting and removal of the Historic District from the National Register would cause significant adverse affects to historic resources in conflict with PRC 5024.

The only alternatives that would be superior for both natural and cultural resources are no new parking lot west of PCH (Section 2.3.9) and variations of the entrance road circulation (Section 2.3.10) and new trail (Section 2.3.14). By not constructing the new parking lot shown on Figure 2.2, S-4, impacts to poor quality coastal sage scrub and associated wildlife species would be avoided. Visual impacts would be avoided. All

potential impacts to many-stemmed dudleya and Turkish rugging, two rare plants, would also be avoided. However, this alternative would not allow on site parking for additional emergency vehicles, park and program staff. By not allowing parking in this area, vehicles needed for temporary access would be more likely to park in the Historic District within the areas designated primarily for pedestrians. This would create adverse congestion within the District, affecting both the aesthetic character for park users and emergency access, particularly for fire trucks. Final design of the parking lot in the proposed project may also reduce potential impacts to native plants but, if located closer to or within the Historic District, may create significant adverse visual impacts to the historic landscape.

Not constructing the new trails shown on Figures 2.2 S-3, S-7 & S-9 would avoid construction and footprint impacts to coastal sage scrub and, potentially, California gnatcatchers. Visual impacts would also be moderately reduced on the artificial slopes where the trail and stairway are proposed. However, several of the trails are already in place and used by the public as volunteer trails. Continued use of these volunteer trails causes erosion and physical impacts to coastal sage scrub as well as visual impacts and safety issues. Construction of a separated pathway will separate pedestrians from the entrance road enhancing both safety and the pedestrian's entry into the Historic District.

The entrance circulation configurations that keep the kiosk in its existing location rather than the new location shown on Figure 2.2, S-11, would avoid the impacts to Coastal Sage scrub and potential impacts to California gnatcatcher. However, these alternatives, while allowing controlled access into the central core of the Historic District, create circulation problems by allowing too many vehicles onto the entrance road and not providing controlled access to the bluff top area.

It is State Parks position that the environmentally superior alternatives would not meet the goals and vision outlined in the *PPUP*. State Parks has chosen alternatives that meet the *PPUP*'s goals while minimizing impacts to environmental resources.

5 CEQA REQUIRED CONSIDERATIONS

5.1 Significant Irreversible Environmental Changes

State Parks intends to make the Crystal Cove Historic District accessible for the education and enjoyment of the public through appropriate adaptive use of the historic cottages. Up to 6 acres of native habitat, including coastal sage scrub, will be impacted through project implementation. Coastal slopes will have minor slope remediation and there will be moderate landform changes associated with the entrance road and new parking lot. A new "living community" will be formed at the Historic District that will open the resource to the public and change the historic use from the 1920 to 1950 period of significance.

5.2 Relationship of local Short-Term Uses and Maintenance and Enhancement of Long-Term Productivity

The uses currently in place under the Crystal Cove Historic District *Investigations and Interim Protection Plan* are a temporary, short-term use that will be replaced by the permanent long-term use envisioned in the Crystal Cove General Plan and Public Use Plan. The long-term use of the project site for public park use will provide a unique opportunity to the local community, region, and vacation travelers to enjoy the ambiance of the Historic District and a breathtaking natural environment while protecting the unique historic resources located at Crystal Cove. This long term use will be flexible in it's application of the uses at the Historic District while firm in its commitment to protect the natural and cultural resources present on site.

5.3 Growth Inducing Impacts

There will be little or no growth inducing impacts because the project does not create new housing or provide infrastructure to support new residential, commercial or industrial development. Program uses at the Historic District will increase educational and recreational opportunities for the public while protecting natural and cultural resources. These opportunities will improve the existing educational and recreational opportunities by providing a unique, attractive experience to the public. While the proposed project will provide a quality of life improvement to the existing and growing communities around it, the project does not contribute to such growth as a park improvement.

5.4 Cumulative Impacts

Substantial impacts to many resources including natural resources, the visual nature of the coastline, water quality, cultural resources, and traffic are occurring in this region due to urban developments adjacent to the State Park. In particular, this nearby urban development provides direct pedestrian access through a pre-existing trail easement to the Historic District and Crystal Cove Beach. Therefore, access to the area is not limited by the size and use of the State Park parking lots, buses or the bike trail. Additionally, this nearby development and the increasing population in Orange County will continue to place increasing public demand and use impacts on the sensitive resources within and

close to the Historic District. These impacts include increased visitation to sensitive tidepools, historic resources, and habitat crucial to sensitive terrestrial species. Within this context, the State Park's actions are undertaken in an extremely environmentally sensitive manner, limiting any potential for State Park's efforts to contribute to local or regionally significant cumulative affects.

Nonetheless, State Parks has or will undertake other projects within a close proximity in Crystal Cove State Park. These projects include the Crystal Cove Historic District Interim Protection Plan, the El Morro Conversion to Campground and Day Use project, and a recently constructed day use project on the coastal terrace. The Interim Protection Plan incorporates minor projects at the Historic District with no permanent changes. The El Morro Conversion to Campground and Day Use project will incorporate permanent changes at the El Morro Village Mobilehome Park and was recently approved by State Parks. The El Morro Conversion project proposes construction of a campground entrance road that will disturb coastal sage scrub and, potentially California gnatcatchers. These proposed project impacts less that 1/2 acre of CSS habitat and 2 acres of riparian habitat. Most of the riparian habitat impacted is part of the Moro Creek restoration aspect of the project.

Since 1983, resource management projects have restored at least 50 acres of CSS to the coastal terrace, much of which is currently occupied by California gnatcatchers. The day use project on the coastal terrace constructed vista points at six locations along the bluffs with connecting trails, improved an existing amphitheater, constructed six shade ramadas, benches, picnic tables, and low level interpretive panels. The project also included native vegetation plantings. The El Morro Elementary School has recently approved a classroom expansion project for about 100 students and is in the process of approving a school playfield expansion that will include sewer hookup. The school expansion will occur within the existing school footprint except for sewer and water quality control systems. The drainage system for the school will encroach into the park at the Muddy Creek drainage where endangered species and sensitive habitat have been identified.

Future Department projects may include reconstruction of the park headquarters entrance road. Natural and cultural resources would potentially be impacted by this project but no design has been prepared for the road.

The project, when considered with other projects in the area, will not have significant adverse cumulative environmental effects but will have significant beneficial effects to public recreational and educational access.

6 REFERENCES

6.1 List of Preparers and Reviewers

Maria Baranowski, Senior Architect, B.A. Architecture, 24 years experience architecture, 12 years experience historic preservation, 9 years experience at Crystal Cove State Park. Northern Service Center.

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Crystal Silva, Student Assistant - Engineering and Architectural Sciences, 3 years of experience in Drafting and AutoCAD at the Southern Service Center

Barbara Stevens, Architectural Assistant, Auto CAD, 2 years experience at California Department of Parks and Recreation. Southern Service Center.

Alan Tang, Project Manager, B.S. Landscape Architecture, 26 years Landscape Architecture experience, 21 years experience at Crystal Cove State Park. Northern Service Center.

Howard Teaze, Senior Delineator, B.S. Landscape Architecture, 15 years landscape and irrigation design, 4 years AutoCAD drafting with California Department of Parks & Recreation, Southern Service Center.

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7 PROPOSED MITIGATION MONITORING PROGRAM & RECORD

7.1 Detailed Monitoring Program & Record

7.1.1 Historic Landscape Management Plan

As a part of carrying out the cultural resource preservation objectives of the PPUP, a *Historic Landscape Management Plan (HLMP)* will be prepared for the Crystal Cove Historic District. Furthermore, this plan will be included as a part of a first phase implementation so that adherence to HLMP guidelines and concepts becomes an established part of Crystal Cove program procedures. This management plan will provide site-specific guidelines for the rehabilitation and long-term management of the CCHD and all its contributing features and elements. These guidelines will be consistent with *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. Furthermore, the guidelines will also be consistent and coordinated with the rehabilitation treatment for the contributing buildings and structures. The management plan will be a dynamic document that is continually updated and refined. The management plan will identify the following as it applies to the Crystal Cove National Register Historic District:

1. Identification and approval of treatments or actions that are in compliance with federal and state historic preservation standards.
2. Specific historic property treatments best suited for individual areas within the Historic District.
3. Identify all contributing features and cultural landscape elements to the National Register Historic District.
4. Identify historic landscape treatments that are compatible with historic building rehabilitation treatments and create a holistic approach to the historic district resources.

The Historic Landscape Management Plan will address the following topics:

- Overall historical landscape concept and management approach for the Crystal Cove Historic District.
- Historical research of the Crystal Cove landscape and site.
- Description of Historic Landscape features and topics (including inventory and documentation).
- Specific historic property treatment for each of the Crystal Cove Historic District planning areas (the entrance and PCH edge, the village center and hollow area, the south beachfront, the north beachfront, and the blufftop). Smaller sub-areas may also be addressed. Consideration should also be given to transition areas on adjacent coastal terrace areas.
- Contemporary landscape features and topics.
- General Horticultural Management (including irrigation and integrated pest management).
- Evaluation of the impacts of proposed rehabilitation on archeological resources.

- Native Vegetation and Habitat Management within the Historic District and in adjacent vegetation transition areas.
- Los Trancos Creek management.
- Strategies for on-going maintenance.
- As with the rest of the PPUP, consideration will be given to the other PPUP objectives (sustainable design, ADA accessibility, fire protection, water quality, etc.) in developing the HLMP.

The management plan will be a source both for making informed decisions about preservation treatments for the CCHD and for guiding management, maintenance, and interpretation to be utilized by state park resource specialists, the project manager, and operations.

7.1.2 Cottage Adaptation Project Evaluation & 5024 process

During implementation planning for the Historic District a structural report was performed for the purposes of determining cottage structural deficiencies and recommending corrective measures that would both optimize cottage adaptive use while preserving cottage historic features. Please see the Cottage Adaptation and Stabilization discussion in Section 2.1.2. A second phase of the structural analysis will provide detailed cottage-by-cottage evaluation with schematic retrofitting in consultation with the state historian and in accordance with the U.S. Secretary of the Interior Standards for Historic Properties. This report will be used to develop the final plans for cottage adaptation and the project manager will incorporate the structural report's recommendations during construction. A cultural resource monitor will be on-site for inspection and recommendations during construction.

Compliance with the Secretary of the Interior's Standards and Guidelines for Historic Property Treatments is a requirement of both state and federal mandates and State Park's resource management guidelines and policies. As such all proposed and future work tasks will be designed and implemented in compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties and Cultural Landscapes (Weeks and Grimmer 1995; Birnbaum and Peters 1996). Applicable state mandates for historical resources such as CEQA and PRC 5024 et al. utilize these standards and guidelines as the benchmark for appropriate treatment to reduce potential effects and/or substantial changes to historical resources to a level below significance. In order to implement the Secretary's Standards for all actions proposed in this plan, a this mitigation program will be coordinated between the state park historian and project manager to assure that all potential impacts from project improvements and programs will be addressed and treated. The Mitigation Monitoring Program & Record Matrix in Section 7.2 outlines these requirements and timing of action. It will be implemented and signed off by the state historian and project manager.

For all subsequent actions and phases, State Parks will use its project planning and project review (DPR Form 183) processes for obtaining compliance with CEQA, PRC 5024.5 and other cultural resource mandates. These reviews are the formal process for implementing cultural resource specialist input and direction into Departmental actions.

The review process also implements State Park's Memorandum of Understanding with the California Office of Historic Preservation in reference to the PRC 5024.5 process. PRC 5024.5 requires state agencies such as California State Parks to consult with the State Historic Preservation Officer (SHPO) on any actions that could affect historical resources. The MOU provides State Parks, due to the presence of qualified cultural resources staff, the authority to review and determine appropriate treatment measures internally. In this way cultural resource preservation guidance is inserted into all department project design and reviews. Any subsequent action that is not in compliance with this EIR and its proposed mitigation or, if the action occurs after environmental changes have occurred, will require additional CEQA compliance.

7.1.3 Coastal Ecology Mitigation

Adaptive management for coastal ecology will be a long term commitment from State Parks both as mitigation for this project's potential for increasing the public's presence and in order for the Park Operations Division to implement the department's ***Mission*** of protecting natural resources. The Crystal Cove State Park interpreters, lifeguards, and rangers will use educational resources to educate visitors how to avoid or minimize impacts to the intertidal areas. A SCUBA/skin diver pamphlet will be developed for distribution to divers using the Underwater Park. State Parks will continue monitoring efforts and compare results with earlier studies to determine if additional protection measures are needed. Additionally, it is the intention of State Parks to bring the tidepools and offshore marine environment to the classroom through the use of interactive internet/satellite technology.

It is anticipated that the above management efforts will provide adequate protection to the Parks intertidal and subtidal resources, however, State Parks will consider a variety of alternative management options if current management efforts cannot maintain a healthy system. Additional management actions may include increased Ranger patrol of sensitive marine resources, seasonally restricting public access to supervised visits or guided tours to tidepool and subtidal areas, and temporary and/or permanent closure of impacted areas. If nesting plovers are detected adjacent to the Historic District, activities will be scheduled to avoid the nesting season and/or locations.

7.1.4 Ecological Mitigation for Construction and Management of *PPUP*.

During planning and construction activities to the maximum extent practicable, project design will avoid or minimize impacts to CSS. A state park ecologist will coordinate with the Project Manager team throughout the final design and review all plans prior to award of a construction contract. All grading proposed in CSS habitat will be monitored by a qualified biologist as required by the NCCP/HCP construction guidelines in Appendix C. Staging and/or stockpile areas will be confined to designated disturbed areas outside of sensitive resource areas. Crystal Cove State Park currently has mitigation credit in the amount of 18 acres. "Take" of CSS habitat as a result of this project anticipated at 6 acres or less will be mitigated by deducting acreage at ratio of 1:1 from this mitigation credit. Temporarily disturbed CSS habitat areas will be revegetated in accordance with NCCP/HCP reserve standards and, within the buffer area will be planted with fire resistant native species.

Focused surveys for many-stemmed dudleya and Turkish rugging will be conducted in the spring, prior to construction, to document specific rare plant locations in the northwest corner of the project site. Sensitive plants found adjacent to the project area will be fenced prior to construction to avoid impacts. If many-stemmed dudleya is detected within the parking lot footprint, the state park ecologist will work with the Project Manager to redesign the parking lot to avoid impacts to this rare plant. The proposed trail realignment will also be routed to avoid direct impacts to these sensitive plant species.

Every effort will be made to avoid or minimize impacts to Los Trancos Creek vegetation. All grading proposed in CSS habitat will be monitored by a qualified biologist as required by the NCCP/HCP construction guidelines in Appendix C. Staging and/or stockpile areas will be confined to designated disturbed areas outside of sensitive resource areas. Crystal Cove State Park currently has mitigation credit in the amount of 18 acres. "Take" of CSS habitat as a result of this project anticipated at 7 acres or less will be mitigated by deducting acreage at ratio of 1:1 from this mitigation credit. Temporarily disturbed CSS habitat areas will be revegetated in accordance with NCCP/HCP reserve standards. Temporarily disturbed areas will be replanted with appropriate plant species, either historic landscape plantings or CSS species depending on the pre-construction composition, location, fire department requirements, and historic landscape plan. The proposed project will not impact the southern willow scrub habitat on site. All activities will be subject to conditions/measures set forth in the Coastal Commission, Fish and Game, and Army Corp. of Engineers permits and the NCCP/HCP agreement. These conditions will be provided to the Project Manager.

Direct and indirect effects to sensitive wildlife species will be minimized through preservation of habitat and thoughtful design of the facilities as coordinated between the state park ecologist and the Project Manager. To minimize impacts to sensitive species, their habitat, and movements, the proposed improvements will be the minimum feasible to accommodate the proposed use and minimize disturbance and impacts to sensitive resources in accordance with NCCP/HCP reserve standards. Removal of CSS vegetation will occur during the non-breeding season (September 1-February 14) to avoid direct impacts to nesting pairs of gnatcatchers. A qualified monitoring biologist will be onsite during any clearing of CSS in accordance with NCCP/HCP construction guidelines (Appendix C). To the maximum extent practicable, minimization measures outlined in the NCCP/HCP construction guidelines will be adhered to. The new entrance kiosk shall be designed to minimize light impacts to sensitive birds by incorporating low level lighting for the facility and minimize light projecting toward any CSS habitat. No new facilities will be constructed outside of the existing developed footprint of the Los Trancos Parking, Visitor Orientation, and Park Office area. The vegetation that will be replanted will provide enough suitable habitat to allow continued migration of the sensitive species that utilize the Historic District. A state park ecologist will scope the plantings in the plant palate accordingly during the final landscape design.

In addition, construction activities producing noise levels in excess of 60 decibels within 300 feet of CSS habitat, will be scheduled to take place during the non breeding season (September 1-February 14), to the maximum extent practicable. A qualified biologist

will monitor during the nesting season (February 15 – August 31), as appropriate, to assure avoidance of indirect impacts to nesting birds. If the biologist determines that project activities are disrupting nesting behavior of California gnatcatchers, the impacting-activities will be redirected, rescheduled or modified to avoid impacts. Staging/stockpile areas will be confined to designated disturbed areas outside of CSS habitat areas during all phases of construction.

Since monarch butterflies will use both eucalyptus and sycamore trees, a retaining wall will be constructed in the parking area, to reduce potential impacts to the sycamore trees by visitors in the ADA Parking/Drop Off area (Figure 2.2 S-3).

The Historic Landscape Management Plan being prepared for the Crystal Cove Historic District will incorporate measures to ensure that pruning or removal of vegetation does not 1) reduce cover required for movement of wildlife through the area, and 2) modify the eucalyptus and sycamore trees in such a way as to modify microclimate conditions required by roosting monarch butterflies. The Historic Landscape Management Plan will be reviewed and subject to approval by a state park ecologist.

If known sensitive species (Table B.1) are discovered nesting within the area of potential impact, surveys will continue through the nesting period during construction. If the biologist determines that project activities are disrupting nesting behavior of a sensitive species, the impacting-activities will be rescheduled or modified to avoid significant impacts. Following completion of construction, any areas with disturbed soils will be replanted. All activities will be subject to conditions and measures set forth in the Coastal Commission, Fish and Game and Army Corp. of Engineers permits and the NCCP/HCP agreement.

7.1.5 Archaeological Mitigation

Any future trenching or excavation anywhere in the Historic District that would extend more than one meter below the surface will be monitored or pre-tested by a qualified archaeologist to assure no impacts to any previously unknown deposits. All excavation within or near the boundaries of CA-Ora-1429 will require archaeological review and testing or monitoring as appropriate due to the possibility of encountering intact deposits. A test excavation unit is recommended prior to construction in one specific location of the proposed underground utility routes to assure appropriate treatment plans are implemented. Additional testing will determine if the site identified in the early 1990's has been destroyed and to better define the boundaries of CA-Ora-1429 and any newly discovered resources.

This, and all subsequent, archaeological research and treatment will be used to direct future project actions to reduce potential effects and/or substantial changes to archaeological resources to a level below significance. In order to implement the Secretary's Standards for all actions proposed in this plan, a this mitigation program will be coordinated between the state park archaeologist and project manager to assure that all potential impacts from project improvements and programs will be addressed and treated. The Mitigation Monitoring Program & Record Matrix in Section 7.2 outlines these

requirements and timing of action. It will be implemented and signed off by the state historian and project manager.

State Parks will also use its project planning and project review processes for obtaining compliance with CEQA, PRC 5024, and other cultural resource mandates in reference to archaeological and cultural resources. These reviews are the formal process for implementing archaeological expertise, treatment, and mitigation measures to avoid adverse effect during Departmental actions. The review process also implements the Department's Memorandum of Understanding with the California Office of Historic Preservation in reference to the PRC 5024.5 process. PRC 5024.5 requires state agencies such as California State Parks to consult with the State Historic Preservation Officer (SHPO) on any actions that could adversely affect historical resources. The MOU provides State Parks, due to the presence of qualified cultural resources staff, the authority to review and determine appropriate treatment measures internally. In this way cultural resource preservation guidance is inserted into all department project design and reviews.

7.1.6 Water Quality Mitigation

All soil disturbing activities, including grading and excavating, associated with road construction and other construction activities, will be subject to restrictions and requirements set for in resource agency permits. To ensure that the project would not result in adverse effects to water quality due to storm runoff, activities are subject to the requirements of the Clean Water Act and National Pollution Discharge Elimination System (NPDES). State Parks will use Best Management Practices throughout construction to avoid and minimize indirect impacts associated with the proposed project.

State Parks will coordinate with and comply with RWQCB criteria as follows:

- Preparation of a Stormwater Pollution Prevention Plan, if required.

- Best Management Practices for construction including silt fencing, sand bagging, and erosion control measures for disturbed surfaces.

- State Parks will implement BMP's similar to those in place at Reef Point. These BMP's include a vacuuming program of twice per month (June – October) and once per month (November – May), daily litter removal from all parking areas, and inspection and removal of litter from culverts, drainages and other areas.

7.2 Mitigation Monitoring Program & Record Matrix – *PPUP*

Mitigation Measure	Timing of Action	Reporting Methods & Standards	Monitoring Reporting Party	Check Off & Date
1. For temporary construction activities with potential to affect aesthetics and public access within the Historic District, including but not limited to the removal and replacement of cottages and slope remediation. A case-by-case scenario will be developed to reduce or minimize adverse visual and access impacts to the public. The work area will be fenced off as needed but the fenced area will be kept to the minimum needed for construction. If feasible, adverse visual effects in core areas will be screened in a variety of ways including the use of tents, vegetation or bamboo fencing. Other areas of the Historic District may be temporarily utilized for programs while the preferred area is undergoing renovation.	Prior to activities, at pre-construc-tion meetings, during activities	Agreements between project manager, contractor, historian and park operations to minimize effect to the public while allowing the preservation/ adaptation of the historic resource. Each cottage or element of construction will be addressed on a case-by-case basis to protect the resources and public safety and enjoyment.	Project Manager Historian Operations	
2. For each activity with the potential to affect water quality The most effective and appropriate combination of Best Management Practices (BMPs) will be used to protect the resources on site and nearby for all phases of work activity. Stormwater and pollutants will be contained on site and evacuated offsite to appropriate, approved facility. No pollutants or sediment will be allowed to enter Los Trancos Creek or the ocean. Disposal of potential pollutants will be conducted according to accepted protocols. A Stormwater Pollution and Prevention Plan will be submitted to the Santa Ana RWCQB for approval.	Prior to each phase of construc-tion or investi-gation activity	Development of appropriate BMPs will be based on coordination between the project manager, contractor, and state park historian, archaeologist, and/or ecologist and monitoring of the effectiveness of the BMPs.	Project Manager Archaeologist Historian & Ecologist Monitors	
3. For each activity with the potential to affect historic fabric A project file will be created based on the second phase of the structural	Prior to activities,	Pre & Post Photo Documentation &	Project Manager	

Mitigation Measure	Timing of Action	Reporting Methods & Standards	Monitoring Reporting Party	Check Off & Date
#3. cont.) report. This file will also contain the Historic Landscape Management Plan. A copy of the file will kept with the historian. For all active phase of work, copies of the appropriate sections will be provided to the project manager and the district on-site. All work will be done in a manner that complies with the *Secretary of the Interior Standards for the Treatment of Historic Properties* (Weeks and Grimmer 1995) and must be approved by a state park historian. If the dilapidated/destroyed sections of historic features represent original historic fabric they will be replaced with identical type materials. Additionally, all projects within the Historic District will be subject to State Park Department Operations Manual (DOM) process and the PRC 5024 MOU with the Office of Historic Preservation.	at pre-construc-tion meetings, during activities	Monitoring Report/ Record for the CEQA file; attach to the 5024 form; copy of site record sent to the Historic Resources Information Center at CSU Fullerton, and Central Records for the unit.	Historian	
4. For all activities that may affect the landscape plantings and landform within the Historic District. Refer to Historic Landscape Management Plan (HLMP) for all specific historical landscape treatments, horticultural management and on-going maintenance, Los Trancos Creek management, and native vegetation and habitat management within the Historic District and adjacent vegetation transition areas. Additionally, all projects within the Historic District will be subject to State Park Department Operations Manual (DOM) process and the PRC 5024 MOU with the Office of Historic Preservation.	Prior to activities, at pre-construc-tion meetings, during activities	Pre & Post Photo Documentation & Monitoring Report/ Record for the CEQA file; attach to the 5024 form; copy of site record sent to the Historic Resources Information Center at CSU Fullerton, and Central Records for the unit.	Project Manager Historian Operations	
5. For all activities that may affect coastal ecology. Water quality measures will be incorporated during project construction to avoid or to minimize any potential contamination in accordance with the Santa Ana State Regional Water Quality Control Board protocols. Adaptive management will be a long-term commitment from State Parks in compliance with its ***Mission*** and as mitigation for the project's potential to increase the public presence on site. Education both on-site	Prior to activities, at pre-construc-tion meetings,	Development of appropriate operations management and BMPs will be based on coordination between the project manager,	Project Manager Ecologist Operations	

Mitigation Measure	Timing of Action	Reporting Methods & Standards	Monitoring Reporting Party	Check Off & Date
and off-site will help visitors to avoid or minimize impacts to intertidal areas. A SCUBA/skin diver pamphlet will be distributed to divers. Ongoing monitoring will provide data on the effectiveness of the management and more intensive tools will be utilized if needed. More intensive management includes increased Ranger or Lifeguard patrols and seasonally restricting public access to sensitive areas	during activities	contractor, and ecologist and monitoring of the effectiveness of the management and BMPs in protecting the resource		
6. For all activities that may affect biological resources A state park ecologist must review and approve the final working drawings and plant palette in ecologically sensitive areas. An approved biologist will monitor construction activities per Section 4.2.3 of the EIR. Temporarily disturbed CSS habitat areas will be revegetated in accordance with NCCP/HCP reserve standards. Temporarily disturbed areas will be replanted with appropriate plant species, either historic landscape plantings or CSS species depending on the pre-construction composition, location, fire department requirements, and historic landscape plan. The proposed project will not impact the southern willow scrub habitat on site. All activities will be subject to conditions/measures set forth in the Coastal Commission, Fish and Game, and Army Corp. of Engineers permits and the NCCP/HCP agreement. Sensitive plants adjacent to the project area will be fenced and avoided and the new parking lot construction and trail realignment will be redesigned if necessary to avoid impacts to the many-stemmed dudlea. Removal of CSS habitat will occur during the non-breeding season (September 1 to February 15) and construction activities that create noise in excess of 60 dBA within 300 feet of CSS habitat will be avoided during breeding season or monitored by a qualified biologist. The HLMP will reviewed and subject to approval by a state park ecologist.	HLMP, Working Drawings, Prior to activities, at pre-construc-tion meetings, during activities	Approval of HLMP, working drawings & bid package, monitoring records. Coordination with NCCP guidelines.	Project Manager Ecologist Operations	

Mitigation Measure	Timing of Action	Reporting Methods & Standards	Monitoring Reporting Party	Check Off & Date
7. For all activities that may affect archaeological resources. Any trenching or excavation anywhere in the Historic District that would extend more than 1 meter below the surface will be monitored or pre-tested by a qualified archaeologist. All excavation within or near the boundaries of CA-Ora-1429 will require archaeological testing and/or monitoring. If cultural materials are discovered during monitoring, work shall be redirected until an archaeologist can determine the appropriate action for data recovery. One test excavation unit is recommended before construction.	Prior to encroachment permit from Caltrans	PRC 5034 form, Section 106 (if needed), monitoring record. Data file for test units.	Project Manager Archaeologist	
8. For all activities that may affect Coastal Processes, Geology & Erosion Develop least invasive design for reconstruction of the slopes that is aesthetically pleasing and conforms to the HLMP while protecting the public from landslides. Use of soil-nail wall construction. No protection will be provided from wave up-rush of historic features and structures due to building new hardened protection devices. Sand bags or sand berms may be used to protect against flooding from Los Trancos Creek or waves. On site lifeguards and rangers will evacuate people, if necessary, to avoid placing the public at risk.	HLMP, Working Drawings, Prior to activities, at pre-construction meetings, during activities	Prc 5024 from, working drawing approval park operations safety plan	Project Manager Historian Operations	
9 For all activities that may affect paleontological resources on site. A qualified paleontologist will develop a plan for salvaging and/or protecting paleontological resources during the construction phase of the project. If paleontological resources are found on-site, work will be redirected until the resource can be recorded and or recovered.	Working Drawings, During Construction	Paleontologist's report and recommendations.	Project Manager Environmental Coordinator Paleontologist	

8 COMMENTS AND COORDINATION

After project planning was implemented in April 2001, State Parks held public two meetings/workshops and numerous scoping meetings with public interest groups and interested agencies. Additionally, informal consultation and early coordination was initiated with the California Coastal Commission, Caltrans, the US Fish and Wildlife Service, the California Department of Fish and Game, the County of Orange, and the Newport Beach Fire Department. Additionally, State Parks has provided 5 newsletters informing the public about the progress and status of project planning. Coordination with responsible and partnering agencies will continue throughout the project planning, design and construction.

The *PPUP* and the Draft Environmental Impact Report were made available for public review and comment between October 15, 2002 and December 2, 2002. With the release of the *PPUP* and DEIR, there was a press release and articles about the *PPUP* in the Los Angeles Times, the Orange County Daily Pilot and the Coastline News. State Parks received numerous phone calls requesting reservations. All callers were told that public comment must be received in writing or by fax by December 2, 2002. The following agencies, organizations, or persons submitted written comments on the Draft Environmental Impact Report. Seventeen letters were received within the comment period and four were received after the comment period closed. All letters are contained in full with responses from State Parks. Materials received as an attachment for one letter are contained in Appendix A – Dennis L. Kelley Attachment. The Notice of Preparation and Responses was made available in the DEIR and has been eliminated from the Final Environmental Impact Report.

Ten of the letters expressed support for the *PPUP* and its implementation, eight of which had specific concerns or suggestions for revisions within the proposed programs. Six of the letters opposed major elements of the program activities proposed by the project. Five of the letters did not state a position either in favor of or against the project, however, four of these letters addressed specific concerns.

Coastal Conservancy	California Department of Transportation
California Coastal Commission	County of Orange
SCAG	Surfrider Foundation, Newport Beach
Sierra Club – Crystal Cove Task Force	Friends of the Irvine Coast
Ocean Institute	Orange Coast College/Dennis L. Kelley
Alliance to Rescue Crystal Cove/Crystal Cove Conservancy	
Laguna Plein Air Painters/California Art Club	
Crystal Cove Community Trust/Bruce Hostetter	
Brad Warrick	Paul Milward
Sylvia G. Marson	Susie Melette
Dale Ghere	Sierra Club/Sandra Genis
The Wise Use Front	Alice Bruns

APPENDICES

A Dennis L. Kelley Attachment

B Natural Resource Tables

Table B.1
Potential Sensitive Wildlife Species

Common Name	Scientific Name	Status
Coastal cactus wren[1]	*Campylorhynchus brunneicapillus couesi*	CSC
Coastal California gnatcatcher[1]	*Polioptila californica*	FT, CSC
Osprey[1]	*Pandion haliaetus*	CSC
California brown pelican[1]	*Pelicanus occidentalis californicus*	FE, SE
Least Bell's vireo[1]	*Vireo bellii pusillus*	FE, SE
Yellow-breasted chat[1]	*Icteria virens*	CSC
Grasshopper sparrow[1]	*Ammodramus savannarum*	MNBMC
Yellow warbler	*Dendroica petechia brewsteri*	CSC
Western Snowy Plover[1]	*Charadrius alexandrinus nivouis*	FT
Southwestern pond turtle	*Clemmys marmorata pallida*	FSC, CSC
Orange-throated whiptail[1]	*Cnemidophorus hyperythrus beldingi*	FSC, CSC
Northern red-diamond rattlesnake[1]	*Crotalus ruber ruber*	FSC, CSC
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	FSC, CSC
San Diego horned lizard[1]	*Phrynosoma coronatum blainvillei*	FSC, CSC
Pacific pocket mouse	*Perognathus longimembris pacificus*	FE, CSC
Monarch butterfly[1]	*Danaus plexippus*	restricted range, rare

[1]Known to occur in the Park

SE	State Endangered
ST	State Threatened
FE	Federally Endangered
FT	Federally Threatened
FSC	Federal Special Concern
CSC	California Special Concern
MNBMC	Migratory Nongame Birds of Management Concern

Table B.2

Potential Sensitive Plant Species

Common Name	Scientific Name	Status
Red sand-verbena[1]	*Abronia maritima*	CNPS 4
Aphanisma	*Aphanisma blitoides*	CNPS 1B
Coulter's saltbush	*Atriplex coulteri*	CNPS 1B
South Coast saltscale	*Atriplex pacifica*	CNPS 1B
Parish's brittlescale	*Atriplex parishii*	CNPS 1B
Davidson's saltscale	*Atriplex serenana var davidson*	CNPS 1B
Catalina mariposa lily[1]	*Calachortus catalinae*	CNPS 4
Intermediate mariposa lily[1]	*Calochortus weedii var intermedius*	CNPS 1B
Turkish rugging[1]	*Chorizanthe staticoides ssp. chrysacantha*	Locally Rare
Many-stemmed dudleya[1]	*Dudleya multicaulis*	CNPS 1B
Laguna Beach dudleya	*Dudleya stolonifera*	FT, ST, CNPS 1B
Cliff spurge	*Euphorbia misera*	CNPS 2
Palmer's grappling hook[1]	*Harpagonella palmeri*	CNPS 4
Coulter's goldfields[1]	*Lasthenia glabrata ssp coulterii*	CNPS 1B
Nuttall's scrub oak	*Quercus dumosa*	CNPS 1B
Crownbeard	*Verbesina dissita*	FT, ST, CNPS 1B

[1]Known to occur in the Park

SE State Endangered
ST State Threatened
FE Federally Endangered
FT Federally Threatened
CNPS California Native Plant Society Lists:
1B: Plants Rare, Threatened, or Endangered in California and elsewhere
2: Plants Rare, Threatened, or Endangered in California, but more common elsewhere
4: Plants of limited distribution – Watch list

Table B.3

TARGET AND IDENTIFIED SPECIES RECEIVING REGULATORY COVERAGE UNDER THE NCCP/HCP

arboreal salamander	Aneides lugubris
black-bellied slender salamander	*Batrachoseps nigriventris*
Catalina mariposa lily	*Calochortus catalinae*
coastal cactus wren	*Campylorhynchus brunneicapillus*
coastal California gnatcatcher	*Polioptila californica californica*
coastal rosy boa	*Lichanura trivirgata rosafusca*
coastal western whiptail lizard	*Cnemidophorus tigris multiscutatus*
Coronado skink	*Eumeces skiltonianus interparietalis*
Coulter's matilija poppy	*Romneya coulteri*
coyote	*Canis latrans*
foothill mariposa lily	*Calochortus weedii*
golden eagle	*Aquila chrysaetos*
gray fox	*Urocyon cinereoargenteus*
heart-leaved pitcher sage	*Lepichinia cardiophylla*
Laguna Beach dudleya	*Dudleya stolonifera*
least Bell's vireo	*Verio belli pusilius*
northern harrier	*Circus cyaneus*
Nuttal's scrub oak	*Quercus dumosa*
orange-throated whiptail lizard	*Cnemidophorus hyperythrus beldingi*
Pacific pocket mouse	*Perognathus longimembris pacificus*
peregrine falcon	*Falco peregrinus*
Prairie falcon	*Falco mexicanus*
Quino (Wright's) checkerspot	*Euphidryos editha quino*
red diamond rattlesnake	*Crotalis rubber rubber*
red-shouldered hawk	*Buteo lineatus*
Riverside fairy shrimp	*Streptocephalus woottoni*
rough-legged hawk	*Buteo lagopus*
San Bernardino ringneck snake	*Diadophis punctatus modestus*
San Diego desert woodrat	*Neotoma lepida intermedia*
San Diego fairy shrimp	*Branchinecta sandeigonensis*
San Diego horned lizard	*Phrynosoma coronatum blainvillei*
Santa Monica Mts. Dudleya	*Dudleya cymosa spp ovatifolia*
sharp-shinned hawk	*Accipiter striatus*
small-flowered mountain mahogany	*Cercoccrpus minutifolio*
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*
southwestern arroyo toad	*Bufo microseaphus californicus*
southwestern willow flycatcher	*Empidonax trailli extimus*
Tecate cypress	*Cupressus forbesii*
western spadefoot toad (Coastal Subarea)	*Scaphiophis hammondi*

C NCCP Joint EIR/EIS Excerpt

FEIS 96-26
FEIR 553

FINAL

Joint Environmental Impact Report & Environmental Impact Statement

Regarding Take Authorization for Implementation of the County of Orange Central & Coastal Subregion Natural Community Conservation Plan & Habitat Conservation Plan

MAY 1996

DOCUMENTS:

- EIR/EIS
- NCCP/HCP Implementation Agreement
- NCCP/HCP & EIR/EIS Map Book
- Comment Letters
- Response to Comments
- NCCP/HCP (available upon request)
- NCCP/HCP & EIR/EIS Appendices (available for review)

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and
U.S. Department of Interior
Fish and Wildlife Service
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Carlsbad, CA 92008

JN 30650-4513

- payment of a mitigation fee to the NCCP/HCP management entity to assure the maintenance of net habitat value by means of habitat restoration/enhancement within the Reserve System and/or acquisition of CSS habitat lands to be added to the Reserve System.

7.5.3 Construction-Related Minimization Measures

The NCCP/HCP proposes that certain **construction-related minimization measures** be required to assure that development/construction within areas recommended to be authorized for incidental take of CSS (including allowed uses within the Reserve System) be undertaken in a manner that minimizes impacts on gnatcatchers presently using or in close proximity to the habitat to be converted. These minimization measures would also be expected to benefit other Identified CSS species.

For *participating landowners*, each landowner will comply with the "construction-related minimization measures" as part of compliance with the landowner's individual Section 10(a) permit pursuant to the Implementation Agreement. For "*non-participating landowners*," the construction-related minimization measures will be integrated with standard brush-clearance/grading permits at the local government level by signatory local governments as specified in the Implementation Agreement.

Since the construction-related minimization measures are based on measures required in prior gnatcatcher Section 7 consultations and Section 10 HCPs, these measures are determined to constitute significant minimization/mitigation of impacts of uses proposed to be allowed in or near CSS occupied by gnatcatchers.

MINIMIZATION/MITIGATION MEASURES - CONSTRUCTION RELATED IMPACTS

1. To the maximum extent practicable, no grading of CSS habitat that is occupied by nesting gnatcatchers will occur during the breeding season (February 15 through July 15). It is expressly understood that this provision and the remaining provisions of these "construction-related minimization measures," are subject to public health and safety considerations. These considerations include unexpected slope stabilization, erosion control measure and emergency facility repairs. In the event of such public health and safety circumstances, landowners or public agencies/utilities will provide USFWS/CDFG with the maximum practicable notice (or such notice as is specified in

the NCCP/HCP) to allow for capture of gnatcatchers, cactus wrens and any other CSS Identified Species that are not otherwise flushed and will carry out the following measures only to the extent as practicable in the context of the public health and safety considerations.

2. Prior to the commencement of grading operations or other activities involving significant soil disturbance, all areas of CSS habitat to be avoided under the provisions of the NCCP/HCP, shall be identified with temporary fencing or other markers clearly visible to construction personnel. Additionally, prior to the commencement of grading operations or other activities involving disturbance of CSS, a survey will be conducted to locate gnatcatchers and cactus wrens within 100 feet of the outer extent of projected soil disturbance activities and the locations of any such species shall be clearly marked and identified on the construction/grading plans.

3. A monitoring biologist, acceptable to USFWS/CDFG will be on site during any clearing of CSS. The landowner or relevant public agency/utility will advise USFWS/CDFG at least seven (7) calendar days (and preferably fourteen (14) calendar days) prior to the clearing of any habitat occupied by Identified Species to allow USFWS/CDFG to work with the monitoring biologist in connection with bird flushing/capture activities. The monitoring biologist will flush Identified Species (avian or other mobile Identified Species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities. If birds cannot be flushed, they will be captured in mist nets, if feasible, and relocated to areas of the site be protected or to the NCCP/HCP Reserve System. It will be the responsibility of the monitoring biologist to assure that Identified bird species will not be directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities on a timely basis.

4. Following the completion of initial grading/earth movement activities, all areas of CSS habitat to be avoided by construction equipment and personnel will be marked with temporary fencing other appropriate markers clearly visible to construction personnel. No construction access, parking or storage of equipment or materials will be permitted within such marked areas.

5. In areas bordering the NCCP Reserve System or Special Linkage/Special Management areas containing significant CSS identified in the NCCP/HCP for protection, vehicle transportation routes between cut-and-fill locations will be restricted to a minimum

number during construction consistent with project construction requirements. Waste dirt or rubble will not be deposited on adjacent CSS identified in the NCCP/HCP for protection. Preconstruction meetings involving the monitoring biologist, construction supervisors and equipment operators will be conducted and documented to ensure maximum practicable adherence to these measures .

6. CSS identified in the NCCP/HCP for protection and located within the likely dust drift radius of construction areas shall be periodically sprayed with water to reduce accumulated dust on the leaves as recommended by the monitoring biologist.

7.5.4 Conclusions Regarding Consistency of the NCCP/HCP Minimization/Avoidance Measures and Mitigation Measures with the NCCP Conservation Guidelines

For the reasons set forth in this chapter and in Chapters 5 and 8, the Central and Coastal NCCP/HCP provides for a Reserve System, including specifically designed reserves protecting core habitat and connectivity features assuring species interchange within and between reserves, and a comprehensive Adaptive Management Program determined to be fully consistent with the substantive requirements of the NCCP Conservation Guidelines. Regarding the assurances of assemblage of the NCCP/HCP Reserve System, the findings for the Implementation Agreement state that:

> *"Based on the deed restrictions, provisions of dedication offers, commitments pursuant to adopted CEQA mitigation measures and other encumbrances against those current and future public lands which are to be included in the Reserve System and Special Linkage Areas as established by the NCCP/HCP, USFWS and CDFG have determined that the habitat protection afforded under those encumbrances and by commitments of lands for Reserve System or Special Linkage purposes pursuant to this Agreement constitute commitments in perpetuity to uses consistent with the purposes of the NCCP/HCP as set forth herein" (Implementation Agreement, Section 3.0(j)).*

Each of the encumbrances and commitments cited in the above Finding as the basis for the "commitments in perpetuity" determination is reviewed in detail in the Final EIR/EIS Response to Comments:

The mitigation measures proposed to be provided by ***participating landowners***, in combination with pre-NCCP and NCCP avoidance actions, assure the assemblage of the Reserve System and the implementation of the Adaptive Management Program. The NCCP/HCP Reserve System is of sufficient size and the NCCP/HCP assurances of a comprehensive Adaptive Management Program are such that the NCCP/HCP, in its totality, provides for high likelihoods for persistence of NCCP Target Species in the subregion. Therefore, the proposed mitigation measures provide the basis for mitigating those impacts of incidental take which remain following the application of the minimization and avoidance measures reviewed in Chapter 5.

With regard to ***non-participating landowners***, the NCCP/HCP provides an option for mitigation of impacts on the habitat of species listed as threatened or endangered under CESA/FESA which would place such mitigation actions within the broad framework of a comprehensive Reserve System and long-term management program. As an alternative mitigation approach to the FESA Section 7/10 and CESA 2081 processes, the NCCP/HCP mitigation fee option provides an effective means of addressing incidental take by *"non-participating landowners."*