

CALIFORNIA COASTAL COMMISSION

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 Commission Action:

Th 23e**RECORD PACKET COPY****STAFF REPORT: REGULAR CALENDAR****APPLICATION NUMBER: 5-04-192 (Brightwater)****APPLICANT: Hearthside Homes/Signal Landmark**

**AGENT: Ed Mountford, Hearthside Homes/Signal Landmark
 Dave Neish, Culbertson, Adams & Associates
 Susan Hori, Mannat, Phelps & Phillips**

**PROJECT LOCATION: 17201 Bolsa Chica Road, (Bolsa Chica Mesa)
 Bolsa Chica, Orange County**

PROJECT DESCRIPTION: Subbdivision of an existing parcel into a residual parcel (lower bench) and on the remaining 105.3 acres, located primarily on the upper bench, subdivide into a 379-lot private residential community through the approval of Vesting Tentative Tract Map 15460. The proposed project also includes the construction of 379 single-family homes in a guard-gated community; a 2.5-acre private recreation center; a 2 million gallon underground water storage reservoir and above ground pumping facility; and other associated infrastructure. A 28-acre upland habitat park, located along the gradual slope between the upper and lower benches, containing 30 public parking spaces, a Class 1 bicycle/hiking trail, bike racks, and interpretive exhibits, is also proposed. The applicant also modified the project description to propose to construct a total of 114 (unstriped) public parking spaces within the new 20 feet of public right-of-way dedication along the south side of Los Patos Avenue, adjacent to the on-site 30-foot-wide greenbelt.

A series of constructed wetlands and a 1.3-acre detention basin (which is also a part of the residential water quality management plan) is proposed to be located in the upland habitat park. Grading to carry out the proposed development consists of 330,000 cubic yards of cut, 300,000 cubic yards of fill and 30,000 cubic yards of overexcavation.

In addition to the creation of the remainder or residual parcel on the lower bench through the approval of VTTM 15460, other development proposed on the lower

bench includes the translocation of Southern Tarplant from the upper bench through the implementation of the Translocation Plan Southern Tarplant (*Centromadia Parryi* ssp. *Australis*) Brightwater Development Project, Bolsa Chica Mesa, Orange County, California, LSA, May 1, 2003, as approved by the Department of Fish and Game.

STAFF NOTE:

On July 13, 2004, Commission staff received a letter from the applicant dated July 12, 2004, requesting a revision to the project description for the proposed remainder (or residual) parcel being created on the lower bench of the Bolsa Chica Mesa through the proposed approval of VTTM 15460. The letter states that it is being submitted partially in response to the Commission staff's previous request that the applicant identify an intended use for the remainder parcel, noting that the proposed tentative tract map simply indicated that the parcel was "Not a Part" of the proposed subdivision and no use was proposed. The letter requests that the project description of coastal development permit application 5-04-192 be amended to reflect that the remainder parcel is within the 103 acres covered by the (enclosed) Purchase and Sale Agreement and Escrow Instructions, and is proposed to be sold to the State of California for conservation purposes (Exhibit 6).

The letter also stated that the draft Purchase and Sale Agreement and Escrow Instructions between Signal Landmark and the State of California for the acquisition of 103 acres on the Bolsa Chica Mesa for \$65 million, was being submitted pursuant to our request for information concerning the lower bench. Apparently, the matter will be heard by the WCB on August 12, 2004. The letter did not, however, state that the applicant is revising the project description to include all of the applicant's holdings on the lower bench of the Bolsa Chica Mesa in coastal development permit application 5-04-192 as staff had previously requested on several occasions during the coastal development permit application review process that began November 6, 2002 with the submittal of the prior application 5-02-375.

Commission staff has been aware of the applicant's on-going negotiations with the Department of General Services and the WCB for several months. Therefore, staff accommodated the applicant's request to postpone the original Brightwater development project application 5-02-375 from the February 2004 Commission meeting in San Diego to facilitate the on-going negotiations. However, staff informed the applicant that they had to first waive their right to a Coastal Commission final action on application 5-02-375 within 180 days of filing, since the application had been filed on September 24, 2003 and the only remaining hearing within the 180 day deadline would be a non-local hearing in Monterey in March. After receipt of the applicant's waiver of time limits from the required Commission final action on application 5-02-375, the application was then tentatively set for the Commission's June meeting in San Pedro. When the applicant requested a further

postponement from the June Commission meeting to accommodate continued negotiations, staff informed the applicant that the Permit Streamlining Act does not allow postponements beyond a maximum of 270 days from the filing of a coastal development permit application. Staff suggested that Hearthside Homes withdraw application 5-02-375 and request a waiver of the six-month waiting period to allow an immediate reapplication.

By letter dated May 13, 2004 and received in the Commission office on May 17, 2004, the applicant withdrew application 5-02-375 and requested that the Executive Director waive the six-month waiting period to reapply for the same project. On June 4, 2004, Commission staff, on behalf of the Executive Director, honored the request, finding that the applicant's on-going negotiations regarding the sale of the lower bench for conservation purposes, to be good cause. On May 21, 2004, the applicant submitted application 5-04-192 and requested that all plans and supplemental material from the previous application be considered for the new application¹. The applicant requested that the new application be set for the Commission's August hearing in San Pedro. When staff agreed to waive the six-month waiting period, staff reiterated that the staff recommendation and findings would be based on the formal project description, as approved by the local government and other agencies, as submitted in the previous (5-02-375) application and as modified in the new application². The importance of this discussion was that the applicant was asking staff to put the application on the August Commission agenda while negotiations were still on going and were not anticipated to be concluded in time for sale to be acted on by the WCB prior to the date that the Commission staff reports for the August hearing had to be published. As it is an integral part of the Bolsa Chica ecosystem and previous assessments, the disposition and treatment of the lower bench would be a critical factor in developing a staff recommendation. Staff did however agree at that time to add a note to the staff report to inform the Commission of the results of the negotiations, any further revisions to the project description made by the applicant, and explain how the sale of the lower bench for conservation purposes, were it to occur, would change the staff recommendation concerning certain biological impacts of the project, provided the coastal development permit application was amended to include all of the applicant's holdings on the lower bench of the Bolsa Chica Mesa.

¹ The applicant acknowledged the need for an updated mailing list and envelopes given the nearly 2 year period since the previous application was submitted. The applicant updated the mailing information and submitted a new fee. Staff agreed to file the new application with the submittal of these items. The application was therefore filed on the date of submittal, May 21, 2004.

² The applicant amended the project description of the original application 5-02-375 on April 16, 2004 to include the off-site improvement of Los Patos Avenue to accommodate (unstriped) parking for 114 cars and landscaping. Also, on June 11, 2004 the applicant submitted a ground squirrel survey pertaining to potential alternate burrowing owl habitat elsewhere on the mesa. With the exception of these two changes to the project description, the applicant submitted no other project revisions until the July 13, 2004 letter requesting only that the proposed lower bench remainder (residual) parcel approved through VTTM 15460 be added to the project description.

Because the applicant has chosen not to modify the project description to include all of their holdings on the lower bench of the Bolsa Chica Mesa in the coastal development permit application before the Commission, there is nothing for staff to comment on since the lower bench of the Bolsa Chica Mesa is not before the Commission, with the exception of the proposed creation of the remainder parcel that is included in the local government action in the approval of VTTM 15460. The applicant owns a total of 103.2 acres on the lower bench, including the remainder parcel. However, only the remainder parcel is before the Commission. It constitutes only 11-16% of their ownership on the lower bench, which is the only portion of the lower bench that is included in this application³. The staff recommendation with regards to the proposed lower bench remainder parcel is discussed below.

Regardless of the disposition of the lower bench, staff believes the Brightwater development project, as currently proposed, causes the following significant adverse impacts: (1) Southern Tarplant ESHA surrounding the seasonal wetlands near Los Patos Avenue; (2) the loss of the burrowing owl ESHA in the vicinity of the proposed detention basin; (3) the encroachments into the applicant's proposed (reduced) 100 ft. Eucalyptus grove buffer and the Eucalyptus ESHA itself for required on-going fuel modification for the adjacent residential lots and encroachments of park related development (portions of the entry road, parking spaces and portions of the trail); and (4) the significant landform alteration (up to a 30 foot high fill slope) proposed at the current bluff edge overlooking the wetlands. Further, the proposed project provides grossly inadequate public access and public recreation opportunities due to the prohibition of public vehicular, pedestrian and bicycle access into the guard-gated residential subdivision to facilitate the use of the proposed public upland habitat park and scenic trail.

Commission staff is recommending denial of the proposed Brightwater. The decision to recommend denial, as opposed to approval with special conditions to address the above Coastal Act inconsistencies, was made by staff considering that the extent of necessary changes to bring the project into conformance with the Coastal Act would result in a

³ The exact acreage of the remainder (or residual) parcel proposed to be created through the approval of VTTM 15460 is in dispute. The residual parcel is that portion of existing Parcel 2 created by Certificate of Compliance No. CC 92-01. The applicant has stated and submitted correspondence that says the parcel is 11.8 acres in size. Additionally, the approved vesting tentative tract map (VTTM) contains a notation that says "REMAINING PROPERTY N.A.P. [not a part] 11.75 Ac". However, the VTTM does not show the location of this parcel nor its shape. The Orange County Subdivision Committee approved the VTTM on May 29, 2002. However, the subdivision approval does not mention the remainder or residual parcel at all and refers only to the 105.3-acre portion of the existing Parcel 2. When staff incompleated the original application, the applicant was requested to provide additional information concerning the proposed residual parcel that would be located on the lower bench. At that time, and up until the present time, the applicant disagrees that the creation of the parcel constitutes development because no grading or construction is being proposed on the parcel. However, the applicant finally provided a graphic showing the proposed lower bench remainder parcel (Exhibit 5) and also provided it electronically in the format of a shapefile. Commission staff technical service division, using the shapefile sent by the applicant's consultant FORMA, determined through GIS mapping that the size of remainder parcel is 16.66 acres.

significant redesign of the project. In addition, on several substantive areas, the applicant expressed no willingness to consider change. A discussion of the necessary changes to bring the project into conformance with the Coastal Act is found in Section J, Alternatives, of this staff report. The level of change that is necessary to bring this project into conformance with the Coastal Act is so significant that the project must come back to the Commission in a public hearing forum.

SUMMARY OF STAFF RECOMMENDATION:

Staff recommends that the Commission **DENY** the proposed project, finding that, as currently designed, the Brightwater development project is inconsistent with Sections 30210, 30212, 30213, 30214, 30222, 30231, 30240, 30244, and 30251 of the Coastal Act. These policies seek to maximize public access and provide or enhance appropriate public recreation, especially lower cost visitor and recreational facilities; protect and enhance marine water quality; protect environmentally sensitive habitat areas (ESHA) and other important land resources and allow only resource dependent uses in ESHA and ensure adequate buffers between ESHA and development areas; to protect archaeological and cultural resources; and the protection of scenic coastal resources to and along the coast by minimizing the alteration of natural landforms.

The 105.3 acre Brightwater development site is located on the upper bench of the Bolsa Chica Mesa in Orange County, adjacent to the City of Huntington Beach. The Bolsa Chica Mesa is adjacent to the Bolsa Chica Lowlands which include the approximately 1,300 acre State owned Bolsa Chica wetlands and Bolsa Chica Ecological Reserve. The Bolsa Chica Mesa has an upper bench and a lower bench separated by a gradual, roughly 25-foot high slope. Together, along with the Huntington Mesa to the south of the Lowlands and the Lowlands themselves, the Bolsa Chica Mesa is a part of a fragile upland/lowland ecosystem. The project site contains an existing environmentally sensitive habitat area (ESHA) that is recognized by the Coastal Commission, Department of Fish and Game and the courts. The ESHA is a 5-acre Eucalyptus tree grove located along the bluff edge and down the slope of the upper bench, overlooking the Lowlands. There are also other important land and marine resources on the project site. A 0.06 acre seasonal wetland near Los Patos Avenue on the project's northern boundary and a 0.2 acre pocket wetland at the southern edge of the slope overlooking the lower bench of the Bolsa Chica Mesa (Exhibit 4). While these two wetlands are not considered by the Commission staff ecologist/wetland coordinator, Dr. John Dixon, to constitute ESHA under the Coastal Act definition, they are nonetheless important marine resources that are protected under Section 30233 of the Coastal Act.

In addition to these previously identified land and marine resources, the site also contains other important land resources including additional areas that staff has concluded qualify as ESHA under the Coastal Act. Some of the Southern Tarplant populations and the

burrowing owl habitat are considered ESHA. Of the 105.3-acre site, approximately 72 acres contain non-native annual grasslands/ruderal vegetation. This vegetation is considered an important land resource because it is critical to the ecosystem as foraging habitat for numerous raptors and ground mammals, some of which are special status species. The upper bench of the Bolsa Chica Mesa is also a natural landform. Though it has been altered in the past, staff believes that it still should be considered a scenic coastal resource, considering its scenic qualities when viewed from below the site from Bolsa Chica State Beach or Pacific Coast Highway. From the project site are also spectacular views of the Lowlands and the birds that use them and the beach and ocean beyond.

Given the numerous resources of the site, all development must be carefully sited and designed to avoid the ESHAs and significant adverse impacts to the other resources. Development of the site must also appropriately maximize public access and passive recreational opportunities, especially given its location adjacent to the State's recently acquired wetlands where millions of dollars are currently being spent in wetland restoration efforts.

The proposed Brightwater development project conceptually includes several aspects that are consistent with Chapter 3 Coastal Act policies. For instance, the proposed project provides a public, lower cost, recreational use, a use that is preferred by the Coastal Act, namely the proposed 28-acre upland habitat park with walking and bicycle trails, public parking and interpretive information. It is also in a location on the project site which provides the public scenic views of the State owned wetlands, Bolsa Chica State Beach and the Pacific Ocean. However, the proposed trail and public parking are improperly located within the critical terrestrial buffers causing significant adverse impacts to the environmentally sensitive land resources that are to be protected by habitat buffers.

As summarized below and discussed in detail in this staff report, the Brightwater development project, as currently designed does not protect or enhance the coastal resources of the site and adjacent marine areas or appropriately maximize public access and passive recreational opportunities.

Areas of Major Controversy

- **Inadequate Buffer Between Eucalyptus Grove ESHA and Adjacent Development.** The proposed Brightwater development project provides a 100-foot buffer between the edge of the existing Eucalyptus grove ESHA and the proposed residential lots. The Eucalyptus trees are used by raptors as nesting and roosting sites, including the white-tailed kite, American kestrel, and the great horned owl. Adequate buffers between habitat areas and development are essential in maintaining the viability of habitat areas. Due to the interdependence of the mesa

with the wetlands of the Bolsa Chica Lowlands, staff recommends a 100-meter buffer (328 feet) between the Eucalyptus tree ESHA and the adjacent development in order to adequately protect the ESHA. If grading occurs when raptors are nesting, an even larger buffer of 152 meters (500 ft.) should be around the nest during construction activities. Given the uncertainty of future development on the lower bench of the Bolsa Chica Mesa, the ESHA buffer on the upper bench is even more important.

- **Encroachments into the Eucalyptus Grove ESHA and the ESHA buffer.** As stated above, the Eucalyptus grove ESHA buffer at 100 ft in width is inadequate to protect the ESHA from adjacent development and should be 100 meters in width. Additionally, the proposed project includes significant encroachments into the proposed 100 ft. wide ESHA buffer, and, into the ESHA itself. The project proposes fuel modification to protect the proposed residences throughout most of the proposed Upland Habitat Park, which is to be dedicated to the public upon completion of construction. Further, Fuel Modification Zone D includes the entire ESHA buffer and encroaches into the Eucalyptus grove ESHA, in order to protect future residences on 16 of the proposed lots (Exhibit 14). There would be initial and continued modification of the understory affecting approximately 0.8 acre of the existing five acre Eucalyptus Grove ESHA. Additional encroachments into the proposed 100 ft. wide Eucalyptus grove ESHA buffer include: (1) approximately 600 linear feet of the proposed paved, all-weather, pedestrian/bicycle trail (as close as 12 feet from the ESHA in one location); (2) significant grading activity (including a 30 ft. high, fill slope, two acres in size); (3) five of the 30 proposed public parking spaces; and (4) approximately 250 ft. of the extension of Bolsa Chica Street.
- **Elimination of Burrowing Owl ESHA.** The burrowing owl (*Athene cunicularia*) is a California Species of Special Concern (CSC), as designated by the California Department of Fish and Game. This bird hunts for prey over open areas and grasslands and typically nests in the abandoned burrows of rodents. Evidence of burrowing owl use of the site was documented in 2001-2002 and 2002-2003. Further, a raptor biologist with extensive knowledge of the Bolsa Chica Mesa has opined that wintering burrowing owls use the Bolsa Chica Mesa during most years. It is the opinion of the applicant that the bird does not reside on the project site, but only winters there. It is the opinion of the Commission's staff ecologist that the identified burrowing owl habitat on the upper bench constitutes an environmentally sensitive habitat area (ESHA) under the Coastal Act and therefore must be avoided. The proposed project would result in the loss of the burrowing owl habitat, as it is the location of the proposed 1.3-acre water quality detention basin for the residential development. On June 15, 2004, the applicant submitted a ground squirrel survey of the entire mesa with the hopes of demonstrating that suitable burrowing owl habitat exists on the lower bench of the Bolsa Chica Mesa, allowing the identified burrowing owl habitat on the upper bench to be eliminated due to the

proposed development. Commission staff ecologist/wetland coordinator, Dr. John Dixon disagrees with this conclusion of the applicant, as detailed in Section D., Biological Resources, and recommends that the Commission require that the identified remain in tact.

- **Elimination of Southern Tarplant ESHA.** Southern Tarplant is listed as a 1B plant (Rare, Threatened, or Endangered in California and Elsewhere) by the California Native Plant Society. There are several small, scattered populations of Southern Tarplant within the project site on the upper bench. Based on information provided by the applicant, including multi-year surveys, the Commission's staff ecologist has determined that the fairly large population of Southern Tarplant that surrounds the Los Patos seasonal wetland is an environmentally sensitive habitat area (ESHA) as defined by the Coastal Act. As such, the Tarplant ESHA must be preserved in place and protected with an adequate buffer. The applicant proposes to translocate this Tarplant ESHA (as well as all Southern Tarplant on the development site) from the upper bench to the lower bench to make way for a 2.5-acre private recreation center for the new residential community.
- **Elimination of 75 Acres of Grassland Open Space Habitat.** The 105.3-acre project site is primarily vegetated with annual grasslands and ruderal vegetation along with several environmentally sensitive habitat areas. Although annual grassland/ruderal vegetation type is non-native, it nevertheless provides foraging habitat for several California Species of Special Concern (CSC) including, but not limited to, the San Diego coast horned lizard, white-tailed kite, northern harrier and the burrowing owl. The loss of this vegetation is considered significant because it represents one of the last significant grasslands adjacent to a coastal wetland, making it an integral part of the wetland/upland ecosystem. Thus the loss of the upper bench grassland has indirect impacts on several special status species inhabiting the Bolsa Chica Lowlands, including the California least tern, western snowy plover, and the peregrine falcon, and degrades the value of the adjacent ESHA. The project as proposed and approved the County of Orange provides no mitigation for this significant adverse impact. The Department of Fish and Game, in its comments on the project EIR recommended that the loss of annual grassland/ruderal vegetation be mitigated at 0.5:1.
- **Inadequate Public Access Through Guard-gated Community.** The 105 acre upper bench of the Bolsa Chica Mesa, at about 50 ft. above sea level, affords spectacular views of the Pacific Ocean, Bolsa Chica State Beach and the now State owned Bolsa Chica wetlands below the site. Although the project includes the addition of 23 acres of park land along the slope and bluff to the existing 5-acre bluff edge Eucalyptus grove ESHA to create a 28-acre public upland habitat park, the proposed guard-gated residential community would prohibit all public access through the community to get to the park. The public's only access to the passive

park will be from Warner Avenue along the park's pedestrian/bicycle trail or from the only public vehicular entry at the proposed extension of Bolsa Chica Street on the eastern boundary of the project site. Although the applicant modified the project description on April 16, 2004 to provide 114 (unstriped) off-site parking spaces along Los Patos Avenue, this parking will not enhance access to the park since the public would still be prohibited from walking (or bicycling) through the residential community to get to the park, which is on the opposite edge of the project site, once they parked their cars in these off-site parking spaces. Additionally, the County's approval of the project in May 2002 already included the requirement to either improve or provide financial security for the improvement of the south side of Los Patos Avenue from Marina View Place to Green Street (County Condition number 34). The park will also be gated on Bolsa Chica Street, the only vehicular entry. Although thirty public parking spaces and bicycle racks are provided at the Bolsa Chica Street trailhead, public use of the park is not encouraged due to inadequate signage and public access restrictions.

- **Significant Landform Alteration.** The Bolsa Chica Mesa, although a natural landform rising some 50 feet above the Lowlands, has been altered in the past. The slope between the upper and lower benches is very gradual due primarily to grading and construction of two gun emplacements (concrete bunkers) on the slope during World War II. The bluff edge along the upper bench was also used as a borrow site for residential development in Huntington Beach in the early 1970's. Despite these alterations, the Bolsa Chica Mesa still remains a scenic, natural landform whose further alteration should be minimized. However, the applicant proposes further significant alteration of the bluff edge, adjacent to the protected Eucalyptus grove ESHA with a 30-foot high fill slope, 2 acres in size. Although the applicant argues that the proposed fill is to restore the slope to its 1939 condition prior to the above alterations, the merits of such a "restoration" are debatable, and in the opinion of Commission staff's geologist, Dr. Mark Johnsson, clearly represents further significant alteration of a natural landform. The purpose of the fill appears to be to allow the proposed residential development to be extended out to the current bluff edge by placing the Bolsa Chica Street extension and the public parking on the new fill slope. Although the extension of Bolsa Chica Street, a public road, and the provision of public parking are encourage, it should be done in a manner that does not cause further significant alteration of bluff or in a location within the terrestrial buffer, as it is currently proposed.

Additional project features that are inconsistent with the Coastal Act are inadequate water quality management program causing potential impacts to adjacent marine resources and potential significant impacts to cultural resources due to extensive grading activities (330,000 cubic yards of cut as deep as 20 feet) without the presence of Native American monitors.

The applicant contends that the current project was designed to be consistent with the Commission's November, 2000 action on the proposed Bolsa Chica Local Coastal Program (LCP). The standard of review for the proposed project is the Coastal Act and not the Commission's action on the LCP since the LCP was never certified. However, as discussed in Section C of this staff report, "Comparison of the Proposed Project With the 2000 Bolsa Chica LCP", the proposed project is not consistent with the Commission's 2000 action on the LCP in a number of significant provisions.

LOCAL APPROVALS RECEIVED: See Appendix A

SUBSTANTIVE FILE DOCUMENTS: See Appendix A

I. STAFF RECOMMENDATION OF DENIAL

Staff recommends that the Commission DENY a coastal development permit for the proposed development by voting NO on the following motion and adopting the following resolution.

MOTION: *I move that the Commission approve Coastal Development Permit No. 5-04-192 for the development proposed by the applicant.*

STAFF RECOMMENDATION OF DENIAL:

Staff recommends a **NO** vote. Failure of this motion will result in denial of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

RESOLUTION TO DENY THE PERMIT:

The Commission hereby denies a coastal development permit for the proposed development on the ground that the development will not conform with the policies of Chapter 3 of the Coastal Act and will prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit would not comply with the California Environmental Quality Act because there are feasible mitigation measures or alternatives that would substantially lessen the significant adverse impacts of the development on the environment.

II. FINDINGS AND DECLARATIONS:

The Commission hereby finds and declares:

A. DESCRIPTION OF PROPOSED PROJECT AND PROJECT SITE

Bolsa Chica Mesa is made up of a lower bench and an upper bench (also referred to as the lower mesa and upper mesa) separated by a gentle slope. The upper bench is located adjacent to and south of Los Patos Avenue and Bolsa Chica Street in the unincorporated area of Bolsa Chica, County of Orange. Although the majority of the upper bench (105.3 acres) is located within the unincorporated Bolsa Chica area of Orange County, approximately .95 acres in the northeasterly corner of the Brightwater development is located within the corporate boundaries of the City of Huntington Beach (Exhibit 1). Huntington Beach has a certified Local Coastal Program. Therefore, the City of Huntington Beach would be the agency to which the applicant must file a coastal development permit application for these nine homes in the City of Huntington Beach. The site is surrounded on the north (across Los Patos Avenue) and northeast by (the Sandover development in the City of Huntington Beach) residential development, the Goodell property and Bolsa Chica Street; on the southeast by the Shea Homes property (the pending Parkside Development located in the City of Huntington Beach) and the existing concrete lined East Garden Grove-Wintersburg (EGGW) Flood Control Channel; on the south by the now State-owned Bolsa Chica lowlands; and on the west by the approximately 120 acre lower bench of Bolsa Chica Mesa and beyond the lower bench, the 306 acre Bolsa Chica Ecological Reserve owned and managed by the California Department of Fish and Game, Pacific Coast Highway and Bolsa Chica State Beach and the Pacific Ocean (Exhibit 2).

The proposed Brightwater development is located primarily on the 105.3-acre upper bench. The applicant owns approximately 103 acres on the lower bench of the Bolsa Chica Mesa, with the Ocean View School District owning 15 acres and the Department of Fish and Game owning the remainder of the lower bench as part of the upland portion of the Bolsa Chica Ecological Reserve. Although the applicant has indicated that the 120-acre lower bench is not a part of the development proposal, development is proposed for the lower bench. Upper bench development consists of subdivision into 379 single-family residential lots in a guard-gated community. Both private and public recreation open space and habitat conservation areas are also proposed.

Overview of Brightwater Development Project

Residential Community

The Brightwater residential community is a 379-unit, private gated development on approximately 77 acres of the 105.3-acre development site. It will have two guard-gated

entries with guardhouses located off the main project entry at Warner Avenue and a second entry on Bolsa Chica Street. The community is planned at medium-low density (6.5-12.5 DU/Ac). The community design concept is that of a New England coastal village with six styles of single-family housing types and sizes. The four larger single-family home types have lots ranging from 4,000 to 7,000 square feet and homes ranging from 2,200 to 4,200 square feet. There will also be smaller units constructed as planned unit developments using reciprocal easements (zero lot lines) and other integrated site planning techniques but are detached single family residential units. The four smaller styled developments have lots that are approximately 3,000 sq. ft. and the homes range from roughly 1,500 to 1,900 sq. ft. All units range from 3 to 5 bedroom floor plans with one product type having as few as two bedrooms. None of the units will exceed 35 feet in height and most will be at 28 - 32 ft. high.

At the northeast corner of the Brightwater project site is the boundary between the City of Huntington Beach and the unincorporated Orange County area. The boundary cuts diagonally between the Brightwater site and the recently completed Sandover development in Huntington Beach (Exhibit 3). One of the project goals is to integrate the two communities. To accomplish this goal, three of the lots approved under the VTTM 15460 will be annexed to the City and combined with three of those lots. As a result of the annexation and vacation of the existing entry into the Sandover development the potential for nine additional lots will exist. Annexation and construction of any development in the City of Huntington Beach is not authorized under the subject coastal development permit. The City will handle development within the City of Huntington Beach as the certified Huntington Beach LCP covers the area.

Private Recreational Facilities

The 2.5 acre private recreation center, located near Los Patos Avenue in the center of project site, contains a 1,350 sq. ft. clubhouse, three swimming pools, two family/small group picnic areas, a tot lot and elevated boardwalk that provide a continuous, grade-separated viewing of the existing Los Patos Wetland and wetland buffer that will be enhanced. Three vertical walkways or "paseos" leading from the residential community to the park provide the community residents and their guest access to the public upland habitat park. A total of 50 parking spaces will be provided for the private recreation center. The private recreation facilities are located in Planning Area 7-1 (Exhibit 3).

Public Recreational Amenities

At the far western and southern edges of the Brightwater development project is Planning Areas 3A and 3B which is the 28-acre upland habitat park, located along the western slope edge and the southeastern bluff edge of the upper bench of the Bolsa Chica Mesa (Exhibit 3). The upland habitat park includes the existing 5-acre Eucalyptus grove ESHA

along the southeastern bluff edge. The existing "pocket wetland" is also within the habitat park and it will be preserved in place and provided with a 100 ft. wetland buffer. Protective fencing will be placed around the Eucalyptus ESHA and the existing wetland. Split rail fencing will be on the bluffward side of the trail. The habitat park will be planted with coastal prairie, and coastal sage scrub and coastal bluff scrub habitats. Within the park will be a paved, 12 ft. wide multi-use pedestrian/Class I bicycle trail, and an interpretive/spur trail, bicycle racks for up to 20 bicycles, interpretive signage, an orientation kiosk and rustic seating along the trail. Bolsa Chica Street will be extended into to habitat park as the only vehicular entry where 30 on-site public parking spaces will also be provided (Exhibit 4). Protective fencing will also be located along both sides of Bolsa Chica Street. Once constructed, the upland habitat park will be dedicated to the County of Orange for public park and conservation purposes.

The series of five constructed wetlands and detention basin that serve as part of the water quality management plan treatment system for the residential community is also located within the upland habitat park.

Other community facilities include a 2 million gallon underground (35 ft. deep) water storage reservoir will be provided for the community as well as domestic water pump station including two fire pumps. A temporary on-site groundwater well will be constructed and used during grading and construction operations. The temporary well will be abandoned once the permanent underground reservoir is completed. 630,000 cubic yards of balanced grading will be necessary to carry out the development as planned (30,000 cy of cut will be shrinkage from overexcavation). As detailed in Section G.2. of this staff report, the Orange County Fire Authority requires initial and on-going fuel modification for the homes that are adjacent to the upland habitat park.

Residual Parcel

When the Commission approved, during consideration of Bolsa Chica LCP in November, 2000, 100 ft. and 50 ft. buffers, though not normally of adequate width to protect the environmentally sensitive habitat areas and adjacent important land resources such as exist on the Bolsa Chica Mesa, the buffers were reduced as a trade-off for the concentration of development that was occurring on the upper bench in exchange for the placement of an open space easement over the entirety of the lower bench of the Bolsa Chica Mesa. The deliberations were only possible because the Commission had the entire Bolsa Chica Mesa before it given that they were acting on an LCP amendment that included all of the area within the Bolsa Chica LCP Area. The current coastal permit application is primarily to subdivide and develop the upper bench of the Bolsa Chica Mesa with a gated residential community. The upper bench, approximately 105.3 acres in size, is primarily one legal parcel comprised of a portion of Parcel 2 of Certificate of Compliance No. CC 92-01, but also includes an 8.2-acre parcel of land formerly owned by Metropolitan Water District. However, Parcel 2 extends down the slope and includes

approximately 16 acres of land on the lower bench (Exhibit 5). Under the approved VTTM 15460 the applicant is requesting to separate this 16-acre lower bench portion from larger upper bench portion of the existing parcel and create a "residual" parcel on the lower bench. Staff incompleated the initial coastal development permit application for the proposed development in November, 2002 for several items, including the applicant's plans concerning the lower bench⁴. Staff noted in the letter to the applicant that all previous evaluations of the biological resources, potential impacts and planning efforts for the Bolsa Chica Mesa included both the upper and lower benches. The applicant's response was that there were no plans, at the present time, for the lower bench. However, staff noted that the existing Parcel 2 to be subdivided in the current application also extends down the western slope and includes land on the lower bench. Staff further noted that the creation of this 16-acre residual lot is a division of land that constitutes development under the Coastal Act on the lower bench. Thus, the instant applicant did include some development of the lower bench, and the creation of a new parcel thereon required some explanation of the plans for that parcel. Further, the applicant is proposing to translocate Southern Tarplant existing on the upper bench, within the proposed residential development footprint, to the lower bench. All development in the coastal zone, unless it is otherwise exempt, must be approved by the Coastal Commission, since the local government has no certified LCP for this area. Despite the applicant's contention that none of the lower bench is before the Commission in the subject application, the Commission disagreed with this statement based on the creation of a separate legal parcel on the lower bench through the proposed subdivision of Parcel 2, and the translocation of Southern Tarplant from the upper bench to the lower bench.

Therefore, the proposed lower bench development is being analyzed under this application as was approved by the local government in the approval of Vesting Tentative Tract Map (VTTM) No. 15460 and included in the application submittal to the Commission. Also the portion of the lower bench to receive topsoil and tarplant seedlings from the upper bench and be graded to the same compaction as the upper bench tarplant areas is

⁴ The initial coastal development permit application that was submitted on November 6, 2002 was application 5-02-375. The applicant provided Commission staff with the requested additional information in several separate submittals over an extended period of time. The application was finally filed on September 24, 2003. Staff tentatively scheduled the application for the Commission's February, 2004 meeting in San Diego. The applicant requested the postponement of the matter in order to allow them time to enter into discussions with the California Wildlife Conversation Board for the sale of the lower bench for conservation purposes. Commission staff agreed to the request provided the applicant waive their right to a final Commission action within 180 days of the completed application since this would not be possible with a postponement of the hearing date. The applicant waived his right to a hearing within 180 days, and the application was then tentatively scheduled for the Commission's June hearing in Los Angeles. Citing on-going negotiations over the sale of the lower bench, the applicant requested an additional postponement. Under the Permit Streamlining Act, the Commission must take a final action on an application within a maximum of 270 days or the application must be withdrawn. On May 13, 2004, the applicant formally withdrew application 5-02-375. On May 21, 2004, a new application, 5-04-192, the subject application, was submitted. Coastal development permit application 5-04-192, as submitted, was identical to application 5-02-375.

also included in this application by virtue of the fact that the applicant is proposing this development. The Translocation Plan Southern Tarplant (*Centromadia Parryi* ssp. *Australis*) Brightwater Development Project, Bolsa Chica Mesa, Orange County, California, LSA, May 1, 2003, was included in the application submittal package for the previous and current coastal development permit application.

Site Description

The approximately 225-acre Bolsa Chica Mesa is only one portion of the Bolsa Chica LCP area. On the opposite end (to the south) of the LCP area is the Huntington Mesa, including the proposed Harriett Wieder Regional Park. The County of Orange began its LCP planning activities in 1977, segmented the area of the coastal zone into four segments with 12 geographic subareas or segments, the Bolsa Chica area being of those segments. The LCP area is comprised of approximately 1,588 acres of unincorporated land within the coastal zone of northwestern Orange County. Currently, the land exists predominantly as open space containing both upland and wetland habitat. The Bolsa Chica and Huntington mesas rise some 50 feet above the lowlands and are open space areas consisting primarily of non-native grasslands. However, they are a very important component of the Bolsa Chica ecosystem. An extensive wetland area located between two upland mesas to the north (Bolsa Chica Mesa) and south (Huntington Mesa) dominates the site. The Pacific Coast Highway, Bolsa Chica State Beach, and the Pacific Ocean border the western side, while urban development occurs to the east. The Bolsa Chica wetlands were formerly part of an extensive coastal lagoon/salt marsh system, which was estimated to cover 2,300 acres in 1894 by the U.S. Fish and Wildlife Service. Today, substantial portions of the wetland habitat remain in the lowland area.

Bolsa Chica is a unique place along the California coast. Bolsa Chica has undergone substantial degradation caused by human interference with its natural wetlands processes commencing in the 1800's. Bolsa Chica has been used for a variety of purposes over the years, most notably for on-going oil and gas production since the 1930's. Beginning in the 1960's and continuing through the late 1980's, it became increasingly recognized that the wetlands at Bolsa Chica were in need of major restoration. Initially restoration was proposed to be achieved through construction of a new ocean inlet in conjunction with a marina (boating facility).

Over the past century, Bolsa Chica has been affected by urban, recreation, and oil-related development. Three state oil leases occur within the lowlands, which currently support 331 oil wells (active and inactive), related oil facilities, and improved and unimproved roadways. Although development has markedly changed Bolsa Chica, the area currently contains substantial and important natural resource values. The Bolsa Chica Lowlands contains one of the largest remaining coastal wetlands in southern California.

Although a good portion of the wetlands is now degraded due to oil production, road construction and flood control, tens of thousands of birds use Bolsa Chica lowlands every year, including six endangered or threatened species. Up until 1997, the majority of the lowlands were in private ownership. However, in 1997, the State of California acquired 880 acres of the lowlands for the purpose of carrying out a comprehensive wetlands restoration, including a new ocean inlet. The Ports of Los Angeles and Long Beach are providing funding for the wetland restoration.

Bolsa Chica Mesa has been subject to agricultural activities for a substantial period of time. At the southern edge of the lower and upper bench of the Bolsa Chica Mesa is a continuous grove of Eucalyptus trees. Although Eucalyptus trees are not native to the area, they serve a vital biological role in the wetland/upland ecosystem. The Eucalyptus grove totals approximately 20 acres on both benches, 5 acres being on the upper bench. It is recognized by the Department of Fish and Game as an environmentally sensitive area under CEQA and the Coastal Commission and the courts as an environmentally sensitive habitat area or ESHA, as defined by the Coastal Act. Further inland from the Bolsa Chica Mesa bluff edge are grasslands that are used by both birds and other land mammals, including, but not limited to, the burrowing owl, for foraging.

B. PLANNING HISTORY

The planning effort for the Bolsa Chica segment of the County of Orange Local Coastal Program is long and controversial. Although the subject application is the first substantial coastal development permit application to the Coastal Commission for permanent development on the Bolsa Chica Mesa, the Commission's first consideration of the Bolsa Chica Local Coastal Program (LCP) began in 1982. Despite the Commission's numerous actions on the Bolsa Chica LCP throughout this twenty-year period, no LCP has ever been fully certified.

The Bolsa Chica LCP planning area is approximately 1,588 acres in size. The planning area is flanked on the north by Warner and Los Patos Avenues and the Bolsa Chica Mesa and on the south by the Huntington Mesa and Seapoint Street⁵. Between the two mesas is the 1,300-acre Bolsa Chica Lowland. The Pacific Ocean (Bolsa Chica State Beach) borders the western side of the planning area with residential development in the City of Huntington Beach on the east. The lowlands are primarily historic and currently functioning wetlands interspersed with former wetlands that are utilized for oil production activities (pads and roads) and upland areas that are Environmentally Sensitive Habitat Areas. The 306-acre Bolsa Chica Ecological Reserve, including Inner and Outer Bolsa Bay, are managed by the California Department of Fish and Game. The East Garden

⁵ Approximately 10 acres of the Huntington Mesa and Seapoint Street are within the City of Huntington Beach.

Grove-Wintersburg (EGGW) Flood Control Channel, maintained by Orange County Flood Control District, is also within the Bolsa Chica lowlands. The flood control channel empties into Outer Bolsa Bay.

The Commission's first approval of the Bolsa Chica Land Use Plan (LUP) occurred in November 1984. On October 23, 1985, a revised land use plan was adopted which would have allowed for intensive development of the area including 75 acres of mixed-use marina/commercial, a 150 room motel, 500 acres of high density residential development, a navigable tidal inlet, an arterial roadway through the Bolsa Chica Wetlands (the Cross-Gap Connector), and 915 acres of wetland restoration. The amount of wetland fill that would have occurred under this LCP was not specified. This controversial LUP was never fully certified.

In June 1995, the County of Orange submitted an amended proposal of the Bolsa Chica Local Coastal Program (LCP) for Commission certification. As submitted in 1995, the Bolsa Chica LCP would have allowed 2,400 units on the upper and lower benches of the Bolsa Chica Mesa, and up to 900 residential units in the Lowlands for a total of 3,300 residential units. The Lowland development would have resulted in fill of 120 acres of wetland and the elimination of 65 acres of ESHA that was interspersed between the wetlands. The major property owner was required to fund the restoration of 770 acres of adjacent wetlands and dedicate the restored wetlands to a public agency, as mitigation for the wetland impacts. Public access and recreational facilities included a public loop road ("mesa connector road") on the Bolsa Chica Mesa, active and passive parks on both the Bolsa Chica Mesa and in the Lowlands, 100 public parking spaces on the Bolsa Chica Mesa and 60 public parking spaces in the Lowlands, pedestrian and bicycle trails on the mesas and in the Lowlands, a 4-acre kayak/conoe/beach facility on the inland side of PCH, and the optional provision of 10 acres of neighborhood commercial use on the Bolsa Chica Mesa. Fifty-eight acres of land on the Huntington Mesa was to also be dedicated to the County of Orange for the Harriet Wieder Regional Park. Development on the Bolsa Chica Mesa would have eliminated Warner Pond, a 1.7-acre wetland located on the lower bench. Additionally, the Eucalyptus grove ESHA on the Bolsa Chica Mesa was to be relocated onto the Huntington Mesa in order to accommodate the build-out of the Bolsa Chica Mesa. The Commission approved this amended version of the Bolsa Chica LCP on January 11, 1996. The Commission's decision became the subject of a lawsuit.

The trial court determined on June 4, 1997 that the Commission's approval of the Bolsa Chica LCP was deficient in two respects. First, that Section 30233 of the Coastal Act does not allow the fill of wetlands for residential purposes. Second, that the Warner Pond wetland was an environmentally sensitive habitat area (ESHA) and that the Commission failed to explain how such an ESHA could be filled consistent with Section 30240 of the Coastal Act. The trial court remanded the Bolsa Chica LCP to the Commission. The Commission reheard the Bolsa Chica LCP on October 9, 1997.

At the Commission's October 9, 1997 meeting, significant revisions were made to the Plan as originally submitted in June 1995. The Commission found in October 1997 that the fill of wetlands for residential development was not an allowable use and denied the development proposed in the lowland area. Residential development of the upper and lower benches of the Bolsa Chica Mesa was also scaled back to 1,235 residential units to avoid the widening of Warner Avenue which necessitated the fill of Warner Pond. Since lowland residential development was denied, the proposed wetland restoration mitigation project was also deleted from the Bolsa Chica LCP since it was to be funded by the developer through the lowland residential development. Furthermore, the wetland restoration program became moot since the majority of the lowland (880 acres) was acquired by the State of California, thus becoming public trust lands. The State and Federal governments have a Coastal Commission approved wetland restoration program covering 1,247 acres of the lowland. On November 13, 2001, the Commission approved Consistency Determination No. CD-061-01 (U.S. Fish and Wildlife Service) for the major wetland restoration project.

The Commission's October 9, 1997 decision on remand was again challenged. On April 16, 1999, the appellate court upheld the trial courts findings, added a new finding and remanded the Bolsa Chica LCP back to the Commission. The new finding of the appellate court was that the relocation of the Eucalyptus grove from the Bolsa Chica Mesa to the Huntington Mesa was not allowed under Section 30240 of the Coastal Act. To comply with the appellate court's remand, the Commission once again re-heard the Bolsa Chica LCP on November 11, 2000. The Commission certified the LCP again, with suggested modifications that were significantly different from the previous suggested modifications.

In the Commission's 2000 approval, it again limited the number of residential units on the Bolsa Chica Mesa to a maximum of 1,235 to avoid the filling of Warner Pond. However, the Commission further required that all future development be concentrated on the upper bench of the Bolsa Chica Mesa adjacent to existing residential development and that the entire lower bench (with the exception of a 10 acre school site adjacent to Warner Avenue) be designated for conservation and preserved through an open space-deed restriction. The Commission found that in order to be most protective of the resources that development of the Bolsa Chica Mesa must be confined to the upper bench of the mesa, in close proximity to existing development, to conserve all of the resources of the lower bench in a manner that is more protective overall of significant coastal resources, than protecting each specific habitat area in conjunction with development of the entire Bolsa Chica Mesa.

The Commission also required that the Eucalyptus grove ESHA remain intact and protected on the Bolsa Chica Mesa and that it not be relocated to the Huntington Mesa, as was previously proposed and approved under the earlier LCP. To protect the portion of the Eucalyptus ESHA located on the upper bench, the Commission required that all future residential development be set back a minimum of one hundred feet from either the inland

edge of the ESHA or the inland edge of the bluff, whichever is the greatest distance. The Commission's 2000 action on the LCP further required that future development of the portion of the upper bench that overlooks the lower bench was required to be set back fifty feet from the upper edge of the slope separating the two benches. Other significant suggested modifications contained in the Commission's 2000 action included the prohibition of storm water discharges directly into Outer Bolsa Bay or other wetland area; the provision of a scenic public loop road allowing public parking on both sides, immediately landward of the buffer and paralleling the portion of the upper bench that overlooks the Lowlands; and the protection of cultural resources by requiring that a Native American monitor also be present during all grading operations.

The Commission's November 2000 action was unacceptable to the County of Orange and the landowner. In May 2001, the County notified the Commission that it would not be adopting the Commission's suggested modifications. Therefore, the Commission's certification of the LCP lapsed six months after its action. Therefore the standard of review for the currently proposed development remains the Chapter 3 policies of the Coastal Act since there is no certified LCP for the Bolsa Chica area of the County of Orange.

D. BIOLOGICAL RESOURCES

Although 82.6 acres of the 105.3-acre Brightwater development project site (78%) is dominated by non-native annual grasslands and forb or ruderal communities, the upper bench of the Bolsa Chica Mesa also contains a Eucalyptus grove, Southern Tarplant, coastal bluff scrub communities, and two wetlands. These native and non-native communities combine to make the Bolsa Chica Mesa ecologically valuable. The mesa and its associated bluffs provide habitat for over 88 species of land birds, including some 33 resident species, 38 migrants, 15 wintering species and 3 summering species. Reptiles and at least ten species of mammals also utilize the Bolsa Chica Mesa.

The Bolsa Chica Mesa must also be viewed in the larger context of its role in the upland/wetland ecosystem. According to both the California Department of Fish and Game and the U.S. Fish and Wildlife Service, the Bolsa Chica Mesa and the lowland wetlands are biologically interdependent. Together with the Bolsa Chica wetlands, a part of the roughly 1,300 acre Bolsa Chica Lowlands, the mesa communities which include both the Bolsa Chica Mesa and the Huntington Mesa to the south of the Lowlands, combine to make this area an important upland-wetland ecosystem. These biological interdependencies are vital to maintaining biological productivity and diversity. However, it must also be recognized that over the years, this resource area has declined due to human impacts and development pressures. Commission staff ecologist, Dr. John Dixon, summarizes the declining, but still valuable, overall ecological condition of the greater Bolsa Chica area in his July 15, 2004 memo on the Proposed Brightwater Development Project in this way:

"The Bolsa Chica wetlands once covered over 30 square miles and, on the Bolsa Chica and Huntington Mesas, were bounded by coastal sage scrub communities that interacted ecologically with the wet lowlands. Although the wetlands have been reduced to less than two square miles and the adjoining mesas have been substantially developed and the remaining open space much altered, the U. S. Fish and Wildlife Service in 1979 nonetheless identified the Bolsa Chica ecosystem as "one of the last remaining viable wetland-bluff ecosystems in southern California." This viewpoint was echoed by conservation biologists over twenty years later: "...Bolsa Chica is one of the last remaining areas in coastal southern California with a reasonably intact upland-wetland gradient, which is of high ecological importance and generally lacking in representation in reserves in the region." In nearly all other coastal marsh ecosystems in southern California, the upland components have succumbed to urban development. Uplands provide pollinators for wetland plants, nesting and denning sites for avian and mammalian predators that forage in wetlands, important alternative prey populations for many of those predators, and critical habitat for primarily upland species. Many species have life-stages that rely on both wetland and upland habitats ... [citations omitted]

Dr. Dixon's memo can be found in its entirety as Exhibit 20 to this staff report and is incorporated herein by reference. Due to the special communities of the Bolsa Chica Mesa, many areas of the mesa have previously been determined to constitute environmentally sensitive habitat areas, as defined by and protected by the Coastal Act, or, if not previously so recognized, nevertheless qualify as such. The Coastal Act defines environmentally sensitive habitat areas or environmentally sensitive areas as:

Section 30107.5

"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

Further, Section 30240 of the Coastal Act requires that land resources that constitute environmentally sensitive areas or environmentally sensitive habitat areas as defined by Section 30107.5 be protected by allowing only resource dependent uses within those areas. Additionally, development adjacent to environmentally sensitive areas and parks and recreation areas must be sited and designed such that the adjacent development will not degrade the habitat or recreation values of the sensitive resource. Finally, uses adjacent to environmentally sensitive land resources and park and recreation areas must be compatible with the continuance of the resource area. Coastal Act Section 30240 states:

Section 30240

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

In the November 2, 2000 Commission staff report concerning a proposed amendment to the Bolsa Chica Local Coastal Program, the following Environmentally Sensitive Habitat Areas (ESHA) were identified: (1) the Eucalyptus grove on and along the edge of both the upper and lower bench of the Bolsa Chica Mesa; (2) Warner Pond, located on the lower bench, a marine habitat connected by culvert to Huntington Harbor; (3) the natural habitats within the California Department of Fish and Game Ecological Reserve along the western edge of the lower bench of the Bolsa Chica Mesa; (4) the coastal sage scrub community throughout the mesa; (5) habitat of the southern tarplant throughout the mesa; and, (6) the degraded wetlands in the lowlands that are part of a restoration plan. The Eucalyptus trees, Warner Pond, and the Ecological Reserve were generally depicted, the locations of the other ESHA types were not mapped.

Dr. Dixon notes that there has been no change in circumstances in the intervening four years that would cause the removal any of these habitats from the recommended list of environmentally sensitive habitat areas on or adjacent to the Bolsa Chica mesa. Thus, for the reasons stated in Dr. Dixon's July 15, 2004 memo, the Commission finds these areas to constitute ESHA. In addition to the abovementioned habitats, the upper bench of the Bolsa Chica Mesa contains two small but functioning wetlands: the 0.2 acre Los Patos seasonal wetland (referred to as "seasonal pond" by the applicant), located near Los Patos Avenue and the 0.06 acre "pocket wetland" located in the central slope/bluff edge area (Exhibit 4). The Los Patos wetland is a seasonally ponded depression, dominated by herbaceous vegetation, including the rare Southern Tarplant. The "pocket wetland" is a small borrow pit dominated by a stand of willows and mulefat with very little understory vegetation. These wetlands are protected under Section 30233 of the Coastal Act and only certain enumerated uses are allowed if no less environmentally damaging feasible alternative exists, and if feasible mitigation measures are provided. However, these freshwater wetlands do not constitute ESHA as defined above. The proposed Brightwater development project however does not propose to fill these wetlands but will retain them in place with a 100-foot wetland buffer. This wetland buffer is consistent with numerous past Commission actions to protect wetlands from the effects of adjacent development.

However, care must be taken during grading and construction to assure that impacts to the wetlands are avoided.

Another habitat of the Bolsa Chica Mesa that was not identified as ESHA in the Commission's previous actions on the Bolsa Chica LCP is that of the burrowing owl. The burrowing owl is considered a California Species of Special Concern by the Department of Fish and Game. Burrowing owls use the Bolsa Chica grassland and ruderal habitats as well as abandoned burrows of rodents or other small mammals. In the winters of 2001-2002 and 2002-2003, the applicant's biologist documented use of specific areas of the mesa by this owl (Exhibit 17a). The characteristics of the burrowing owl habitat, its ESHA status on the Bolsa Chica Mesa, and the proposed project impacts are detailed below.

The residential and park facilities of the proposed Brightwater development project, as currently proposed, will significantly impair the biological productivity of the upper bench of the Bolsa Chica Mesa, and indirectly impact the adjacent lowland wetlands. Adverse impacts from residential development and park facilities include: disturbances to wildlife, including nesting, from human activity and disruptive noise and lights due to the inadequate buffer adjacent to the Eucalyptus grove ESHA; loss of terrestrial habitat, including the protected Southern Tarplant and burrowing owl ESHAs and coastal sage scrub due to residential fuel modification encroachment into the ESHA and ESHA buffer, recreation center facility construction impacts on the Tarplant ESHA and the encroachment of residential fuel modification and the installation of the proposed detention basin into the burrowing owl ESHA; loss of foraging habitat caused by the development footprint and associated elimination of 75 acres of non-native grasslands and ruderal vegetation that is utilized by several California Species of Special Concern (CSC); loss of wildlife movement corridors; adverse impacts to native plants and animals from domestic pets, especially cats, and the introduction of pollutants through residential landscaping and irrigation runoff, and human activities. The Brightwater development project features and their impacts to the various sensitive land resources of the upper bench of the Bolsa Chica Mesa are detailed below.

1. Eucalyptus Grove ESHA and ESHA Buffer

In 1982, the Department of Fish and Game (DFG) designated the Bolsa Chica Mesa Eucalyptus grove as an environmentally sensitive habitat area (ESHA) based on its value for nesting and roosting for a variety of raptors. In their 1982 report, "Environmentally Sensitive Habitat Areas at Bolsa Chica", DFG noted the presence of eleven raptor species. Raptors found to be using the grove included the white tailed kite, marsh hawk, sharp-shinned hawk, Cooper's hawk, and osprey. Many of these species are dependent on both the Bolsa Chica wetlands and the upland areas of the Bolsa Chica Mesa for their food. Other raptor biologists who have studied the Bolsa Chica Mesa have also found it to

be particularly significant to a large number of birds of prey, including the Northern Harrier, prairie falcon, burrowing owl and the loggerhead shrike. The grove is also recognized by the Coastal Commission as an "environmentally sensitive area" or environmentally sensitive habitat area (ESHA) as defined by Section 30107.5 of the Coastal Act. The Commission first recognized the ESHA status of the grove many years ago, and the California appellate court in 1999 did not challenge the designation of the Eucalyptus grove as an ESHA protected by the Coastal Act when, in 1995, the County of Orange, on behalf of the predecessor applicant, Koll Real Estate Group, attempted to relocate the Eucalyptus grove, through the LCP process, to the Huntington Mesa, in order to make room for full development of the upper and lower benches of the Bolsa Chica Mesa.

The Eucalyptus grove along the southern bluff edge of the mesa is considered an ESHA because of the important ecosystem function it provides for birds of prey. However, the adjacent grassland, ruderal and coastal sage scrub function as foraging habitat and must also be preserved in order for the ESHA function. According to Dr. Dixon, some of the raptors that use the Eucalyptus trees forage in the wetlands, some forage in the mesa grasslands, and some forage within the coastal sage scrub along the bluff edge, and many of the raptors forage in more than one habitat. The need for hunting perches and roosting or nesting sites cannot be separated from the need for an effective hunting area. It is believed that the Eucalyptus grove would cease to function as ESHA were there not adequate foraging habitat nearby. The Commission found in November 2000 during its deliberations over the Bolsa Chica LCP, that the ESHA along with the adjacent non-ESHA areas are interdependent and constitute an ecological system. The Department of Fish and Game stated in its 1982 report that "habitat diversity is further enhanced by associations of eucalyptus-grasslands, eucalyptus-coastal sage scrub eucalyptus (snags)-wetland communities". This important point was also made by the U. S. Fish and Wildlife Service in its 1979 report on the Bolsa Chica Area, reiterated in the 1996 EIR for the Bolsa Chica LCP, and by LSA Associates in 2001 in the subsequent EIR for the subject Brightwater development project.

The adjacent upland mesa area is important to the functioning of the ecosystem because: (1) many of the species that are dependent on the Eucalyptus trees or on burrows near the pocket wetland on the central slope area forage over the entire Mesa, (2) habitat areas need to be large enough to avoid habitat fragmentation and to provide connectivity to other habitat areas, and (3) habitat areas must be large enough to promote and maintain habitat and species diversity. Development must be separated from ESHAs by buffers in order to prevent impacts that would significantly degrade those areas. DFG and the USFWS previously recommended the establishment of a 100-meter buffer on the Bolsa Chica Mesa in the 1980's. Dr. Findlay, of the University of Ottawa, in a letter to the Coastal Commission dated February 9, 2000, recommended a 150-meter buffer for the Eucalyptus grove. The Coastal Commission staff ecologist recommends a minimum 100-meter (328 ft.) buffer around the Eucalyptus grove ESHA. In further studying the

appropriate buffer for the Eucalyptus grove ESHA in light of the proposed adjacent development, Dr Dixon states:

The buffer around the Eucalyptus tree ESHA is particularly important if those trees are to continue to function as nesting habitat for a variety of raptors. The California Department of Fish and Game and the U.S. Fish and Wildlife Service recommended a 100-m buffer. A literature review found that raptor biologists recommended buffers for various species of nesting raptors from 200 m to 1500 m in width, with the exception of 50-m buffers from visual disturbance for kestrels and prairie falcons. . . .In an independent review concerning a prior development proposal at Bolsa Chica with 100-foot (30-m) buffers, raptor expert Brian Walton opined that developers "...often rely on buffers that I find largely ineffective for reducing raptor fright/flight response." [and] "[t]hey describe unusual tolerance, habituated individuals or exceptions to normal raptor behavior rather than the more common behavior of wild birds."

Dr. Dixon concluded, after evaluating the various case studies and independent reviews specifically of the raptor behavior of the Bolsa Chica Mesa, that a minimum 100-meter buffer is necessary if the Eucalyptus trees are going to function as nesting sites in the future. He further opined that larger buffers are necessary during the extraordinary disturbance that takes place during construction. If raptors are nesting, a 152-m (500-ft) buffer should be established around the nest during construction activities. The sensitive habitat areas of the project site on the upper bench of the Bola Chica Mesa, including the recommended buffers, are shown in Figure 1 of Dr. Dixon's July 15, 2004 memo on the subject project (Exhibit 20).

As discussed above, the Brightwater development project proposal of a 100-ft. buffer around the Eucalyptus grove ESHA is inadequate to protect the ESHA from myriad human and domestic pet activities that occur when residential development is adjacent to a sensitive area. Dr. Dixon notes that buffers serve several important functions: they allow for some error in assigning boundaries (for example, extent of wetlands or southern tarplant habitat), they keep disturbance at a distance, they provide important auxiliary habitat (e.g., foraging or pollinator habitat), and they provide water quality functions around wetlands. Buffers should not be used for activities that have negative effects on the resources that are being protected.

The proposed Brightwater development project includes a 100-foot buffer between the proposed single-family residential lots and the Eucalyptus ESHA. Dr. Dixon does not think that such a narrow buffer is adequately protective of the ESHA. In addition, there is also proposed several types of development within the buffer that would cause adverse impacts to the adjacent ESHA.

The development proposed between the residential lots and the Eucalyptus grove ESHA includes: (1) park amenities including a 12 foot wide, paved pedestrian/bicycle trail, 30 public parking spaces, bicycle racks, and the extension of Bolsa Chica Street (32 ft. wide park entry road – the only vehicular access to the park) (Exhibit 4), (2) significant grading activity including a fill slope up to 30 feet in height (Exhibit 15), (3) a water quality treatment facility for the residential community including five created wetlands and a 1.3 ac detention basin (Exhibit 4 and 15), and (4) 100% of the fuel modification requirements for the lots that abut the ESHA buffer ((Exhibit 14). Incompatible development within the ESHA buffer compromises the goal of the buffer. The impacts of the fuel modification activities are discussed in this staff report in Section G, Hazards, the impacts of the park amenities are discussed in Section E, Public Access and Recreation, the impacts of the grading is discussed in Section F, Scenic and Visual Resources, and the impacts of the water quality treatment facilities is discussed in Section H, Marine Resources, of this staff report. As is explained in those sections, each of these features has impacts that, in addition to being inconsistent with the primary policies discussed in those sections, is also inconsistent with Section 30240 of the Coastal Act.

The approved vesting tentative tract map for the Brightwater subdivision includes residential lots abutting the proposed 28-acre upland habitat park. The southeast portion of the upland habitat park includes the existing 5-acre Eucalyptus grove ESHA. The Brightwater development project's proposed 100 ft. wide ESHA buffer is also a part of the proposed upland habitat park (Exhibit 8). The park is located along the slope between the upper and lower benches of the mesa immediately below the proposed residential lots. Under the County's approval, the homes on each of the lots that abut the park are allowed to have 100% of the required fuel modification located in the upland habitat park that again includes the 100-foot wide ESHA buffer in the southeast portion of the park. The required fuel modification for approximately 16 of the residential lots in this area extends beyond the ESHA buffer and encroaches into the Eucalyptus tree ESHA itself. The Orange County Fire Authority (OCFA) has conceptually approved the Fuel Modification Plan for the proposed project.

Fuel modification is an on-going activity that is required as long as there are adjacent habitable structures. The goal of the fuel modification is to control the plant palette and the location and design of development in order to minimize the risk of wild fires. This goal is at odds with the protection of native plant species because many of the native species are combustible. Further, methods of fuel load suppression are at odds with maintaining a natural plant community. Those methods include irrigation of native plants and thinning and vegetation removal of certain important native plant species that are a part of native plant communities. Therefore, if residences are allowed in the proposed location, there will be continual impacts in the ESHA with the on-going implementation of fuel modification requirements.

In addition to fuel modification activities within the ESHA and the Brightwater project's proposed 100 ft. ESHA buffer, other incompatible development within the buffer includes: (1) approximately 600 linear feet of the proposed 12 ft. wide paved pedestrian/bicycle trail (at one point the trail is as close as 10 -12 ft. from the ESHA); and (2) approximately 250 linear feet of the 32 foot wide Bolsa Chica Street extension and five of the proposed 30 public parking spaces; and (3) extensive grading (fill slopes as high as 30 ft.). These development encroachments into the ESHA buffer also compromise the effectiveness of the buffer in the protection of the adjacent ESHA. As explained by Dr. Dixon an ESHA buffer is supposed to contain transitional native vegetation, provide important auxiliary habitat and keep disturbance at a distance. Buffers are not intended to contain development such as that which is being proposed.

Therefore, for reasons detailed above, the Brightwater development project as currently proposed is inconsistent with the Coastal Act requirements for the protection of environmentally sensitive habitat areas, namely the Eucalyptus grove ESHA on the upper bench of the Bolsa Chica Mesa. The Commission therefore denies the proposed project as submitted.

2. Southern Tarplant ESHA

The Southern Tarplant is a Federal "Species of Concern" and listed as a 1B (Rare, Threatened, or Endangered in California and Elsewhere) plant by the California Native Plant Society (CNPS) and meets the CEQA definition of rare (threatened) and endangered species. Southern Tarplant is an annual plant that favors damp, disturbed areas and is generally restricted to grasslands, wetland edges, vernal pools, and alkaline flats in the coastal counties of southern California and has been greatly reduced and populations have been fragmented by development. According to Dr. Dixon, Southern Tarplant has become rare in California and its remaining habitat is particularly valuable due to the loss of its natural habitat. The Department of Fish and Game further noted in their January 16, 2002 EIR comments on the proposed project, that one of the characteristics of the Southern Tarplant is that, as an annual (life cycle is completed within one year), the number of detectable (above-ground flowering) plants visible in any one year vary sharply depending on factors such as soil moisture. Because of this characteristic of the plant, quantifying populations and determining the impacts of a development project on existing tarplant communities can be problematic (Exhibit 9). Therefore, the long-term health of the tarplant population depends on an extensive seed bank.

The applicant's consultant conducted tarplant surveys of both the upper and lower benches in 1999, 2000, 2001 and 2002. The largest concentration of tarplant by far is on the lower bench; however, the upper bench also contains several sizeable patches of the

sensitive plant (Exhibit 16). Dr. Dixon notes that based on the applicant's recent surveys, the tarplant tends to be much more widely distributed among the habitats on the lower bench than on the upper bench where it is almost entirely confined to the area surrounding the seasonal pond adjacent to the Los Patos wetland. There may be habitat differences between the upper and lower benches that account for this phenomenon. Southern Tarplant is most abundant near trails and other open disturbed areas. Scattered individual plants on the upper bench do not constitute ESHA. However, the significant Tarplant populations around the Los Patos wetland on the upper bench should be considered ESHA under the Coastal Act definition. Similarly, the patches of tarplant near the western edge of the development area are part of the extensive population on the lower bench and area part of the ESHA. As environmentally sensitive habitat areas, the tarplant populations must be preserved in place and cannot be eliminated or translocated in order to use their existing locations for residential use.

The Brightwater development proposal would eliminate two of the existing ESHA populations of Tarplant within the proposed 28-acre Upland Habitat Park and a third tarplant population located in the area of the proposed 2.5-acre private recreation center surrounding the existing Los Patos seasonal wetland would also be eliminated (Figure 1 of Exhibit 20). The Brightwater development project, as approved by the County of Orange, and as submitted by the applicant in both the original application 5-02-375 and the subject application, does not propose the preservation any of the existing tarplant on the upper bench. All tarplant will be translocated to the lower bench through implementation of the "Translocation Plan, Southern Tarplant (*Centromadia Parryi* ssp. *Australis*) Brightwater Development Project, Bolsa Chica Mesa, Orange County, California, LSA, May 1, 2003. However, habitat that qualifies as ESHA under the Coastal Act must be protected in place, except under limited situations, pursuant to Section 30240 of the Coastal Act. Only resource dependent uses are allowed to impact ESHA and only if there is no other less environmentally damaging feasible alternative. Therefore, the proposed Southern Tarplant translocation is not permissible under the Coastal Act since it would be done for residential purposes. The courts have already established this standard in previous rulings concerning the Bolsa Chica site when the Commission approved the translocation of the existing Eucalyptus grove ESHA over to the Huntington Mesa to make way for residential development.

The Southern Tarplant populations that constitute ESHA must also be protected from adjacent development with an adequately sized buffer. Commission staff ecologist recommends that a 50-foot buffer be established adjacent to the ESHA boundaries defined by the presence of tarplant, as illustrated in Figure 1 of his memo (Exhibit 20). The Commission has used such a buffer to protect sensitive vegetation in past actions, consistent with Section 30240(b) of the Coastal Act.

After conversations with staff concerning the tarplant surrounding the Los Patos wetland, the applicant verbally agreed to preserve any tarplant that is within the proposed 100-foot

wetland buffer (since the tarplant basically rings the wetland). The applicant did not however modify the project description in writing to formalize this agreement. Further, the applicant is not willing to preserve all of the Tarplant ESHA surrounding the wetland, i.e. any of the tarplant that is more than 100 ft. from the wetland. When staff discussed Further, the applicant is unwilling to provide the necessary 50-foot buffer around the Tarplant ESHA in order to protect it from the adjacent planned recreational uses of the proposed 2.5-acre private recreation center. The 2.5-acre recreation center adjacent to the Southern Tarplant ESHA includes a tot lot; picnic areas on decomposed granite, a boardwalk and gazebo, several swimming pools and a 1,300 square foot clubhouse. There could certainly be a redesign of the private recreation center to allow the necessary preservation of the Tarplant ESHA. Therefore, for reasons detailed above, the Brightwater development project as currently proposed is inconsistent with the Coastal Act requirements for the protection of environmentally sensitive habitat areas, namely the Southern Tarplant ESHA populations on the upper bench of the Bolsa Chica Mesa. The Commission therefore denies the proposed project as submitted.

3. Burrowing Owl ESHA

One of the sensitive raptor species that uses the Bolsa Chica mesa is the burrowing owl. The Department of Fish and Game (DFG) considers the burrowing owl (*Athene cunicularia*) a California Species of Special Concern. It hunts for prey in open grasslands and areas of ruderal vegetation. The upper bench of the Bolsa Chica Mesa contains 75 acres of such habitat. In addition to foraging over the grasslands, the burrowing owl uses the abandoned burrows of the California ground squirrel and other small rodents as shelter during the nesting and wintering seasons. The burrowing owl is in decline in most areas of California, especially in the coastal zone due to the loss of habitat as a result of development and rodent control activities. The rapid decline of this species in Orange County has been chronicled in the latter half of the 20th century.⁶

The Brightwater development site contains many burrows that have probably been used by the burrowing owl. One or two wintering birds are thought to use the Bolsa Chica Mesa, as evidenced by repeated observations of a one owl or two owls in the winters of 2001-2002 and 2002-2003 by the applicant's biologists (Exhibit 17a). However, it is believed that the Bolsa Chica Mesa is used by an unknown number of migrant burrowing owls as a stop-over foraging area, according to Dr. Dixon's communications with other raptor biologists. It is raptor biologist Peter Bloom's professional opinion that migrant and wintering burrowing owls use the Bolsa Chica Mesa during most years. The Bolsa Chica Mesa is one of the few areas in the region that still has the potential for nesting by this

⁶ Hamilton and Willick (1996) and Gallagher and Bloom (1997), according to Draft Subsequent Environmental Impact Report, Volume I, Brightwater Development Project, Orange County, California, SCH #1993071064, LSA, November 17, 2001, page 4.9-21.

species in the future. Additionally, the burrowing owl is one of three species of raptors at Bolsa Chica that DFG biologist Ron Jurek thinks is most in need of habitat protection. Based on this information, Dr. Dixon has determined that the area on the Bolsa Chica Mesa as mapped by the applicant's biologist as burrowing owl habitat constitute an ESHA as defined by the Coastal Act, and therefore also should be protected as required by the Coastal Act. The Commission agrees. Additionally, the DFG, in its January 16, 2002 comments on the project EIR, recommended that the burrowing owl habitat on the upper bench be retained, if feasible.

Upon receipt of the applicant's mapping showing the burrowing owl habitat location, at the request of Commission technical staff, planning staff suggested that the applicant again review the submittal of the mapped burrowing owl use area. It appeared to staff that the area might have been drawn overly broad. The applicant however declined the offer to provide refined data. However, several months later, the applicant agreed to resurvey the project area for signs of burrowing owl use. On June 15, 2004, the applicant's consultant, LSA, submitted the results of a survey taken on June 2, 2004 (Exhibit 17). The applicant's June 2004 survey of ground squirrel activity found approximately 130 ground squirrel locations, providing a rough approximation of how squirrels are distributed on the site, as explained by the consultant. The highest use areas were areas where there is a break in topography; at the edge of the slope of the upper mesa on the west and at the bluff edge on the south and on the bluff edge of the lower bench overlooking Outer Bolsa Bay and the lowlands on the southeastern bluff edge of the lower bench. LSA concluded that, "the best way to offset potential impacts to burrowing owl habitat would be to enhance owl habitat suitability somewhere on the lower mesa where human disturbance could be managed".

However, Dr. Dixon recommends that the Commission use a similar approach in identifying the burrowing owl ESHA on the Bolsa Chica as it did in a recent project in the South Central Coast District, the Arco Dos Pueblos Golf Links (December 11, 2002 Commission Hearing). In that case, the Commission designated only trees known to have been used by white-tailed kites for nesting or perching and adjacent trees as ESHA. In the present instance, LSA Associates has identified the area containing burrows known to be used by wintering burrowing owls. Burrowing owls tend to reuse burrows year after year and an area should be considered occupied if at least one burrowing owl has been observed occupying a burrow there within the last three years, according to the California Burrowing Owl Consortium, recognized by the Department of Fish and Game. Therefore, the LSA field observations are good evidence of occupied habitat, and Dr. Dixon recommends that the Commission designate as ESHA the area mapped by LSA as the "Primary roosting areas used by wintering burrowing owls". This designation would be made in recognition of its important role in the ecosystem of providing support to a species of special concern that has nearly been extirpated from the coastal zone by conversion of habitat to urban uses. This LSA mapping is shown in Exhibit 17a and is

reflected in Figure 1 of Dr. Dixon's July 15, 2004 memo (Exhibit 20).. The Commission agrees and hereby designates those areas as ESHA.

Again, once an area is designated as ESHA, the Commission cannot sacrifice it in exchange for another (except in limited circumstances not applicable here). Thus, the existing burrowing owl habitat, as provided by the applicant's biologist and shown on Figure 1 of Dr. Dixon's July 15, 2004, memo, must remain in tact, given the evidence of the previous use of the area by the burrowing owl. Although enhanced owl habitat suitability "somewhere on the lower mesa where human disturbance could be managed," as recommended by LSA may be beneficial, it cannot be used to justify removal of existing habitat.

Instead of retaining the burrowing owl habitat, the County of Orange in its approval of the project required the applicant (in Project Design Feature (PDF) 9-5) to conduct surveys for the burrowing owl prior to grading and construction, but ultimately will allow the existing burrow to be eliminated, with mitigation. If the burrow is found to be in active use, the bird(s) is (are) required to be passively relocated to enhanced or created alternative burrows, at a 1:1 ratio. DFG requested that the applicant conduct a formal burrowing owl survey and perform all activities concerning the burrowing owl using the 1993 "Burrowing Owl Survey Protocol and Mitigation Guidelines", prepared by the California Burrowing Owl Consortium following the DFG "Staff Report on Burrowing Owl Mitigation", dated September 25, 1995. Further, DFG requested that "when destruction of occupied burrows is unavoidable," enhanced or new burrows be provided on a 2:1 ratio on permanently protected lands adjacent to the occupied burrowing owl habitat, if possible. As approved by the County, the applicant only has to provide mitigation at a ratio of 1:1 as opposed to the 2:1 suggested by DFG.

Therefore, for reasons detailed above, the Brightwater development project as currently proposed is inconsistent with the Coastal Act requirements for the protection of environmentally sensitive habitat areas, namely the burrowing owl ESHA on the upper bench of the Bolsa Chica Mesa. The Commission therefore denies the proposed project as submitted.

4. Annual Grassland and Ruderal Foraging Habitat

The vegetation type on the project site is predominantly non-native annual grasslands and ruderal vegetation. Of the 105.3-acre development area, 82.6 acres of open vegetated areas are dominated by annual grasslands (55.9 acres) and areas vegetated with ruderal grassland/forb (26.7 acres), according to the project EIR. Although annual grasslands and ruderal vegetation are generally not considered to be sensitive resources because of the exotic character of the dominant species, these habitats nevertheless provide

important support for many native species of the plants and animals. It is particularly important as foraging habitat for many species of birds of prey and it is being rapidly replaced by development in much of coastal southern California. At the Bolsa Chica mesa, the annual grassland and ruderal vegetation provides critical support for the any species of birds that use the Eucalyptus and palms trees along the bluff edge for perching, roosting and nesting. Without adequate foraging habitat nearby, the existing Eucalyptus grove of the Bolsa Chica Mesa would not continue to function as ESHA.

In the past, little concern has been expressed nor any actions taken about the loss of annual grasslands and ruderal vegetation given their status as non-native habitat. However, in recent years, with the increasing loss of native prairies, it has recently come to the attention of Department of Fish and Game and other raptor biologists that the remaining non-native annual grassland and ruderal vegetation are becoming a critical food source which is essential to the health of populations of many birds of prey and other native species. For this reason, DFG has recommended mitigation under the California Environmental Quality Act for the loss of such non-native habitat. In over 60 recent actions, DFG has required preservation of foraging habitat at a ratio of 0.5 acres preserved to each acre lost to development. At Bolsa Chica, the foraging habitat on the mesa is absolutely necessary for the continued presence of many of the raptors that utilize the Eucalyptus ESHA. Furthermore, concerning the interconnectedness of the foraging habitat and the Eucalyptus ESHA, DFG biologist Ron Jurek wrote, in an October 2000 independent review of the potential effects of development on raptors of the Bolsa Chica Mesa, that the Eucalyptus ESHA "...is a zone of trees with good perching and nesting conditions within raptor habitat. It is not the raptor habitat itself. In my professional opinion, for most of the raptor species known to use the ESHA, raptor use depends primarily on the availability of the food resources of the surrounding lands...."

As proposed, the Brightwater development project would eliminate 75.2 acres of annual grassland and ruderal habitat, combined. In approving the development, the County of Orange also adopted the project's subsequent EIR. The EIR states that the proposed loss of foraging habitat will not be significant considering the existence of the remaining habitat on the mesa and in the region. The Commission notes that of the existing grassland and ruderal habitat on the upper bench of the Bolsa Chica Mesa, the Brightwater development project eliminates all but 1.5 acres of grassland and all but 6 acres of ruderal vegetation. Therefore the EIR statement must be referring to the grassland and ruderal habitats remaining on the lower bench of Bolsa Chica Mesa. However, the Commission notes that the lower bench is not before the Commission given that the applicant has refused to include it in this or the original Brightwater application. There is no guarantee that the lower bench will be sold for conservation purposes.

The project EIR also suggested that the loss of foraging habitat would not be significant based on a statement of another October 2000 independent reviewer of the Bolsa Chica Mesa, Brian Walton, that concluded that the overall population status would not be

changed for any species of raptor at Bolsa Chica. Although this statement is true, Dr. Dixon points out that this standard is not adequate in the context of resource conservation and states, "it would be a very low standard that ignores the local or regional significance of a species' presence. It simply means that the viability of the species in California is unlikely to be measurably decreased by local losses. Similar claims can be made of impacts even to many endangered species where the loss of a few individuals is unlikely to push the species to extinction. That fact is, however, not a compelling argument for additional impacts". In fact, Mr. Walton did not intend to suggest that the raptor habitat at Bolsa Chica was unimportant. This is obvious in the following excerpts from Mr. Walton's letters to the Department of Fish and Game and to the Coastal Commission:

Pete [Bloom] and I have studied raptors in coastal California for the last 25+ years. No one else can say that. We still feel that the raptors and the Bolsa Chica habitat are important. That has been a consistent opinion for nearly 20 years from the only two people who have been continuously focused on these species in these locations.

During that period ... the rest of Orange County has largely been paved over and upland grasslands near coastal wetlands are almost non-existent. Hence, it would be likely that the opinions we had in 1982 on the importance of this habitat are even more relevant in 2000. I have difficulty in understanding why any development is allowed to occur in this area.

and:

The clearest case where development is impacting raptors and their prey species but where the Commission still is uncertain of the real impact on raptor populations, is in Orange County. There, most raptor species have been completely eliminated from the coastal zone as breeders and most of the region has vastly reduced wintering population range. Even still, the last bit of available open space (Bolsa Chica) is being considered for some development, with the idea that the remaining raptors will move elsewhere or not be impacted, or live in remnant open space within the developed area.

It is not accurate, in fact, that individual raptors when impacted by development simply move elsewhere and everyone survives. If that were true, there would be areas of incredible density in non-developed areas, where the impacted raptors have moved and are now living with pre-existing birds. This philosophy would be analogous to thinking that if you tore down one of two adjacent apartment buildings, that all the residents would simply move into the remaining building and live two families to an apartment. The density of raptors is dependent on a variety of things, so birds cannot actually just get denser in adjacent areas by moving off development sites.

Given the above facts concerning the importance of grasslands and ruderal habitats for the proper functioning of the adjacent Eucalyptus ESHA for the many raptors that use the Bolsa Chica Mesa, a decision has to be made as to whether the non-native habitat alone

constitutes ESHA as defined by the Coastal Act. Dr. Dixon outlines the issues that have to be factored when making such a determination. Although the raptor foraging habitat at Bolsa Chica is clearly of high ecological value because of its context in maintaining the raptors, including the burrowing owl, the non-native habitat alone does not constitute ESHA. However, its loss as contemplated in the proposed Brightwater development project would clearly be inconsistent with Section 30240(b) of the Coastal Act that requires that significant impacts to ESHA not be allowed. As discussed herein, the importance of foraging habitat is clearly such that the loss of a large amount at Bolsa Chica would result in "impacts which would significantly degrade" the adjacent Eucalyptus tree ESHA such that it would no longer be especially valuable to birds of prey. Therefore, to be in compliance with Section 30240(b) of the Coastal Act, development must be sited such that this does not occur.

Because of the significant adverse effects of development on raptor foraging habitat, Dr. Dixon suggests that the Commission should follow the recommendation of the Department of Fish and Game and seek mitigation for the destruction of annual grassland and ruderal foraging habitat on the Bolsa Chica Mesa by preserving 0.5 acres of such habitat for each acre lost to development. Preservation should be on the project site adjacent to the Eucalyptus tree ESHA and could reasonably include the recommended buffer areas for the Eucalyptus trees and for the burrowing owl habitat described above.

Therefore, for reasons detailed above, the Brightwater development project as currently proposed is inconsistent with the Coastal Act requirements that development in areas adjacent to ESHA shall be sited to prevent impacts that would seriously degrade the ESHA. The proposed development would remove the annual grasslands and ruderal habitat on the upper bench of the Bolsa Chica Mesa that are necessary for the continued functioning of the Eucalyptus tree ESHA. The Commission therefore denies the proposed project as submitted.

E. PUBLIC ACCESS AND RECREATION

The provision of public access in new development proposals is one of the main tenants of the Coastal Act, especially in conjunction with new development located between the sea and the first public road, such as the subject project. The 225-acre Bolsa Chica Mesa is located between the first public road and the mean high tide of the sea. At nearly 50 ft. above mean sea level, spectacular views of the wetlands and the associated wildlife and uninterrupted views of the Pacific Ocean are available from the upper bench of the Bolsa Chica Mesa. The Bolsa Chica Wetlands at approximately 1,000 acres is the largest remaining wetland in Southern Orange County. Following the 1997 State acquisition of most of the remaining wetlands that were under private ownership, a comprehensive

Bolsa Chica wetlands restoration effort is now underway. Given the prominence of the adjacent Bolsa Chica wetlands, appropriate public access and passive recreational opportunities must be conspicuously posted and provided. Further, the Coastal Act gives priority to land uses that provide opportunities for enhanced public access, public recreation and lower cost visitor recreational uses.

Section 30210 Access; recreational opportunities; posting

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

(Amended by Ch. 1075, Stats. 1978.)

Section 30211 Development not to interfere with access

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30212 New development projects

(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) It is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) Adequate access exists nearby, or, (3) Agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

(b) For purposes of this section, "new development" does not include:

(1) Replacement of any structure pursuant to the provisions of subdivision (g) of Section 30610.

(2) The demolition and reconstruction of a single-family residence; provided, that the reconstructed residence shall not exceed either the floor area, height or bulk of the former structure by more than 10 percent, and that the reconstructed residence shall be sited in the same location on the affected property as the former structure.

(3) Improvements to any structure which do not change the intensity of its use, which do not increase either the floor area, height, or bulk of the structure by more than 10 percent, which do not block or impede public access, and which do not result in a seaward encroachment by the structure.

(4) The reconstruction or repair of any seawall; provided, however, that the reconstructed or repaired seawall is not a seaward of the location of the former structure.

(5) Any repair or maintenance activity for which the commission has determined, pursuant to Section 30610, that a coastal development permit will be required unless the commission determines that the activity will have an adverse impact on lateral public access along the beach.

As used in this subdivision "bulk" means total interior cubic volume as measured from the exterior surface of the structure.

(c) Nothing in this division shall restrict public access nor shall it excuse the performance of duties and responsibilities of public agencies which are required by Sections 66478.1 to 66478.14, inclusive, of the Government Code and by Section 4 of Article X of the California Constitution.

(Amended by: Ch. 1075, Stats. 1978; Ch. 919, Stats. 1979; Ch. 744, Stats. 1983.)

Section 30212.5 Public facilities; distribution

Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.

Section 30213 Lower cost visitor and recreational facilities; encouragement and provision; overnight room rentals

Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.

The commission shall not: (1) require that overnight room rentals be fixed at an amount certain for any privately owned and operated hotel, motel, or other similar visitor-serving facility located on either public or private lands; or (2) establish or approve any method for the identification of low or moderate income persons for the purpose of determining eligibility for overnight room rentals in any such facilities.

(Amended by: Ch. 1191, Stats. 1979; Ch. 1087, Stats. 1980; Ch. 1007, Stats. 1981; Ch. 285, Stats. 1991.)

The proposed project does not provide for maximum public access to and along the bluff edge where views of the coast are available, as required by the Coastal Act. Further, as currently designed, the park trail, entry road and public parking spaces, supported by a 30 ft. high, 2 acre fill slope, are all located too close to the Eucalyptus grove ESHA, inconsistent with the land resources protection policies of the Coastal Act. The Brightwater development portion of the site is approximately 105 acres and the proposed residual parcel is another 16 acres for a total project site of 121 acres. The applicant is proposing a 28-acre upland habitat park along the slope and bluff of the upper bench of the mesa (Exhibit 4). Therefore, 23% of the project area is devoted to public access and recreation land use along bluff and 77% of the site is used for residential and unknown purposes. However, it must be noted that the proposed upland habitat park is being used for more than public park purposes. 100% of the required fuel modification to protect

future homes that abut the park is located in the public park. Additionally, a vegetated treatment system, the major part of the water quality management plan to treat low flow and storm runoff from the private community development, is also located in the public park. While the public park provides public passive recreational uses, including wildlife viewing opportunities of the adjacent wetlands, and scenic views of Bolsa Chica State Beach and the Pacific Ocean beyond, it also contains the existing 5-acre Eucalyptus grove ESHA and the necessary buffer, which is a constraint to development. Bike racks and interpretive information will also be provided along the 0.6 mile long paved pedestrian/Class I bike trail. The entire park will be dedicated to the County of Orange Department of Harbors, Beaches and Parks for recreation and conservation purposes upon completion of construction. The park acreage also includes the extension of Bolsa Chica Street, the only vehicular access to the park, and 30 public parking spaces at the end of this new road.

To determine whether a development meets the Coastal Act goal of providing maximum public access and recreational opportunities at a level appropriate for a particular site, the ease at which the public can use the amenities and not just the acreage devoted to such use must also be considered. The Coastal Act also requires that public access opportunities be conspicuously posted to inform the public of the on-site amenities. The applicant is proposing a guard-gated, private residential community between the public road (Los Patos Avenue) and the proposed public upland habitat park along the slope and bluff of the upper mesa, at the opposite end of the 105-acre site. All forms of public access (vehicular, bicycle and pedestrian), through the community are prohibited. The general public is not allowed to enter the residential community, park on its streets, or use the three proposed resident only interior vertical accessways that lead to the various segments of the more than half mile long park and trail. Further, the only vehicular access to the park, Bolsa Chica Street, on the inland most (eastern) boundary of the project site. The vehicular park entry location is not known to individuals who do not reside in area of Huntington Beach.

Further, the off-site signage informing the public of the availability of the proposed park is located at Warner Avenue and Bolsa Chica Street. The signage program includes no signage on Warner Avenue at Pacific Coast Highway. The existing publicly owned Bolsa Chica Ecological Reserve parking lot is located at Warner and Pacific Coast Highway. Many visitors from outside of the local area use this parking lot to enjoy the wetlands. This would be a much better location for signage to inform the public of the proposed upland habitat park. The applicant should seek permission from the Department of Fish and Game, owners of the Ecological Reserve, to place public signage concerning the upland habitat park in the Ecological Reserve parking lot.

Private, guard-gated communities are not publicly inviting and are therefore not encouraged between the sea and the first public road. A visitor-friendly signage program that informs the public of the on-site public access and recreational amenities, including

parking, may help to overcome the psychological public access barriers created by private communities. However, the proposed public signage program is also inadequate, further exacerbating the inadequacies of the overall public access and recreation provisions of the development. Therefore, although the proposed project includes a 28-acre upland habitat park, to be dedicated to the public, public access to the park is made difficult and therefore public access is actually discouraged. These design elements render the proposed project inconsistent with the public access and public recreation provisions of the Coastal Act.

Commission staff and the applicant had a meeting at which the public access deficiencies of the proposed project were discussed. Following that meeting, the applicant offered to provide 114 additional off-street parking spaces along Los Patos Avenue on the northern project boundary. The applicant offered to improve the south side of Los Patos Avenue, including streetscaping, along the project frontage of the currently partially unimproved roadway. However, these off-site parking spaces do little to facilitate public access to the proposed bluff park and scenic trail since the public would still not be allowed to walk through the residential community after parking in these off-site spaces. If one were to park along Los Patos Avenue, the most direct route to the central bluff area of the park would be to walk through the residential community. Additionally, the County of Orange already required the applicant to make the proposed street improvement as a condition of approval of the project.

Section 30212.5 of the Coastal Act advocates the distribution of recreation support facilities, such as parking, throughout an area as opposed to a single location in order to prevent overuse of any one area. This is especially significant given the sensitive land resources of the project site. The location of the only on-site public parking to support public use of the park is too close to the Eucalyptus grove ESHA and would be located on a proposed 30 foot high fill slope, placing people and cars at about the same level of the tree tops (Exhibit 4 and 15). This parking location and design creates the potential for significant adverse impacts to the raptors that use the Eucalyptus trees for nesting and perching, as detailed in Section D (Biological Resources) of this staff report. Therefore, the proposed project is inconsistent with Sections 30212.5 and 30240(b) of the Coastal Act. The public parking lot must be moved to another less environmentally sensitive location on the project site. By simply allowing the general public to drive into the subdivision and park along the streets of the community and use the three vertical accessways, the proposal could meet the Coastal Act public access goal of distributing parking throughout the area.

Finally, the proposed park design is further inconsistent with the ESHA protection policies of the Coastal Act due to the location of the proposed multi-use pedestrian/bicycle trail, and the fill slope that contains the Bolsa Chica Street extension and parking lot with respect to the Eucalyptus ESHA. As proposed, approximately one-third of the trail length is adjacent to the Eucalyptus grove ESHA, and is too close to the ESHA. At one point the

trail is only 10-12 feet away from the ESHA. The proposed 2-acre, 30 ft. high fill slope, which contains portions of the park entry road and parking spaces, is immediately adjacent to the Eucalyptus tree ESHA. Similarly, the trail alignment in other locations impact the burrowing owl and Tarplant ESHA. This park design seeks to capitalize on/encroaches into, ESHA and ESHA buffers for purposes other than to serve the public park. Those facilities within the upland habitat park for public park purposes must also be sited and designed so that they do not adversely impact the ESHA. As proposed, the park design creates the potential for significant human disturbance of the endangered and threatened species that use the Eucalyptus grove ESHA. Therefore, the proposed park design creates a conflict between public access and the protection of environmentally sensitive habitat areas that are protected by the Coastal Act. As detailed in Section D of this staff report, the Commission staff ecologist recommends a 100-meter ESHA buffer between the Eucalyptus grove ESHA and all other development, including roads, parking lots and other recreation facilities (Exhibit 20). However, Dr. Dixon explains that trails can be allowed within the ESHA buffer if they are located in the upper five (5) meters of the 100-meter buffer.

As detailed above, the proposed project as designed has serious public access and public recreation deficiencies and also creates significant impacts to Coastal Act protected land resources. There are feasible design alternatives available that can provide appropriate public access and passive recreational opportunities while protecting the adjacent environmentally sensitive resources as required by the Coastal Act. However, the proposed project must be significantly redesigned in order to bring it into conformance with the public access, recreation and land resources protection policies of the Coastal Act. Therefore, the project currently before the Commission must be denied.

F. SCENIC AND VISUAL RESOURCES

The Coastal Act seeks to minimize the alteration of natural bluffs and cliffs in the coastal zone in order to protect the scenic views to and along the coast. Section 30251 of the Coastal Act states:

Section 30251 Scenic and visual qualities

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

The applicant proposes grading at the current easterly edge of the bluff overlooking the Isolated Pocket Lowland, now owned by the State of California. The proposed 30-foot high fill slope, approximately 2 acres in size, constitutes significant landform alteration in the opinion of Commission staff geologist, Dr. Mark Johnsson (Exhibit 13). According to the applicant, the upper bench bluff edge grading is proposed in order to "restore" the bluff edge to its 1939 configuration. The bluff was altered in the early 1940's with the construction of two World War II gun embankments and the 1971 removal of material from along the slope overlooking the lower bench and the bluff above the Isolated Pocket Lowland, now owned by the State of California. The proposed bluff edge grading is visible from the Bolsa Chica Lowlands wetland trails below (Exhibit 18). Dr. Johnsson states, "The relative merits of such a "restoration" are debatable, but in my opinion it is clear that the proposed grading represents significant alteration of a natural landform." The proposed grading represents significant landform alteration in an area that currently contains scenic views and whose multi-million dollar wetlands restoration efforts will also restore and enhance the visual quality of the overall area by removing the existing extensive oil and gas facilities from the Lowlands. This grading is therefore inconsistent with Section 30251 of the Coastal Act.

The proposed fill slope would also be located within the proposed 100 ft. wide Eucalyptus grove ESHA buffer, immediately landward of the ESHA itself. Although the applicant has stated that the proposed bluff edge fill is to support public access and recreation, review of the project grading plans shows that this statement is not accurate. The proposed 2-acre fill slope will contain a portion of the Bolsa Chica Street, but it also contains and supports the rear yards of approximately nine residential lots (lots 13 - 21) under the proposed subdivision design. Bolsa Chica Street, a public road, provides the only public vehicular access and public parking into the entire 105-acre project site. The fill slope, 32 ft. wide road and 30-space parking area will be immediately adjacent to the Eucalyptus grove ESHA, at the same elevation as the tops of the Eucalyptus trees that are on the slope of the upper bench. Commission staff ecologist, Dr. John Dixon, recommends against this development adjacent to the ESHA, citing significant disturbance to the raptors that perch and nest in the treetops.

The proposed bluff edge grading constitutes significant landform alteration. Its purpose is not only the provision of public access, but is also to allow the extension of the residential development footprint. The proposed landform alteration is significant in that it will adversely impact scenic views from the Lowland trails within the now primarily publicly owned Bolsa Chica Lowlands. The visual impact of the grading should also be considered in light of the Bolsa Chica Wetlands Restoration Program that has as one of its goals the enhancement and restoration of the visual qualities of this important coastal area by removing the extensive oil and gas facilities.

It is indisputable that the numerous past activities on the Bolsa Chica Mesa have resulted in alterations to the natural landform of the Mesa, including the slope and bluff edge of the

upper bench. The slope that the applicant is proposing to "restore" was graded in the early 1970's, prior to the Coastal Act to support development in adjacent Huntington Beach. Despite this previous grading, the Bolsa Chica Mesa remains a distinctive natural coastal landform that together with the Bolsa Chica Lowlands and wetlands, form an important ecosystem. Most areas of southern California have sustained a certain amount of alteration; however, it is also notable to consider areas, such as the project site, that have been left alone subsequently for almost 30 years, as landforms warranting protection. The Commission notes that most of the bluffs throughout the coastal zone have been altered, to some extent. This situation does not change the fact that coastal bluffs, including the bluffs at the project site, are natural landforms, which pursuant to Section 30251 of the Coastal Act, should not be further significantly altered. This bluff area is visible from the public wetland trails below the project site. Therefore the proposed fill represents significant landform alteration, in an area whose scenic value is being further restored through the Bolsa Chica Wetlands Restoration project. The proposed bluff edge grading is also inconsistent with the Commission's action on the 2000 Bolsa Chica LCP.

Finally, the landform alteration is also inconsistent with Section 30240(b) of the Coastal Act in that the proposed fill will be located immediately adjacent to the existing Eucalyptus grove ESHA, causing significant adverse impacts to the threatened and endangered species that use the ESHA. As discussed in Section D of this staff report, all roads, parking lots, and other similar structures should not be located within the 100-meter Eucalyptus grove ESHA buffer. The applicant proposes to extend Bolsa Chica Street, with 30 public parking spaces at the new street end, into the proposed public park as the only public vehicular access to the entire site. The elimination of the proposed bluff edge fill will therefore necessitate major redesign of the proposed subdivision layout. The Commission is denying the proposed project as submitted. However, as detailed in the Alternatives section of this staff report, there are feasible less environmentally damaging alternatives to development of the upper bench of the Bolsa Chica Mesa with residential and public recreation land uses while avoiding significant landform alteration of the Bolsa Chica.

G. HAZARDS

Section 30253 Minimization of adverse impacts

New development shall:

- (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- (2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

(3) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.

(4) Minimize energy consumption and vehicle miles traveled.

(5) Where appropriate, protect special communities and neighborhoods which, because of their unique characteristics, are popular visitor destination points for recreational uses.

Section 30253 of the Coastal Act requires that new development minimize risks to life and property in areas of high geologic, flood and fire hazard. The proposed Brightwater development includes approval of a subdivision to create 379 single-family home lots in a guard-gated community, a 2.5-acre private community park for the residents of the development, and a 28-acre public upland habitat park with 30 parking spaces. The active Newport-Inglewood Fault runs along the slope between the upper and lower benches of the Bolsa Chica Mesa (Exhibit 15). The setback zone for habitable structures, as recommended by the project geologist, and required under the Alquist-Priolo Act, lies on the slope between the upper and lower bench (the site of the proposed constructed wetlands and the detention basin), as well as a substantial portion of the proposed residual parcel located on the lower bench. Although all of the proposed residential lots are well set back from the 50 ft. fault line setback of the Newport-Inglewood Fault, the proposed residential water quality treatment system lies on the fault line as well as portions of the residual parcel.

The applicant has submitted geotechnical evidence, with which the Commission staff geologist concurs, that all proposed slopes are stable. Nevertheless, one proposed slope, 30 ft. high, 2 acres in size, is inconsistent with the preservation of scenic views due to its significant landform alteration. As designed, the back yards of approximately nine of the proposed subdivision are dependent upon this large fill slope.

Fifty-seven of the proposed 379 residential lots abut the proposed upland habitat park. As designed, 100% of the required fuel modification plan for the abutting residential lots is designed to occur within the public park. As detailed below, although the proposed residential lots are stable, the proposed development, as currently designed would require (1) a fire protection plan that is inconsistent with the ESHA protection policies of the Coastal Act, (2) the construction of a large fill slope, constituting significant landform alteration, on the bluff edge which is inconsistent with the visual resources protection policies of the Coastal Act, and (3) creates an irregularly shaped residual parcel on the lower bench, with an unspecified use, which contains, among other things, an active fault line running through a significant portion, calling the safety of any future development of the parcel into question.

Existing Geomorphology and Past Development Activities

The Brightwater residential project site is located on the upper bench of the Bolsa Chica Mesa and the slope between the upper and lower benches. The proposed residual parcel is located on the lower bench, at the toe of the slope separating the two benches (Exhibit 15). Existing ground elevations on the upper bench range from 30-50 ft. above mean sea level (MSL). The surface elevation of the lower bench is 10-30 ft. above MSL. The two benches are separated by a slope approx. 25 ft high with an average gradient of 10-15%. Also at the toe of the slope, running parallel to it, lies the surface trace of the Newport-Inglewood fault, suggesting that the slope is a "fault line scarp", created by differential movement across the fault. According to the Commission's staff geologist, Dr. Mark Johnsson, the Bolsa Chica Mesa is one of the few places in Orange County where a fault line scarp can be observed, and is often the site of college level geology class site visits to see this feature first hand (Exhibit 13). Grading and urbanization have destroyed most fault line scarps associated with the Newport-Inglewood fault zone.

The southeastern bluff edge of the project site has a steeper gradient than the slope separating the upper and lower benches. The bluff face averages 45% slope with some areas being near vertical. At the toe of the southeastern bluff edge is the Isolated Pocket Lowland and the EGGW Flood Control Channel. The southeastern bluff was formed by fluvial erosion by the Santa Ana River when its alignment flowed in this part of the lowlands. The natural topography of the Bolsa Chica Mesa has been modified over the past 100 years. Previous activity includes agricultural use, the grading of access roads for the construction of oil wells and oil/gas pipelines, construction (in the early 1940's) and demolition (in the 1990's) of two World War II gun emplacements or concrete bunkers, archaeological investigation, and excavation of portions of the bluff and slope edges to be used for fill for development in the City of Huntington Beach (Exhibit 19). All of the past development, with the exception of the demolition of the WW II bunkers and the later archaeological investigations, was done prior to the Coastal Act.

Development on the Bolsa Chica Mesa pursuant to coastal development permits approved by the Coastal Commission include, the demolition of the WW II bunkers in the early 1990's and several archaeological investigation (two meters square hand excavation units, trenches, auger holes and controlled grading) and data recovery has also occurred on the Bolsa Chica Mesa pursuant to coastal development permits issued between 1983 and 1990.⁷

1. Bluff/Slope Edge Delineation

⁷ Several coastal development permits have been issued for archaeological investigation/salvage activities. The previous permits are discussed in Section ____, Cultural Resources, of this staff report.

Commission staff and the applicant spent several conversations and written correspondence dealing with the location of the bluff edge of the upper bench of the Bolsa Chica Mesa. The applicant contends that because of the prior activity on the mesa, including the slope and bluff edges, that they do not constitute natural landforms. The Commission staff geologist disagreed with this assessment and continued to ask for a delineation of the top-of-slope. The applicant also argues that the slope separating the upper and lower benches of the Bolsa Chica Mesa is not a bluff. Commission staff geologist concurs in the determination that the slope separating the upper and lower benches is probably not a bluff, given the gradual nature of the slope separating the two benches (Exhibit 13). However, Commission staff continues to believe that a delineation of the top-of-slope for the western edge of the project site is necessary because of its usefulness in evaluating various aspects of the project.

The applicant finally produced a map showing the top-of-slope between the upper and lower benches to be a line drawn part way down the slope (Exhibit 19a). Apparently this line was chosen because it corresponds to an interpolated line that is the top of a steep road cut on the slope. Although staff does not agree that the applicant's line conforms to the top of the actual altered slope, we do agree that the determination of top-of-slope is made difficult by the previous alteration that has resulted in the gradual rounding of the slope. Given the circumstances, Commission staff geologist indicated that, "it is probably best to determine the slope face on the basis of its measured gradient, which is markedly steeper than the very gentle gradient of the mesas above and below".

The applicant also produced a map containing a delineation of the edge of the river bluff on the southern edge of the upper mesa, overlooking the Lowlands. The applicant drew the line using the guidelines of the California Code of Regulations, Section 13577(h)(2). Commission staff geologist review of the applicant's bluff edge delineation found that while there are some small areas of disagreement, there is one major discrepancy. The discrepancy is the area of the large borrow pit where the applicant is proposing a 30 ft. high fill slope, approximately two acres in size (Exhibit 15). The applicant places the top of bluff at the outer edge of the cut. However, Section 13577(h)(2) states, that in cases where there is a step like feature that, ". . . the landward edge of the topmost riser shall be taken to be the cliff edge". Following the above-cited Regulations, Commission staff geologist draws the bluff edge considerably inland of the applicant's line (Exhibit 13).

2. Fuel Modification

Although the proposed project is not located within a high fire danger area, the Orange County Fire Authority (OCFA) is still requiring the applicant to prepare a fuel modification plan to reduce the potential for fire damage to property and life. The applicant received

approval of their Conceptual Fuel Modification Plan from OCFA in August 2002. However, OCFA approval of the Precise Fuel Modification Plan is necessary. The County fuel modification requirements are:

Zone A – provide a minimum 20 feet wide level graded area at the top or base of slope and immediately adjacent to the protected development, no combustible structures, fully irrigated with automatic irrigation system, all vegetation shall be highly fire resistant and shall not include undesirable combustible vegetation.

Zone B – provide a minimum 50 feet wide irrigated area and must be planted with plants from the approved OCFA Plant List. No combustible construction is allowed.

Zone C and D – are considered the non-irrigated, thinning zones. Zone C is 50 feet in width and requires 50% thinning with removal of all dead and dying undesirable species. Zone D is 50 feet in width and requires 30% thinning with removal of all dead and dying growth and undesirable species. Specific requirements for these zones include: all fuels be reduced to a maximum of 8-12 inches in height and native grasses, when used, shall be cut after annual seeding and shall not exceed 8 inches in height. All plants within these zones must be chosen from the approved OCFA plant list. Trees which are being retained with the approval of the agency having jurisdiction shall be pruned to provide clearance of three times the height of the under story plant material or 10 feet, whichever is higher. Dead and twiggy growth shall also be removed. All existing plants or plant grouping except cacti, succulents, trees and tree-form shrubs shall be separated by a distance of three times the height of the plant material or 20 feet, whichever is the greater.

The Guidelines do however allow special consideration for rare and endangered species, geologic hazards, tree ordinances, or other conflicting restrictions as identified in the environmental documents.

The applicant has requested that the above fuel modification requirements be modified due to the existing Eucalyptus tree grove ESHA that must remain, as required by both the Department of Fish and Game and the California Coastal Commission and recognized by the courts. The Eucalyptus grove ESHA would be in Zone D of the fuel modification plan using the OCFA Guideline standards. In August 2002, the applicant filed with OCFA a "Request For Use Of Alternate Means And Methods For Complying with OCFA Guidelines". They also requested the alternate means and methods for the planting of wetland and coastal prairie habitats within the fuel modification plan area. The plans for the upland habitat park also show coastal bluff scrub vegetation being used in the northwestern portion of the park near Warner Avenue, but not in the southeastern portion near the Eucalyptus grove ESHA (Exhibit 14).

The proposed public upland habitat park, located on the slope between the upper and lower benches, serves the dual role of providing the full 170 foot wide (Zones A – D) required fuel modification area for the 57 residential lots that are proposed on the slope and bluff edges of the upper bench of the mesa (Exhibit 14a). The upland habitat park is 28 acres in size, including the existing 5-acre Eucalyptus grove ESHA. Based on the current design of the subdivision, 731,000 sq. ft. or 17 of the 28 acres of the upland habitat park is required fuel modification area. Therefore, nearly three-quarters of the public park must be planted, irrigated and maintained in a manner that provides fire protection for the adjacent private residential use. The required fuel modification area also includes 33,500 sq. ft. or 0.8 acres of the 5-acre Eucalyptus grove ESHA, according to OCFA figures.⁸ Of the total 57 lots that abut the public park, 25 residential lots abut the proposed 100 ft. wide Eucalyptus grove ESHA buffer. However, it is the fuel modification requirements for 16 of the lots that encroach into the ESHA, affecting 0.8 acres of the ESHA (Exhibit 14).

One of OCFA responses to the fact that there are Eucalyptus trees within the fuel modification zone was that the applicant could move the proposed houses back 50 feet to avoid this issue.⁹ OCFA also stated that the applicant could propose alternate construction to the structures. The applicant has applied for approval of Alternate Means and Methods to the OCFA fuel modification guidelines. In addition to use of alternative construction methods for the 16 homes whose Zone D fuel modification requirements overlap with the Eucalyptus ESHA (installing automatic sprinklers in the homes, and Class A construction of all roofs of the affected buildings), the applicant is proposing modifications to both Zones C and D, in lieu of moving the structures back 50 feet. Those changes include the irrigation of both zones where they are adjacent to the overlap of Zone D and the Eucalyptus ESHA. According to the applicant, the irrigation of this area increases its equivalent width, when compared to non-irrigated zones.

The Department of Fish and Game (DFG) in their review of the proposed fuel modification program, expressed concerns over the non-compatible goals of habitat protection and fire protection for adjacent habitable structures. DFG noted in its April 24, 2003 review of several documents associate with the Brightwater development approval that, a modified plant palette has been prepared to avoid native coastal sage or coastal bluff scrub species prohibited by the County's list of undesirable species including California sagebrush (*Artemisia californica*) and other common coastal sage scrub species. Also cited by DFG is the irrigation of coastal sage scrub (css) that is being protected in place and the normal requirement that css vegetation be thinned and removed as stated above

⁸ These figures were obtained from the applicant on Attachment A of their 8/12/02 correspondence to Brett Anderson of OCFA concerning the Brightwater Conceptual Fuel Modification Plan, OCFA Service Request No. 68164, page 2 of 2.

⁹ OCFA SR# 68164 (1.9 Conceptual Fuel Modification), Brightwater Tentative Tract #15460, Unincorporated Huntington Beach, Bret Anderson of OCFA to FORMA, April 26, 2002, page 2, item 8. This letter is attached as Exhibit 14.

in the Zones C and D requirements. Concern was also expressed over the limited list of species proposed for the coastal prairie plant community, especially given the abundance of non-native grasses and forbs that will compete with this new habitat. DFG suggested that additional local native species be added to the coastal prairie palette in order to increase native diversity and include native coastal grassland species that are more disturbance adapted for use in the detention basin. Finally, DFG commented on the likely results of the introduction of irrigation, mowing, thinning and other habitat disturbance that will be created by using the upland habitat park, including the Eucalyptus ESHA buffer, for fuel modification purposes. Specifically cited examples are the negative alterations of native arthropod communities and vegetation thinning requirements requiring the removal of species such as California sagebrush.

In response to the DFG concerns noted above, the applicant stated that they will work with OCFA in the required Precise Fuel Modification Plan approval process to avoid or minimize any thinning of existing coastal sage scrub that is being retained and to keep its irrigation to a minimum. The applicant's biological consultant further noted that they were allowed by OCFA to retain existing css in another coastal project without any thinning requirements after requiring the homes to implement similar alternate construction methods. Also irrigation is expected to be infrequent and minimal, and applied only when needed during the dry summer period. Further, the applicant's consultant stated that many native species can tolerate occasional summer irrigation, although they do not need it, including the species identified in the coastal bluff scrub palette for the project.

DGF ultimately concurred with the applicant that the Eucalyptus ESHA will not be affected by the proposed project if all of the specific construction and management activities are followed. Nonetheless, DFG also stated that they "do not consider fuel modification zones, regardless of their native species content, to be considered acceptable as mitigation for biological impacts."

3. Proposed Grading

As currently designed, the 105.3-acre upper bench portion of the Brightwater project includes 630,000 cubic yards (cy) of balanced grading. No grading is proposed on the lower bench residual parcel. A breakdown of the grading reveals 330,000 cy of cut, 300,000 cy of fill and 30,000 cy of overexcavation or expected shrinkage of cut material due to compaction of the fill material. The grading plan retains the existing grade differential between the upper and lower benches and also aims to restore the transitional slope to a natural appearance along the proposed public park area, according to the application submittal. No grading is proposed within the existing Eucalyptus grove ESHA or two freshwater wetlands. However, the area adjacent to the 0.2 ac pocket wetland on the central slope area will be contour-graded to construct a series of interconnected

wetlands and a detention basin to treat the residential low flow and storm water run off of the project as a part of the Water Quality Management Plan (WQMP) (Exhibit 9).

The majority of the site work is to smooth out high points and the fill of low points including areas where roads, archaeological investigations and similar ground disturbances have occurred over the years. With the exception of the fill of the previous borrow area and the removal of the mound containing the crushed concrete from the WW II bunkers, the proposed grading plan shows that a majority of the cut areas will be 0 to 5 feet. The area nearest the project entry at Warner and Los Patos will receive the greatest cut, 10 to 20 feet and then 5 to 10 feet further into the site (Exhibit 15). The majority of the fill areas are 0 to 5 feet in depth but 5 to 10 feet along Los Patos and through the center of the site. Along the area abutting the upland habitat park, approximately 12 lots will receive 10 to 20 feet of fill. Additionally, approximately nine lots located at the current southeastern bluff edge where the 30 foot high fill slope is proposed will receive up to 30 ft. of fill on some portion of the lots. Significant landform alteration should not be allowed to occur at the bluff edge in order to extend the development footprint. The Commission has approved significant landform alteration (such as the construction of large fill slopes) in scenic areas, following such events as massive landslides. However, the Commission has allowed these large fill slopes where this method of stabilization was necessary to protect existing structures from further geologic danger and there was no other feasible alternative method that would have less of an impact on the scenic values of the area. However, this is not the case with the proposed project. There are no structures that are in danger. The applicant simply wishes to expand the development area of site instead of locating the proposed public improvements (the park entry road extension and public parking to serve visitors to the proposed upland habitat park) landward of the existing bluff edge.

The one area where there will be the most significant amount of earthwork and landform alteration is the borrow site on the south edge of the bluff overlooking the Isolated Pocket Lowland. The application proposes a 30-foot high fill slope at the southeastern edge of the bluff and is approximately 2 acres in size. The applicant states that there are two purposes for the fill: to restore the bluff to its 1939 contours and to allow the placement of the extension of Bolsa Chica Street and 30 public parking spaces for public use of the proposed 28-acre upland habitat park. Bolsa Chica Street is proposed as the only public vehicular access to the site and the park, although it also is proposed to be gated, like the residential community. However, a review of the grading plan shows that the fill also extends the rear yards of approximately nine lots that abut the park. As explained in the preceding section of this staff report, Scenic and Visual Resources, the proposed 2 acre, 30 ft. high fill slope on the bluff edge constitutes significant landform alteration and results in adverse visual impacts to visitors using the public trails in the Bolsa Chica Lowlands, below the project site. The grading and proposed uses on the fill slope also are detrimental to the viability of the raptors that use the Eucalyptus grove ESHA. The paved road and 30 space parking lot, people, and noise will be placed at approximately the

same elevation as the tops of the trees that are on the bluff, as detailed in the preceding ESHA and Other Important Land Resources section of this staff report. As discussed in the Scenic and Visual Resources section of this staff report, the proposed grading of the bluff edge cannot be found consistent with Sections 30251 or 30240 (a) and (b) of the Coastal Act. However, the remainder of the grading does not raise an issue of consistency with Section 30253 of the Coastal Act.

4. Newport-Inglewood Fault Zone

A portion of the proposed subdivision is traversed by the Newport-Inglewood fault zone, generally recognized as the source of the 6.25 magnitude Long Beach earthquake in 1933 that killed 120 people and resulted in the passage of the Field Act. The fault traverses the gentle slope between the upper and lower benches and the southeastern and northwestern portions of the proposed lower bench residual parcel (Exhibit 15). The fault has also been designated an Earthquake Fault Zone by the State Geologist under the Alquist-Priolo Act. However, the area has not been identified as one susceptible to earthquake-induced landslides or liquefaction hazard on the California Geological Survey Seismic Hazard Map under the Seismic Hazard Mapping Act, according to Dr. Johnsson (Exhibit 13).

The applicant has prepared and submitted for Commission staff review the necessary reports, including trenching and mapping, pursuant to the Alquist-Priolo Act. The studies verify that the North Branch Fault (of the Newport-Inglewood Fault Zone) is considered active. The surface trace of the fault was identified through detailed trenching and mapping, and a 50-foot setback from all fault traces was identified in accordance with the Alquist-Priolo Act, that prohibits structures for human habitation to be built across an active fault. Commission staff geologist's review of the fault data shows that the fault seems to be well established at its present location. Dr. Johnsson concurs that the 50-foot setback is adequate for the proposed upper bench residential development given that no residential lots of the subdivision abut the mapped fault setback line.

However, the fault line traverses all five of the proposed created wetlands and the southern portion of the proposed 1.3-acre detention basin lies within the setback line of the active fault. According to Dr. Johnsson, these water quality treatment pools could be damaged during an earthquake. However, flood damage would probably not be significant since the wetlands are excavated below grade and because there are no structures on the lower bench below the created wetlands. However, the location of earthquake fault could very well pose a danger to development of the proposed lower bench residual parcel.

As shown in Exhibit 15a, the active earthquake fault traverses the southeastern 500 feet of the residual parcel and approximately 1,000 ft. of the northwestern portion of the

irregularly shaped lower bench residual parcel. For this reason, among others, staff recommends that the Commission deny the creation of this parcel given its seismic hazard constraints and the fact that the applicant has refused to identify the intended use of the proposed parcel nor demonstrate that the parcel can be developed consistent with the geologic hazard and all applicable Chapter 3 provisions of the Coastal Act.

3. Slope Stability Analysis

Commission staff geologist, Dr. Mark Johnsson reviewed the proposed grading plan and requested geotechnical information of the applicant in order to determine if the proposed project assures stability and structural integrity, will not contribute to erosion or geologic instability or destruction of the site or surrounding property or require the construction of protective devices that would substantially alter the natural landforms along the bluffs. The applicant's geotechnical consultant prepared direct shear tests on relatively undisturbed site samples in order to derive soil strength parameters for use in the slope stability analyses of the proposed slopes in the project based on the latest grading plan¹⁰.

Commission staff geologist concurs with the applicant's geotechnical slope stability analyses demonstrating that all proposed slopes would be stable. However, due to the potential for surficial instability, Dr. Johnsson recommends that the applicant abide by the consultant's recommendations contained in one of the submitted reports regarding drainage and landscaping of the slopes.¹¹

H. MARINE RESOURCES – WATER QUALITY

New development can have significant adverse impacts on coastal water quality, and thus, biological productivity, during grading and construction if adequate erosion and runoff control measures are not properly designed and implemented. New development can also adversely affect water quality after construction if permanent pollution prevention, reduction and treatment measures are not provided and maintained, for the life of the development. Sections 30230 and 32031 of the Coastal Act require the

¹⁰ Originally the County of Orange approved a grading plan that required 220,000 cubic yards of export and a 40-ft high fill slope on the southeast bluff edge instead of the current 30-foot high slope. The applicant planned to export the material to the adjacent Parkside Estates site in the City of Huntington Beach. When staff requested evidence of approval for the export, the applicant modified the grading plan to balance cut and fill operations on-site.

¹¹ AMEC Earth and Environmental, Inc. 1997, "Geotechnical evaluation report, Phase I rough grading plans, Vesting Tentative Tract 15460, Bolsa Chica Mesa, South of Warner/Los Patos Avenues, Orange County, California", 60 p. geotechnical report submitted to the Koll Real Estate Group dated 1 December 1997 and signed by D. Dahncke (GE 2279) and S.T. Kerwin (CEG 1267).

protection of marine resources by protecting the quality of coastal waters. Specifically, these policies require:

Section 30230 Marine resources; maintenance

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 Biological productivity; water quality

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

The 105.3 acre Brightwater project site consists of 379 single family residences, community recreation center with a swimming pool, 2 million gallon underground drinking water reservoir and open spaces areas. The impervious surfaces and activities associated with this scale of residential development represents a potentially significant impact to coastal resources, including portions of the Bolsa Chica wetlands, Huntington Harbor and ocean waters. The County of Orange required the preparation of a hydrology/water quality study in the review of the project at the local level. The applicant also prepared a Master Drainage Plan, Storm Water Pollution Prevention Plan (SWPPP), and Water Quality Management Plan (WQMP). These documents were submitted to Commission staff and reviewed by the Commission's Water Quality Unit.

The Brightwater development site is currently undeveloped and no off-site drainage flows onto the site. The mesa is vegetated with primarily non-native grassland, ruderal vegetation and several vegetated ESHA areas. There are also approximately 17 acres of dirt roads or other non-vegetated areas on the site. The hydrology study evaluates the existing hydrologic condition and divides the site into several drainage areas (Exhibit 7, Existing Hydrology). The majority of the project area drains to the south under existing conditions. The existing flows that drain to the south first drain to depressional areas that act as detention basins. The flows ultimately discharge to the Isolated Pocket Lowland via an existing 24 inch corrugated metal pipe (CMP) southeast of the project site. The Isolated Pocket Lowland area is located between the EGGW Flood Control Channel and the project site and currently has no direct connection to the ocean. The area now

belongs to the State and will be restored as part of the Bolsa Chica Wetlands Restoration Project.

In recognition of Huntington Harbor's listing as a 303d impaired water body (for copper, nickel, Dieldrin, PCBs and pathogens) and flooding problems in Bolsa Chica Street, the project will divert most of the existing flows away from Huntington Harbor to Drainage Area B (Exhibit 8, Proposed Hydrology). In the developed condition, Drainage Area A will be reduced from 5.03 to 2.76 acres and Drainage Areas F and G will be reduced from 21.19 to 3.63 acres for a total decrease of roughly 21 acres from the Huntington Harbor watershed. The areas diverted away from Huntington Harbor will be added to Drainage Area B. Most of the developed portion of Drainage Areas C and D will also be diverted to Drainage Area B. The remaining areas in these watersheds will be only the areas of the proposed 28-acre upland habitat park and undisturbed areas. The developed portion of Drainage Area E will also be diverted to Drainage Area B and the slope area below the public park will drain to Drainage Area D. Only natural slope area will continue to drain toward the Shea Homes property.

Although the total area that flows to Drainage Areas A, C, D, E, F and G will be decreased, runoff rates, in some cases such as Drainage Areas A and D, will be increased due to the addition of impervious surfaces. Also, the passive nature park will contain impervious surfaces including a 12 ft. wide, approximately 3,500 ft. long pedestrian/bicycle trail and Bolsa Chica Street at 32 ft. in width and 30 parking spaces. These features represent a significant amount of impervious surface area. Drainage Area B will include the majority of the developed area and receive all of the runoff from the diverted areas increasing the tributary area from 45.4 to 80.9 acres. The applicant proposes to consolidate the runoff to this single drainage area and provide a water quality treatment system to treat the runoff. However, all areas will have standard structural and non-structural best management practices (BMPs) as indicated in the Brightwater water quality management plan (WQMP).

The non-structural BMPs include education for property owners, tenants and occupants; activity restrictions (e.g., no auto repairs or oil changing on site, no discharge of landscaping debris to storm drains, no clean up from painting in paved areas, no washwater from construction activities into stormdrains); common area landscaping maintenance; BMP maintenance requirements; common area litter control; catch basin inspections; and requirements for regular sweeping on private streets and parking lots. Structural BMPs include a vegetated treatment system (referred to as a constructed wetland in the WQMP), media filters for storm drain inlets (on the portion of the site draining to Huntington Harbor), common area efficient irrigation, common area runoff minimizing landscape design, energy dissipating riprap at new stormdrain outlets and inlet trash racks.

The Brightwater development proposes to retain the dry season low flows on site by diverting it to a Vegetated Treatment System (VTS¹²) consisting of series of five freshwater ponds located within the proposed upland habitat park on the slope separating the upper and lower benches (Exhibit 9). All dry weather flows, and runoff from storms that are smaller than 0.80 inches in 24 hours (the design storm¹³) will be diverted to the VTS. The freshwater ponds will be constructed at varying depths with the goal of providing various habitat opportunities for wildlife and native plants. During wet weather storm events, runoff from the design storm will be released from the VTS over a 24 to 48 hour period into the adjacent 0.2-acre existing pocket wetland. The VTS and the overflow system are designed so that the amount of water flowing into the existing on-site pocket wetland is the same as that under existing conditions. In turn, when the existing on-site pocket wetland reaches capacity it will flow into a 1.3-acre detention basin. If the VTS reaches capacity during large storms (greater than the 0.8 inch design storm) the additional runoff will be diverted directly to the detention basin.

The detention basin will be located at the southern bluff edge in an existing depression area and riprap will be placed at the outlet in order to avoid erosion of the off-site lowland area. It will be designed to primarily to detain the peak flows during large storms for a few hours to improve flood control so that the maximum rate of flow to the Isolated Pocket Lowland is not significantly increased above the existing flow rate. It will detain the peak flow by routing the discharge through an existing 24-inch corrugated metal pipe prior to discharge to the pocket lowland. It is not considered to be part of the water quality treatment program, however discharge from small storm events may be partially treated by evapotranspiration, infiltration or adsorption.

The detention basin however encroaches into an area that has been determined by Commission staff senior ecologist to be a burrowing owl environmentally sensitive habitat area (ESHA). Further, two of the five proposed created wetlands impact a population of Southern Tarplant that has also been determined to be Coastal Act protected ESHA (Figure 1 of Exhibit 20).

The Water Quality staff of the Coastal Commission has reviewed and evaluated the WQMP to determine whether it meets its stated goals and whether it is in conformity with the marine resources protection policies of the Coastal Act (Exhibit 10). The Water Quality Unit concludes that the WQMP, which treats the majority of the project runoff through the proposed Vegetated Treatment System, could significantly reduce the

¹² The CCC water quality staff and non-point source staff from other state agencies prefer to call these BMPs Vegetated Treatment Systems to make it clear that the primary purpose is treatment of water quality and that any habitat benefits are secondary. This is to distinguish VTS BMPs from constructed wetlands where the primary purpose is habitat creation.

¹³ This design storm is slightly larger than the standard 85th percentile storm event for the project area, which is 0.75 inches.

discharge of polluted runoff from the development if certain necessary or feasible modifications are made to the overall treatment program. Therefore, as proposed the WQMP is not in conformity with Section 30230, 30231 and 30240 of the Coastal Act.

First, if a Vegetated Treatment System (VTS) is used as a part of the WQMP it must be built following the guidelines of the California Stormwater Quality Association (CASQA). The California Stormwater Quality Association (CASQA) BMP handbook recommends that the permanent pool of water for a constructed wetland BMP be 2 times the water quality volume (the volume of runoff from the design storm event). The most recent design provided by the applicant only has about 1.2 times the water quality volume in the permanent pool.

The location of the proposed detention basin and two of the five proposed created wetlands encroach into the existing burrowing owl habitat and Southern Tarplant ESHA that have been determined to be Coastal Act protected ESHA. This encroachment is inconsistent with Section 30240 of the Coastal Act as detailed in the Biological Resources section of this staff report. Therefore, there may be restrictions on the size and shape of the VTS due to this site constraint and other site requirements. These site constraints may make it difficult to design and build a VTS that will substantially conform to the CASQA guidelines. While this should not necessarily preclude the use of a VTS, it may indicate that additional source control and/or treatment control BMPs are needed in order to properly protect water quality. Any efforts to reduce site runoff during storm events would help to maintain natural site hydrology and minimize impacts to the off-site resources.

To add to the overall reliability and effectiveness of the WQMP, vortex separation BMPs should be provided in the storm drain system upstream of the created wetlands and detention basin. These BMPs would remove coarse particulates, trash and other debris and help to maintain the aesthetic and habitat values of the constructed wetlands and detention basin.

Additional efforts to reduce impervious surfaces should also be included in the WQMP given the size of the development and the sensitivity of the adjacent coastal resources. For example, within the proposed habitat park the 12 ft. wide trail, 32 ft. wide road extension and 30-space public parking lot will all be paved. These impervious surfaces are within the proposed native habitat park, within close proximity to the existing Eucalyptus grove ESHA. The 12 ft. wide trail is proposed to be located as close as 10 -12 feet away from the Eucalyptus grove ESHA (Exhibit 4). BMPs that reduce the amount of runoff can feasibly be added to the WQMP. The incorporation of Low Impact Development features such as the use of permeable pavement (in driveways, roads and parking areas) and discharge of roof runoff to landscaping areas (instead of allowing the potential for direct runoff to the streets and stormdrains). The WQMP should implement any other feasible BMPs that reduce site runoff.

Various individuals, organizations and agencies have expressed concerns over the Brightwater WQMP. Those concerns include: potential adverse impacts to the Isolated Pocket Lowland wetlands due to the volume of the project (freshwater flows) and the remaining pollutants in the discharge including a recommendation that post-development monitoring of the Isolated Pocket Lowlands be done in order to assess project effects on vegetation; adverse impacts to the mud flats of Outer Bolsa Bay; the adequacy of the proposed fossil filter catch basin inserts in removing pollutants, especially coliform bacteria and nutrients and the long term performance of the filters; given that the created wetlands are bypassed during larger storms, the treatment of the detention basin alone will not remove a considerable proportion of pollutants before their discharge into the Isolated Lowlands; the WQMP does not provide information on total loading; potential adverse cumulative impact caused by use of pesticides, fertilizers and other chemicals by individual homeowners, along with animal waste; low flows and first flush flows should be diverted to the OC Sanitation District treatment plant, consistent with the Coastal Commission's action in November 2000; long-term maintenance of the water quality system and annual monitoring is needed; project applicant should prepare water quality studies for receiving waters (including TMDLs for the Bolsa Chica Bay prior to Brightwater development; the adequacy of the project erosion control plan; and, that the project's Santa Ana Regional Water Quality Control Board approval from 1998 may no longer be valid.

Considerable concern has been expressed about potential impacts to the adjacent State owned Isolated Pocket Lowlands, especially given the extensive 1,100-acre wetland restoration effort. When the applicant sold the Isolated Pocket Lowlands area to the State the applicant retained a drainage easement to accommodate the flows from the proposed development (Exhibit 12). However, the discharge must be done in a way that it does not adversely impact water quality or the biological productivity of the wetlands. Staff discussed these concerns with personnel from two of the eight State and Federal agencies that make up the Bolsa Chica Steering Committee charged with the restoration of the Bolsa Chica Wetlands¹⁴. Their response was that they are aware of the Brightwater plans for the Bolsa Chica Mesa and that the consensus of the Steering Committee is that they do not object to the proposed discharge to the Isolated Pocket Wetland area. Further, the Steering Committee feels that the low freshwater volumes into what will be muted tidal habitats would create very localized but beneficial biological diversity, and not likely to contribute contamination. During large storm events, when the Brightwater runoff increases and bypasses the proposed created treatment ponds, the EGGW Flood Control Channel is also producing overwhelming flows that will exceed the Brightwater runoff volumes, and thus its influence, many times over.

¹⁴ Personal communication between Teresa Henry, Coastal Commission staff, Jack Fancher of USFWS and Bob Hoffman of NMFS in February and March 2004.

Concerns about the need for a monitoring program or a quantitative estimate of the total loading of pollutants to the waters downstream are related in that they presume that the quality of runoff is regulated by quantitative regulatory standards. In fact, the control of polluted runoff nationwide and in California is regulated by requiring dischargers to use nonstructural and structural Best Management Practices (BMPs) to reduce the impact of polluted runoff. These BMPs have been tested and shown to provide significant water quality benefits when properly designed, installed and maintained. Typically in California, they are designed to capture, treat or infiltrate the runoff from the 85th percentile 24 hour storm event, effectively dealing with most small storms and the first flush from larger storms.

The strategy of requiring structural and nonstructural BMPs is a significant first step towards dealing with polluted runoff; a water quality problem that is widespread, caused by the actions of many people and where responsibility cannot be readily assigned to specific parties. A large variety of BMPs have been approved by federal and state agencies for their ability to reduce the pollutants that are found in polluted runoff. The suite of BMPs considered appropriate for California are found in the California Stormwater Quality Association (CASQA) BMP handbook. While the Coastal Commission has, on occasion, required monitoring of discharge from specific developments, this has been in response to the proposed use of management practices that are not designed to the specifications in the CASQA BMP handbook due to site-specific conditions or innovative methods in need of additional information to document effectiveness.

Concerns about potential adverse cumulative impact caused by use of pesticides, fertilizers and other chemicals by individual homeowners and the potential effects of animal wastes are valid and these pollutants are a potential problem throughout our coastal communities. In response to these concerns, the WQMP includes both non-structural and structural BMPs such as education for property owners, tenants and occupants; common area landscaping maintenance; common area litter control; catch basin inspections; requirements for regular sweeping on private streets and parking lots to deal with these issues; and the vegetated treatment system. The homeowner education BMP is intended to make individuals aware that misuse of water and household chemicals can have harmful impacts on the nearby wetlands, harbor and ocean. The Vegetated Treatment System, **in combination with the recommendations above**, can be an effective BMP for minimizing the impacts of irrigation runoff, pesticides, fertilizer and pet wastes, especially in combination with source control of these pollutants through best management practices in the common areas and private areas of the development.

Another concern that has been expressed is the adequacy of dry season runoff to sustain the vegetation of the VTS and maintain its intended function of cleansing the nuisance flows. The potential for wetland plant growth to be affected by dry conditions is legitimate since source control efforts will work to reduce or eliminate dry season runoff thereby minimizing the transport of sediment, pesticides and fertilizer to surface waters and

replicating natural runoff conditions in the Southern California environment. Nevertheless, the ability of the VTS to remove pollutants is only partly due to the active growth of wetland plants. Other removal mechanisms include adsorption of pollutants to soils and living or dead plant materials, infiltration of water into the soil, gravitational settling, physical filtration and microbial decomposition and evapotranspiration. Evidence from the constructed wetlands at Playa Vista indicates that pollutant removal does not significantly decrease during the dry season¹⁵.

There has been some discussion of the possibility of diverting all of the dry weather flow and first flush runoff to a conventional sewage treatment system. While diversion has occurred for several major residential developments in Southern California over the past few years, it is not generally required by the water quality agencies or by the Commission. In some cases, diversion can be a quick fix to beach water quality problems, but it is an end-of-pipe solution that tends to de-emphasize the responsibility of upstream landowners to control sources of pollution, maintain site hydrology near natural conditions and minimize or eliminate dry weather runoff (e.g. runoff from poorly controlled irrigation systems). In addition, diversion of runoff to a sewage treatment plant would require the governing board for the plant to find that there is adequate capacity to treat the additional water. As sewage treatment plants approach their design capacity, governing boards can be expected to refuse to treat urban runoff if that would reduce their capacity to treat residential wastewater. In this case, the combination of source control and treatment control BMPs avoids the need for diversion to a sewage treatment plant and is a more sustainable solution.

In conclusion, Commission Water Quality Unit staff has reviewed the WQMP and supporting documents as listed above. If the WQMP is modified consistent with the above recommendations concerning additional structural BMPs and the design of the VTS to conform with the CASQA standards, the WQMP for the Brightwater development will be comparable in terms of the level of water quality treatment to other similarly sized developments recently reviewed and approved by the Commission. Further, if the above recommendations are implemented and VTS is sited to avoid impacts to the identified ESHAs, the proposed project will be consistent with the water quality and environmentally sensitive habitat area protection policies of the Coastal Act.

J. ALTERNATIVES

As detailed in the preceding sections of this staff report, the proposed project is inconsistent with the public access, recreation, marine resources, land resources including environmentally sensitive and cultural resources, and the visual resources protection policies of the Coastal Act. However, none of these inconsistencies is a direct

¹⁵ Personal communication, Xavier Swamikannu, Los Angeles Regional Water Quality Control Board.

result of the fundamental nature of this proposed project as a residential subdivision and habitat park. Thus, these inconsistencies do not necessarily mean that a fundamentally similar project cannot be built. Moreover, the Brightwater development site, including the 16-acre residual parcel being created by the proposed subdivision, is 121 acres in size and is relatively flat. Therefore, the redesign of the subdivision and the development of the site consistent with the policies in Chapter 3 of the Coastal Act are eminently feasible. However, a substantial redesign of the proposed subdivision including the road layout and physical development of the project site is necessary in order to avoid significant adverse impacts to the ESHA and other significant land, visual and marine resources of the site and to provide meaningful public access and passive recreational opportunities, as required by the Coastal Act.

In order to bring the development into conformity with the public access and recreation provisions of the Coastal Act, the subdivision streets must be open to public vehicular, pedestrian and bicycle use and the public must have access to the proposed 0.6 mile long trail at locations other than the trailhead and the end of the trail along Warner Avenue, just as the residents do. The streets of the 70-acre residential community must be available for public parking in order to distribute public access and recreational use of the passive park throughout the entire park area and avoid overusing any one area, especially where it might focus on any protected ESHA.

The 114 parking spaces along Los Patos Avenue can be used to truly facilitate public access to the bluff park only if the project is redesigned to provide a pedestrian gate along Los Patos Avenue to allow those who park in these off-site spaces a more direct route to the park. A gate could be provided near Lynne Street that is approximately at the mid-point of the parking area and is also adjacent to the proposed 2.5-acre private recreation center (Exhibit 4). A public walkway could be easily accommodated adjacent to this common area. The public access signage program must also be improved to include signage at locations other than the intersection of Warner Avenue and Bolsa Chica Street to inform more members of the public of the location of nature park and scenic trail.

In order to bring the project into conformance with the land resources protection policies of the Coastal Act, the following changes to the project would have to occur: (1) elimination of the proposed landform alteration at the southeastern bluff edge; (2) provision of a 100-meter Eucalyptus grove ESHA buffer and elimination of roads, parking lots, recreational facilities (with the exception of trails¹⁶) and all fuel modification within the ESHA and ESHA buffer; (3) elimination of the proposed impacts to the burrowing owl ESHA and the provision of a 50-meter burrowing owl ESHA buffer; (4) mitigation for the loss of raptor foraging habitat (annual grasslands and ruderal vegetation) at a ratio of 0.5 (preservation):1 (displacement), to be located adjacent to (and potentially including), the Eucalyptus tree ESHA buffer and burrowing owl buffer areas; and (5) elimination of the

¹⁶ A paved pedestrian/bicycle trail may be allowed in the Eucalyptus grove ESHA buffer provided it is located in the uppermost five meters of the 100-meter buffer.

proposed translocation of the two populations of Southern Tarplant that have been determined to be ESHA, retain them in place and provide a 50-foot Tarplant ESHA buffer around each ESHA population; (6) elimination of impacts to coastal sage scrub and the provision of a 50 foot buffer; and (7) elimination of the creation of the proposed 16 acre residual parcel or the applicant must propose a specific use for the parcel and demonstrate that the parcel can be developed for that use consistent with all applicable Chapter 3 policies of the Coastal Act, including, but not limited to, the geologic hazards and land resources protection policies.

There are other project features that must be modified in order to bring the development into conformity with the applicable Chapter 3 policies of the Coastal Act. They include, but are not limited to, changes to the proposed water quality management plan to include filtering devices on the storm drains before the runoff flow into the proposed created wetlands or discharge to the storm drain system that discharges into Huntington Harbor; the relocation or redesign of the proposed vegetative treatment system (created wetlands and detention basin) due to their impacts to the burrowing owl habitat ESHA or Tarplant ESHA, as currently designed.

As currently designed, approximately 55 of the proposed 379 residential lots along the bluff/slope edge, the detention basin and two of the proposed five created water quality treatment wetlands are sited such that they impact the existing Eucalyptus grove ESHA or the burrowing owl or Southern Tarplant ESHAs. The impacts are caused by their proposed locations or their fuel modification requirements. Further, approximately four additional residential lots and approximately two-thirds of the proposed 2.5 acre private recreation center near Los Patos Avenue impact the Southern Tarplant ESHA that surrounds the Los Patos seasonal wetland.

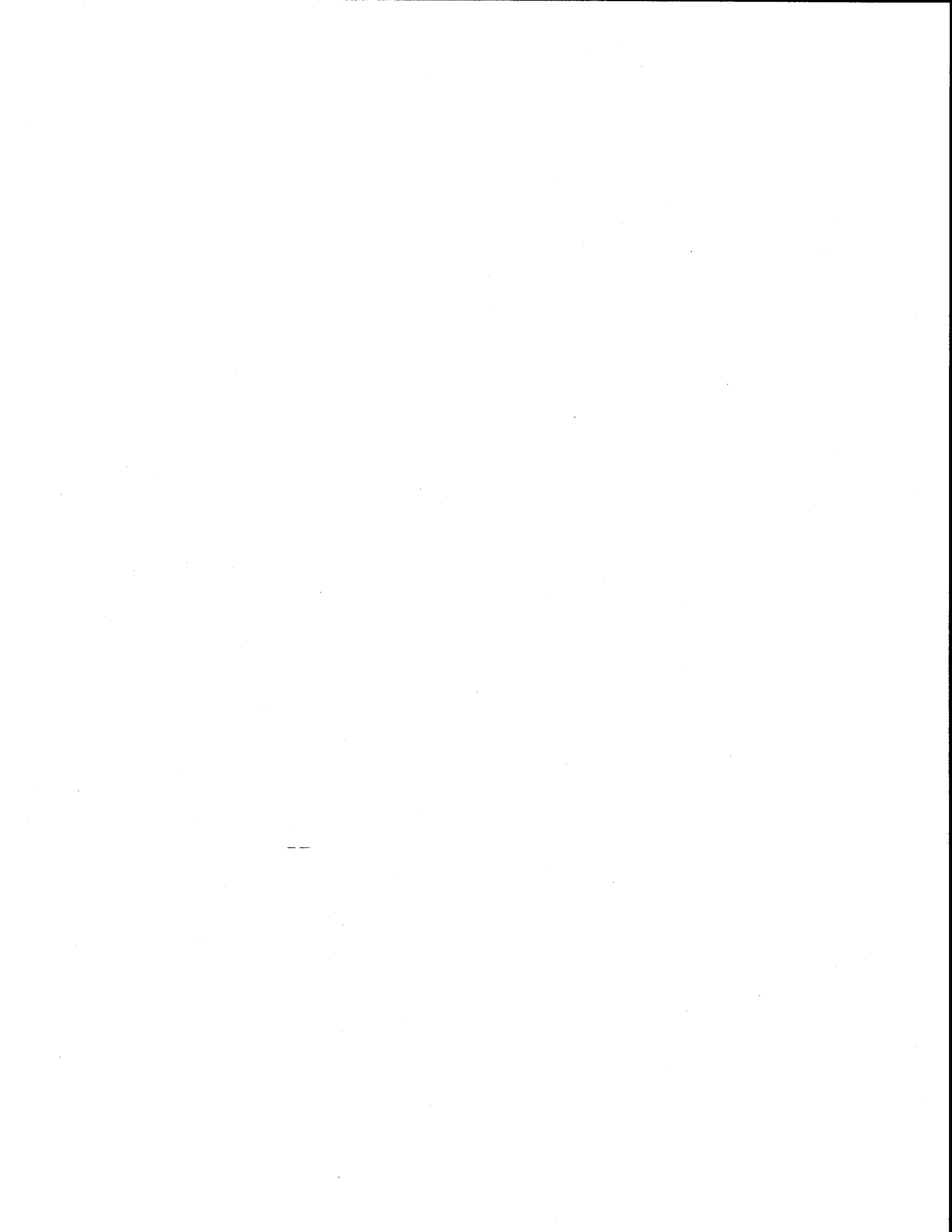
In summary, approximately 60 residential lots out of the proposed 379 lots cause significant adverse impacts to environmentally sensitive habitat areas and other sensitive land resources. This represents 16% of the proposed residential lots. Additionally, the buffers around the Eucalyptus grove ESHA, the burrowing owl ESHA and the Tarplant ESHAs must be increased to adequately protect the viability of the habitat. The applicant may choose however to redesign the subdivision by also changing the internal road layout given the changes that would be necessary to the proposed alignment of the Bolsa Chica Street extension to avoid encroachment into the larger Eucalyptus and coastal sage scrub ESHA buffers. The developer could avoid all of these impacts, minimize changes to the structure of the subdivision, and still build literally hundreds of residential units.

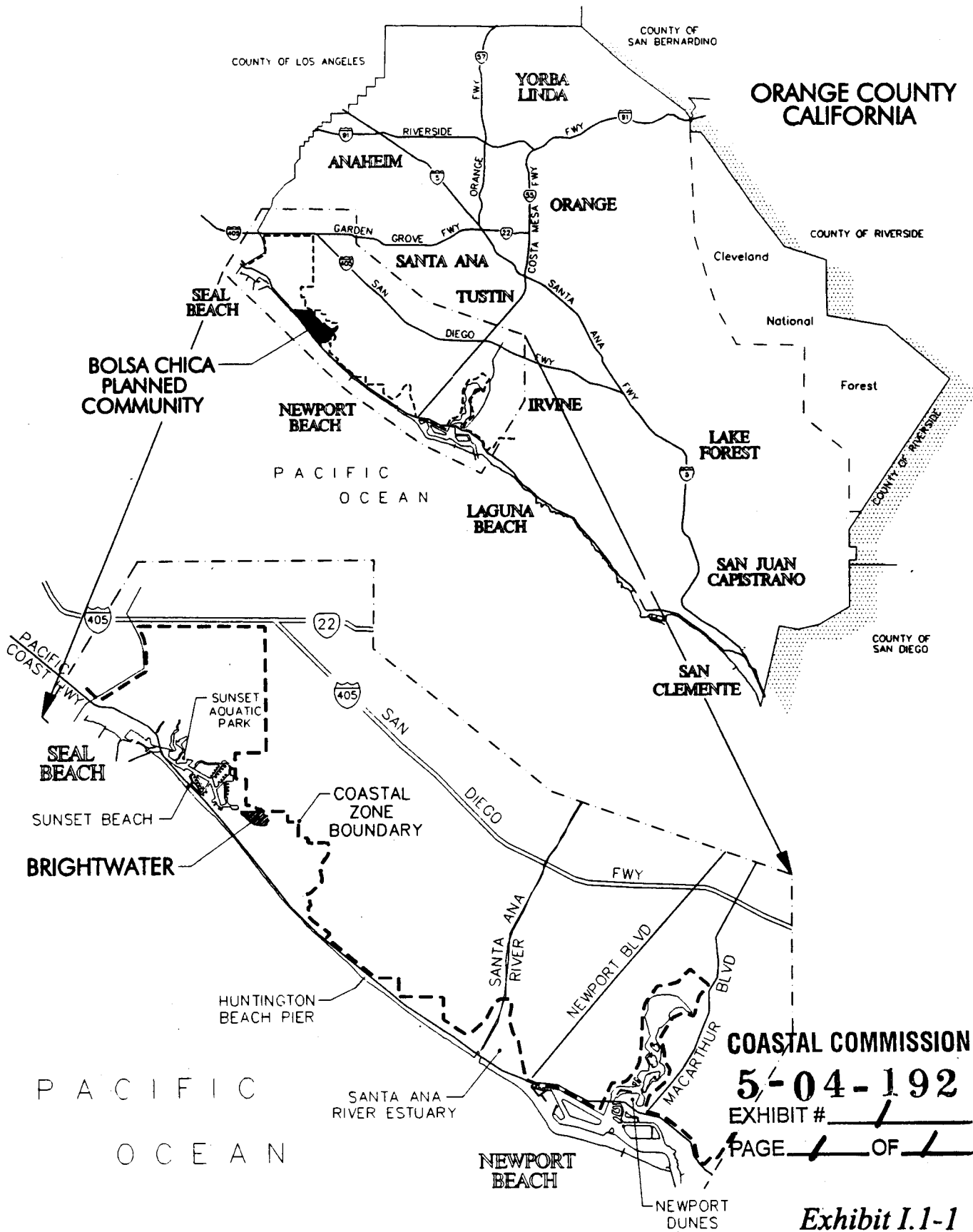
The Commission notes that the total number of residential units would not have to be reduced. The subdivision could be redesigned to eliminate the proposed fill at the southeastern bluff edge and remove inappropriately sited development from its currently proposed location within ESHAs or ESHA buffers without reducing the number of units. Redesign of the proposed subdivision can be accomplished by several means and still

allow 379 residential units or substantial development on a highly constrained site. Residential design alternatives include, but are not limited to: decreasing the size of the lots; increasing the density of development on the lots (by building duplexes, for example); clustering some of the residential units on fewer lots (multi-family units); deletion or significant reduction of the proposed 2.5-acre private recreation center given the passive recreation opportunity at the on-site nature park and the nearby Bolsa Chica State Beach; etc.

At this point, the Commission cannot definitively state what alternative configurations would be possible. It would be necessary to have a specific development proposal available for review before any final analysis could be performed. The Commission also retains significant discretion in evaluating complex development proposals and deciding whether they can be found to be consistent with Chapter 3 policies or how they could be modified to become consistent with those policies. In extreme cases, development that is inconsistent with one or more Chapter 3 policies may even be approvable, by invoking the balancing approach authorized by Section 30007.5 of the Coastal Act or the prohibition against takings in Section 30010. However, it is clear that a substantial residential subdivision, similar in its fundamental respects to the current proposal, is possible on this site.

Of course, there are other alternatives to developing this site as well, which do not necessarily involve maintaining the fundamental character of the current proposal (that the site be developed as a residential subdivision with a habitat park) at all. There are far too many options for developing this site to attempt to list them here, nor is it the job of this Commission to generate ideas for a private developer's development of its lot.





BRIGHTWATER

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Exhibit I.1-1

Location Maps



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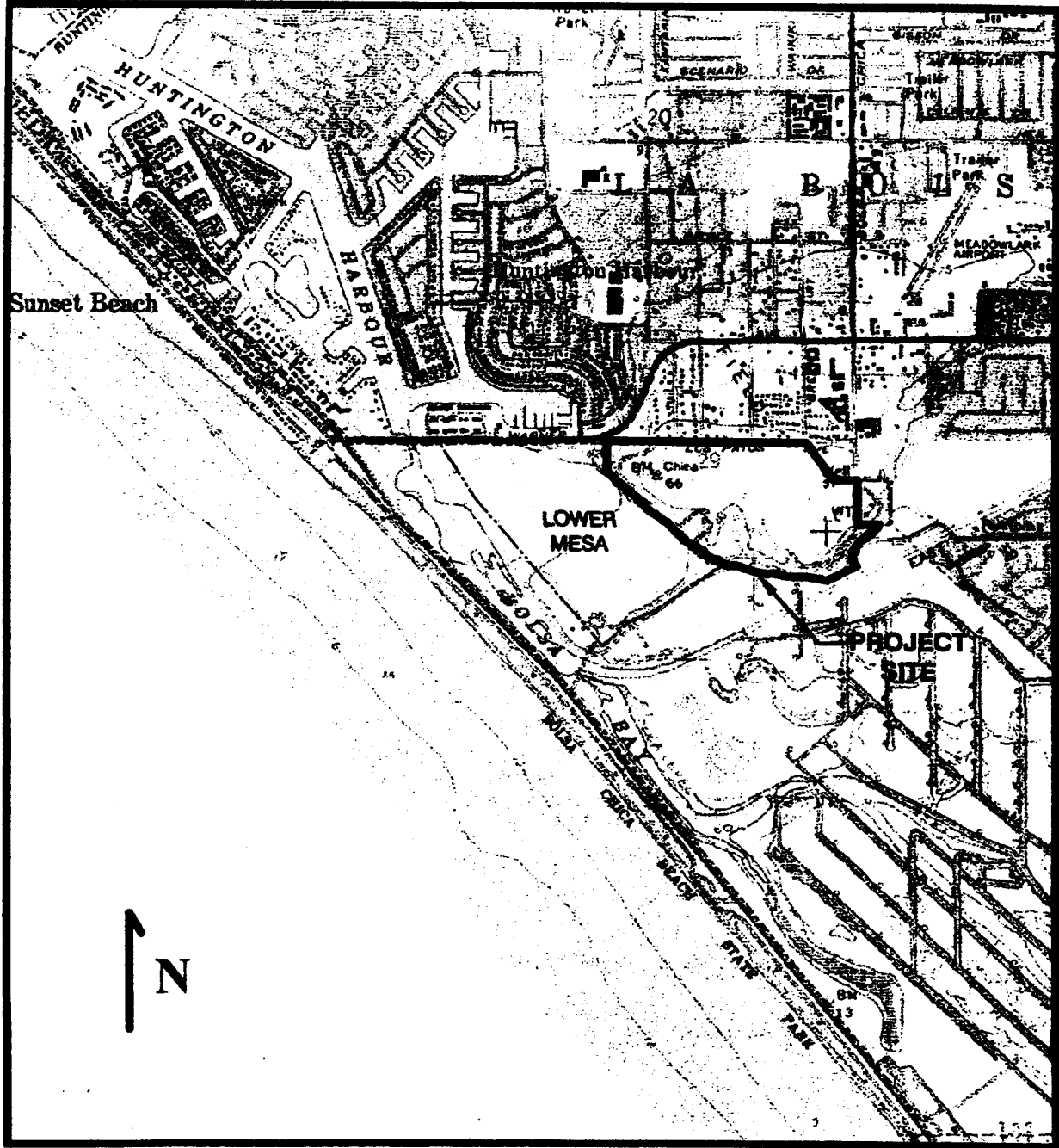
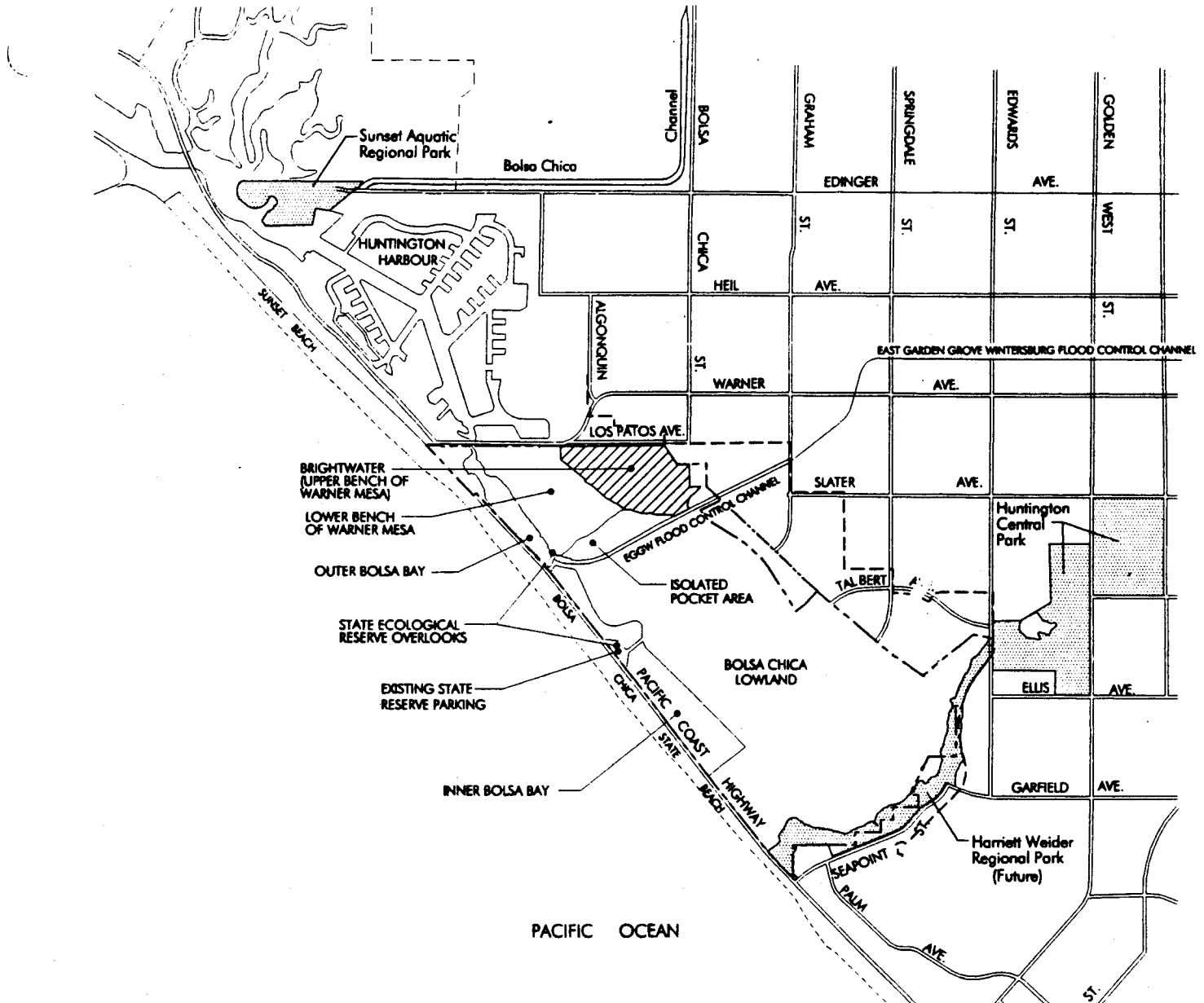


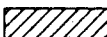
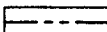
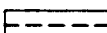
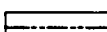
Figure 1. Map of Tentative Tract No. 15460 property. Scale 1:22,600.

height of 55 feet on the mesa to a low of about 10 feet above mean sea level.

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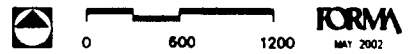
LEGEND

-  BRIGHTWATER PROJECT AREA
-  PLANNED COMMUNITY BOUNDARY
-  COASTAL ZONE BOUNDARY
-  COUNTY - HUNTINGTON BEACH BOUNDARY

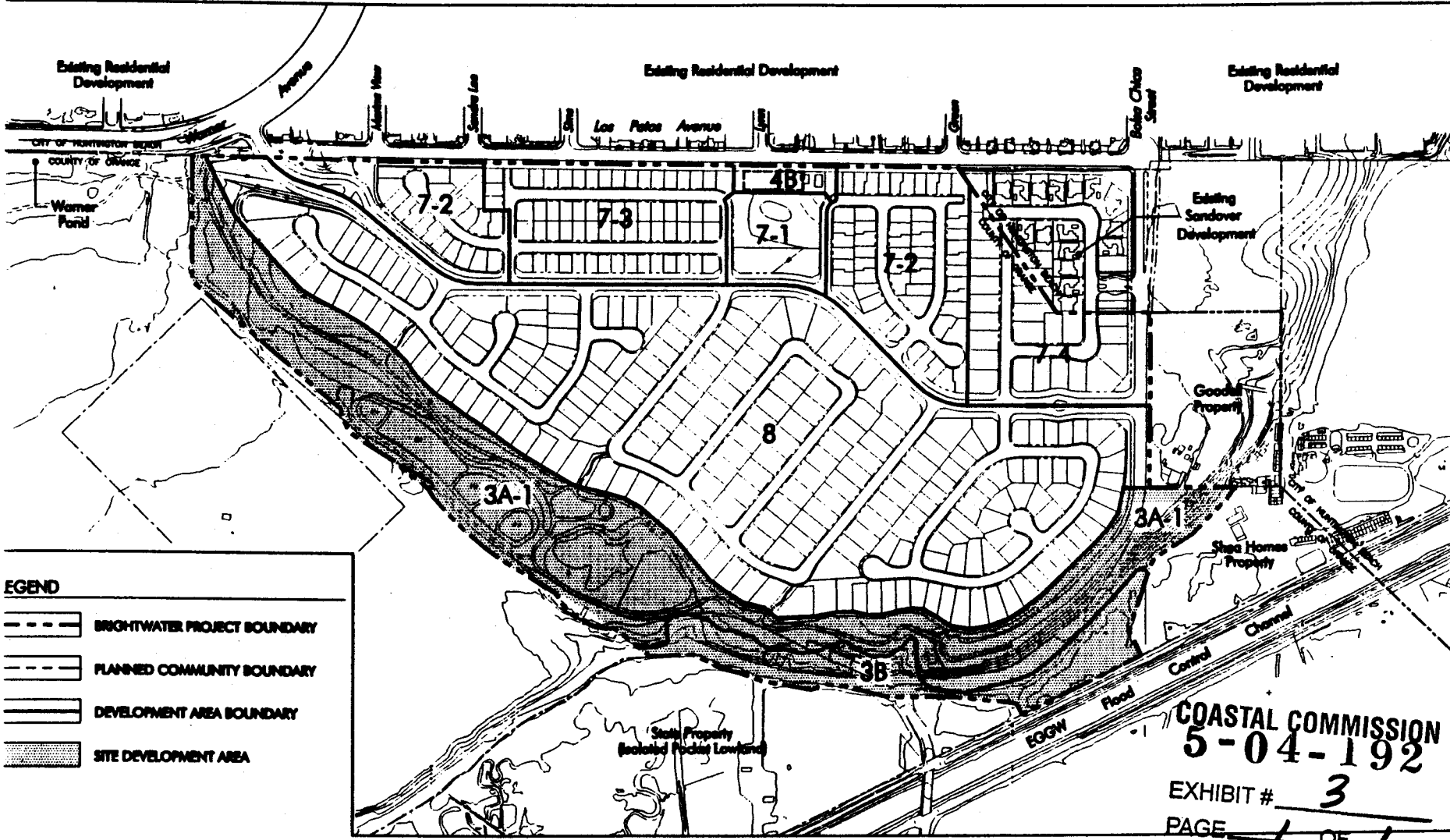
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BRIGHTWATER

Exhibit I.1-2
Vicinity Map



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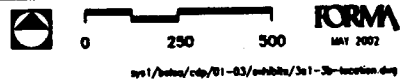


- LEGEND**
- BRIGHTWATER PROJECT BOUNDARY
 - PLANNED COMMUNITY BOUNDARY
 - DEVELOPMENT AREA BOUNDARY
 - SITE DEVELOPMENT AREA

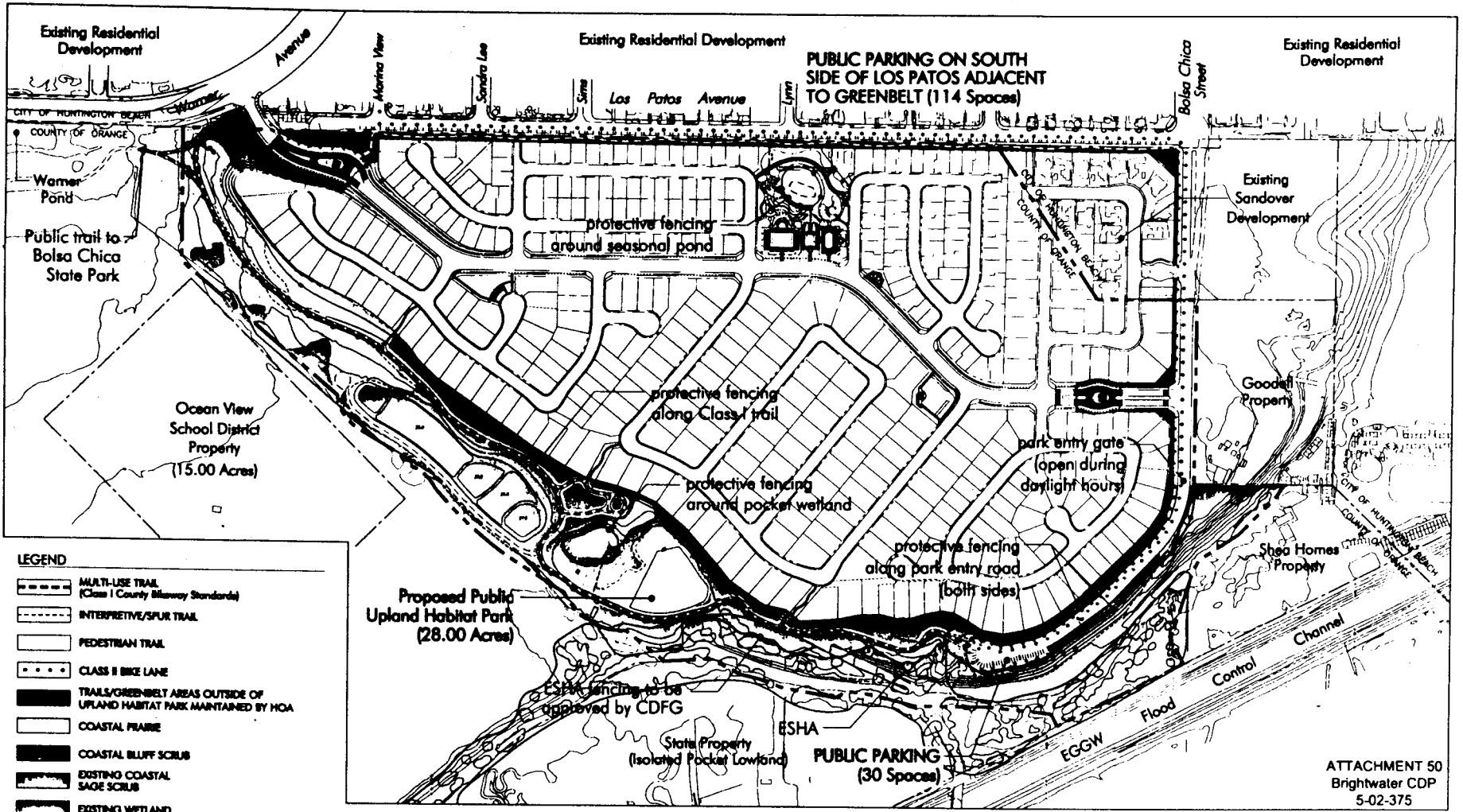
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BRIGHTWATER

Exhibit III.1-1
Location Map
AREA 3A-1 AND 3B SITE PLAN



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- LEGEND**
- MULTI-USE TRAIL (Class I County Minway Standards)
 - INTERPRETIVE/SPUR TRAIL
 - PEDESTRIAN TRAIL
 - CLASS II BIKE LANE
 - TRAILS/GREENBELT AREAS OUTSIDE OF UPLAND HABITAT PARK MAINTAINED BY HOA
 - COASTAL PRAIRIE
 - COASTAL BLUFF SCRUB
 - EXISTING COASTAL SAGE SCRUB
 - EXISTING WETLAND
 - CONSTRUCTED WETLANDS

**UPLAND HABITAT PARK
BRIGHTWATER PROJECT**

*Public Parking, Trails,
and Habitat Protection Plan*

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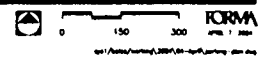
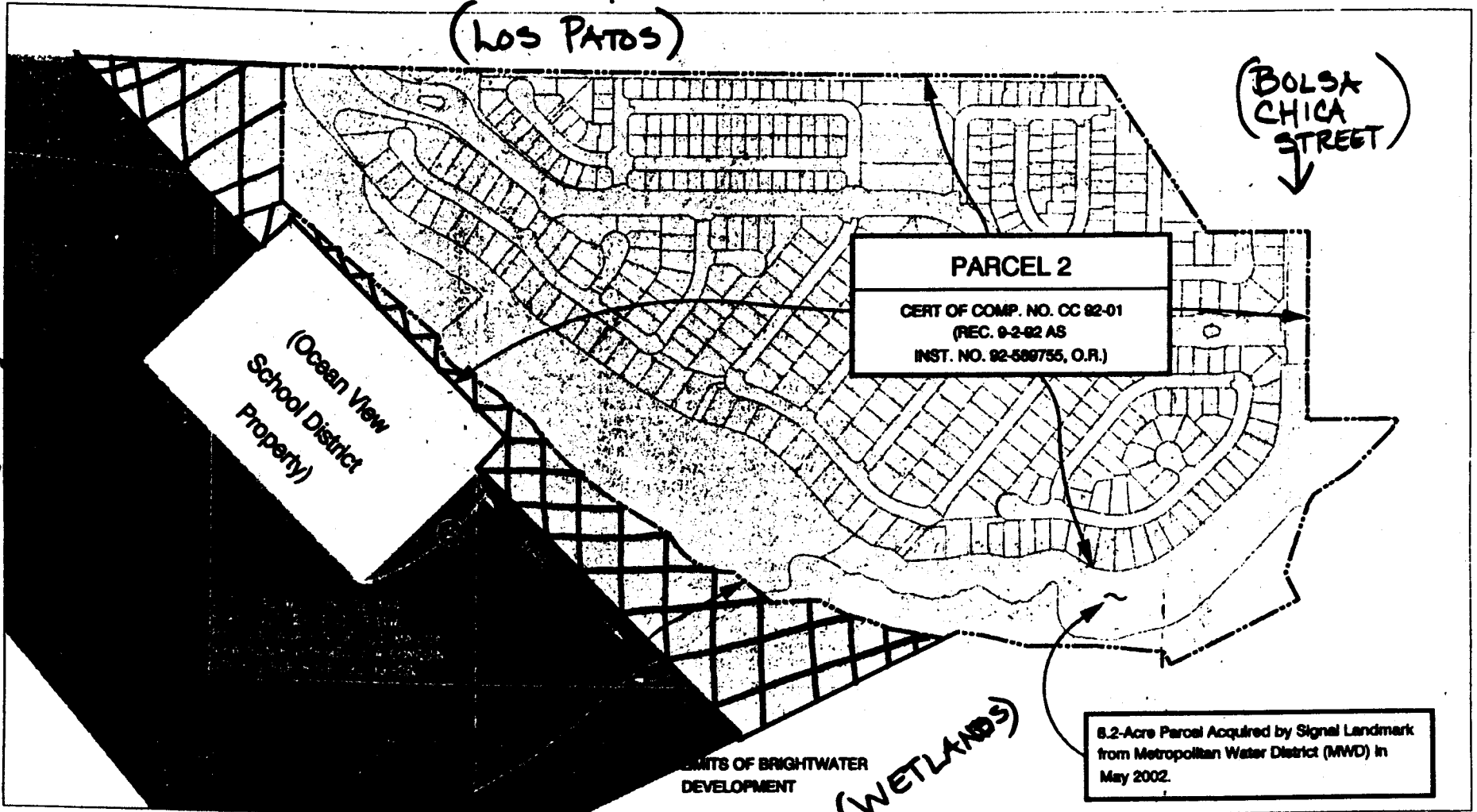


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ATTACHMENT 50
Brightwater CDP
5-02-375



Portion of existing Parcel 2 that is not included in the proposed subdivision. The applicant stated that this residual lot is not a part of this application. Because no grading or construction is proposed, this does not constitute development. Staff disagrees.



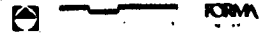
BRIGHTWATER



COASTAL COMMISSION
5-04-192

EXHIBIT # 5
PAGE 1 OF 1

Parcel 2 and Parcel Acquired from MWD
Attachment to Brightwater CDP Application





HEARTHSIDE HOMES

July 12, 2004

Teresa Henry, District Manager
California Coastal Commission
200 OceanGate, 10th floor
Long Beach, CA 90802-4416

RECEIVED
South Coast Region

JUL 13 2004

CALIFORNIA
COASTAL COMMISSION

Re: Coastal Development Permit Application No. 5-04-192 (Brightwater, Bolsa Chica)

Dear Teresa:

Pursuant to your request for information regarding the Lower Bench of Bolsa Chica Mesa, enclosed please find a copy of the draft Purchase and Sale Agreement and Escrow Instructions between Signal Landmark and the State of California for the acquisition of 103 acres on Bolsa Chica Mesa referred to as the Lower Bench. Upon approval of the acquisition by the State Wildlife Conservation Board (a copy of the Wildlife Conservation Board's August 12, 2004 Agenda is enclosed), the shareholders of Signal Landmark and satisfaction of all other conditions to the close of escrow, these 103 acres would be acquired by the State for conservation purposes.

As we have discussed during the pendency of our application for the Brightwater project, most of the Lower Bench is a separate legal parcel which is not a part of our Brightwater application. During our discussions regarding the Brightwater application, the Coastal Commission staff has indicated great interest in the future use and disposition of the Lower Bench. I trust that the enclosed document provides you with the information you need with respect to the future use and disposition of the Lower Bench.

You have also requested that we amend our current application to address the future use and disposition of the 11.8-acre remainder parcel which was included in our application. When the application was originally filed and deemed complete, no land uses for the remainder parcel were identified. It was simply identified in the proposed tentative tract map as being "Not a Part" of the proposed subdivision, and no uses for that remainder parcel were proposed. The remainder parcel, however, is part of the 103 acres that is proposed for acquisition by the State and upon the close of escrow will be transferred to the State for conservation purposes. Therefore, we respectfully request that the project description for Coastal Development Permit Application No. 5-04-192 be amended to reflect that the remainder parcel is within the 103 acres covered by the Purchase and Sale Agreement and Escrow Instructions, and is proposed to be sold to the State of California for conservation purposes.

We trust that the enclosed agreement and our proposed modification to our project description respond to your request.

Very truly yours,

Ed Mountford
Ed Mountford, Sr. Vice President

COASTAL COMMISSION
5-04-192
EXHIBIT # 6
PAGE 1 OF 1

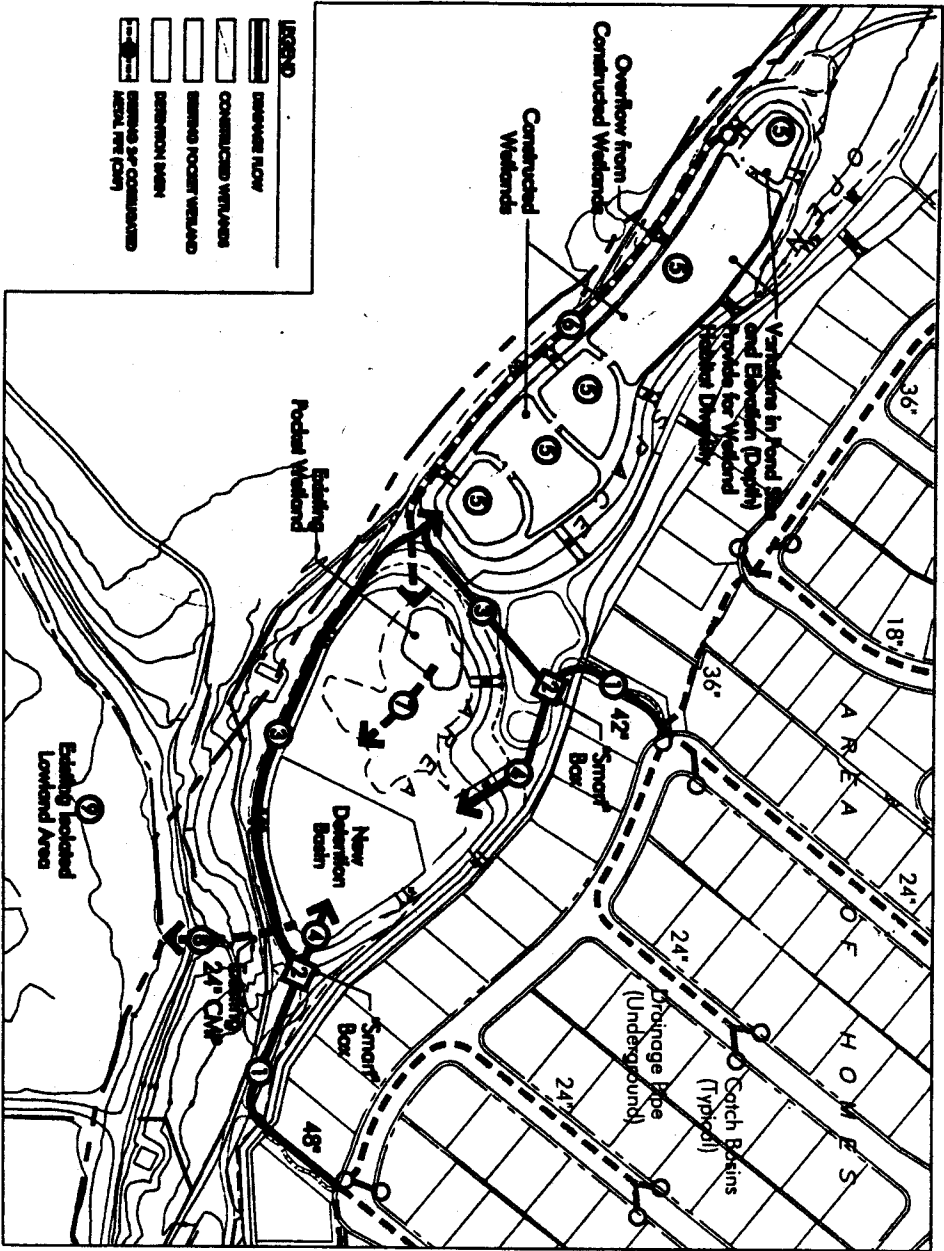


Existing Hydrology / Drainage Conditions



Proposed Hydrology / Drainage Conditions

BRIGHTWATER



- ① Retention runoff is collected in streets, captured into catch basins, and conveyed by drainage pipes to the created wetland areas.
- ② "Smart Boxes" sense the rate of drainage flow, and divert runoff to one of two water treatment areas.
- ③ Pipes from the smallest 85% of storms (i.e., less than 3/8" in 24 hours) and from the "first flush" from major storms are diverted to the Constructed Wetlands.
- ④ Major storm flows are diverted directly to the Detention Basin, which is sized to accommodate a 100-year storm.
- ⑤ Water entering the Constructed Wetlands progressively fills a series of five freshwater wetland ponds. Pond bottoms vary in elevation, thus providing wetlands with different water depths, vegetation, and wildlife habitat opportunities.
- ⑥ When the Constructed Wetlands Area reaches capacity, the uppermost pond overflows into a pipe that outlets into an existing Pocket Wetland to the south.
- ⑦ When the Pocket Wetland reaches capacity, it overflows into the Detention Basin.
- ⑧ The Detention Basin drains - via an existing 24" diameter pipe - into the Isolated Wetland Area in the Lowland formed by the nearby embankment of the East Garden Grove Wintersburg Flood Control Channel and the southern toe of Warner Mesa.
- ⑨ The Isolated Wetland Area in the Lowland is comparatively large and can contain any runoff storm flow from the Brightwater Development, and has no hydrologic connection with Inver or Otter Basin Bay, or the Pacific Ocean.

**Storm Water Flow within
Constructed Wetland Areas**



COASTAL COMMISSION
5-04-192

EXHIBIT # **9**
PAGE **1** OF **1**

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400



June 25, 2004

MEMORANDUM

To: Peter Douglas, Executive Director
Teresa Henry, Coastal Program Manager

From: Jack Gregg, Water Quality Supervisor

Re: Brightwater Water Quality Management Plan

The water quality aspects of this project were reviewed in detail over the last two years by Janna Shackeroff and Jeff Melby, formerly of the Commission's Water Quality Unit. I have reviewed the Water Quality Management Plan (WQMP) dated October 22, 2002 and the briefly scanned other water quality documents for the project. In addition, I have had several phone calls with Paul Carey of the Keith Companies, water quality consultants for the project.

Background

The project as described in the WQMP would consist of 387 single family residences, a community center with a pool, a 2 million gallon drinking water reservoir buried below grade, and open spaces. The impervious surfaces and activities associated with this scale of residential development represents a potentially significant impact to coastal resources, including portions of the Bolsa Chica wetlands, Huntington Harbor and Huntington Beach. The threat is heightened due to the proximity of the site to the Bolsa Chica wetlands. Huntington Harbor is listed by the state as impaired for copper, nickel, Dieldrin, PCBs and pathogens.

The project proponents propose to address the runoff generated by the development through a program of non-structural and structural BMPs that minimize reduce the impacts on coastal waters. Non-structural BMPs include education for property owners, tenants and occupants;

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PAGE 1 OF 4

activity restrictions (e.g., no auto repairs or oil changing on site, no discharge of landscaping debris to storm drains, no clean up from painting in paved areas, no washwater from construction activities into stormdrains); common area landscaping maintenance; BMP maintenance requirements; common area litter control; catch basin inspections; and requirements for regular sweeping on private streets and parking lots. Structural BMPs include a constructed wetland, media filters for storm drain inlets (on a 5 acre portion of the site draining to Huntington Harbor), common area efficient irrigation, common area runoff minimizing landscape design, energy dissipating riprap at new stormdrain outlets and inlet trash racks. In addition, discharge from the constructed wetlands and other areas of the site passes through a detention basin to reduce peak flows during storm events.

The developer proposes to build a constructed wetland (also known as a Vegetated Treatment System¹ or VTS) to treat runoff from storms that generate up to 0.8 inches of rainfall in a 24 hour period (the design storm), which is slightly larger than the standard 85th percentile storm event for this area. The VTS will treat runoff by adsorption of pollutants to soil and plant materials, infiltration and evapotranspiration. Dry weather flow will entirely captured by the VTS during the summer months, eliminating any dry weather flow to coastal waters. During wet weather storm events, runoff from the design storm will be released from the VTS over a 24 to 48 hour draw down period into the "Pocket Wetland" and from there will flow to the detention basin. Runoff events greater than the design storm will be diverted to the detention basin.

While discharge from small storm events may be partially treated in the detention basin (by evapotranspiration, infiltration or adsorption), the detention basin is primarily designed to reduce peak flow rates for a few hours during large storm events. Discharge from the detention basin passes through a 24-inch outlet pipe into the "Pocket Lowland" area of Bolsa Chica, northwest of the East Garden Grove Flood Control Channel.

The developer claims that the combination of structural and non-structural BMPs will:

¹ The CCC water quality staff and nonpoint source staff from other state agencies prefer to call these BMPs Vegetated Treatment Systems to make it clear that the primary purpose is treatment of water quality and that any habitat benefits are secondary. This is to distinguish VTS BMPs from constructed wetlands where the primary purpose is habitat creation.

- Reduce the stormwater and dry weather runoff from the site to the impaired waters of Huntington Harbor by 75%;
- Slow the discharge rate of runoff to the Bolsa Chica wetlands;
- Maintain the hydrologic conditions of the Pocket Wetland; and
- Treat the runoff from 85th percentile storm events.

Conclusions

The treatment of runoff from the project through a VTS should significantly reduce the discharge of polluted runoff from the development, if the VTS is built following the guidelines of the California Stormwater Quality Association (CASQA). The system would be improved by the addition of vortex separation BMPs upstream from the VTS and the detention basin. This would remove coarse particulates, trash and other debris and help to maintain the aesthetic and habitat values of those structural BMPs. These vortex separation BMPs would add to the overall reliability and effectiveness of the treatment system.

Even with the above improvement (vortex separation) there are still some uncertainties about the design, location and effectiveness of the VTS. The California Stormwater Quality Association (CASQA) BMP handbook recommends that the permanent pool of water for a constructed wetland BMP be 2 times the water quality volume (the volume of runoff from the design storm event) and the most recent design provided by the developer only has about 1.2 time the water quality volume in the permanent pool. In addition, possible restrictions on the size and shape of the wetland due to other site requirements (e.g., habitat protection) may make it difficult to design and build a VTS that will substantially conform to the CASQA guidelines. While this should not preclude the use of a VTS, it may indicate that additional source control and/or treatment control BMPs should be provided to properly protect water quality.

Given the sensitivity of the adjacent coastal resources and the benefits of moderating the effects of project's directly connected impermeable surfaces, this project would benefit from the incorporation of Low Impact Development features such as the use of permeable pavement (in driveways, roads and parking areas) and discharge of roof runoff to landscaping areas (instead of allowing the potential for runoff to the streets and stormdrains). The WQMP does not discuss

consideration of rain gardens, restrictions on on-street parking or minimizing street widths to reduce site runoff² or use of permeable pavement in driveways or streets. Given the size of the development any efforts to reduce site runoff during storm events would help to maintain natural site hydrology and minimize impacts to the downstream resources (Pocket Lowland).

There has been some discussion of the possibility of diverting all of the dry weather flow and first flush runoff to a conventional sewage treatment system. While diversion has occurred for several major residential developments in Southern California over the past few years, it is not generally required by the water quality agencies or by the Commission. In some cases diversion can be a quick fix to beach water quality problems, but it is an end-of-pipe solution that tends to de-emphasize the responsibility of upstream landowners to control sources of pollution, maintain hydrologic conditions near natural conditions and minimize or eliminate dry weather runoff (e.g. runoff from poorly controlled irrigation systems). In addition, diversion of runoff to a sewage treatment plant would require the permission of the governing board for the plant. The governing board may find that treatment of urban runoff by a plant designed to treat sewage is not the best use of treatment capacity and may require high fees for the treatment. It would be preferable to modify the WQMP as indicated above, rather than diverting runoff to a sewage treatment plant.

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5-04-198

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² In a phone conversation with Paul Carey of the Keith Companies, he indicated that the street widths were minimized as far as allowed by the local fire department, but the basis for the design street widths should be indicated in the WQMP.



Amigos de Bolsa Chica

16531 Bolsa Chica Street Suite 312 Huntington Beach, CA 92649-3546
Phone / Fax 714 840 1575 info@amigosdebolsachica.org www.amigosdebolsachica.org

January 14, 2004

RECEIVED
South Coast Region

JAN 16 2004

California Coastal Commission
200 OceanGate, 10th Floor
Long Beach, CA 90802

CALIFORNIA
COASTAL COMMISSION

Att: Teresa Henry, District Manager

RE: Bolsa Chica Mesa -- CDP Application No. 5-02-375

Dear Ms. Henry:

Amigos de Bolsa Chica has reviewed materials submitted by Hearthside Homes in support of their Application for Coastal Development Permit (5-02-375) for approval of Vesting Tentative Tract Map No. 15460 and the construction of 379 homes on the Bolsa Chica Mesa. We have serious concerns regarding the environmental impacts of the project as proposed and deficiencies in the information provided by Hearthside Homes to date.

We believe that, as proposed, the project violates several Coastal Act requirements. We are particularly concerned that it fails to protect environmentally sensitive habitat areas (ESHAs), as required by Section 30240 of the Coastal Act.

1. THE APPLICATION DOES NOT INCLUDE A COMPREHENSIVE REVIEW OF IMPACTS UPON THE ENTIRE BOLSA CHICA ECOSYSTEM

The project application and supporting documents address the proposed project on the "upper bench" of the Bolsa Chica mesa in isolation from and without sufficient consideration of the "lower bench" of the mesa, either in terms of the impacts on the lower mesa or the cumulative impacts of the currently proposed project and potential development on the lower mesa, which shares the same land owner as the upper bench.

The applicant has challenged the Coastal Commission's previous determination that the "lower bench" of the mesa should be preserved as open space. In any event, the impacts on the lower mesa and the cumulative impacts of the proposed project and potential development on the lower mesa need to be addressed.

A piecemeal planning approach for Bolsa Chica could result in numerous development projects which could cause severe environmental destruction to the fragile Bolsa Chica ecosystem.

As recognized by the Coastal Commission in its November 16, 2000 findings regarding the Orange County Bolsa Chica LCP application, the Bolsa Chica area, consisting of wetlands, lowlands and uplands, constitutes a significant and fragile integrated biological ecosystem which must be addressed and protected in its entirety.

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The findings of the Coastal Commission, based upon data presented by a team of three consultant biologists, including one selected by the current applicant, concluded that preservation of (ESHAs) and minimization of the environmental impacts of residential development **require** that residential development be consolidated and restricted to the upper bench of the mesa in order to allow sufficient buffer and upland foraging area to ensure the continued functioning of the integrated biological ecosystem.

The Coastal Commission unanimously concluded in 2000 that residential development on the Bolsa Chica Mesa could only comply with the Coastal Act if development was consolidated on 65 acres of the upper bench of the mesa and the lower bench of the mesa was preserved as open space conservation area.

In its present application, Hearthside Homes proposes a project including 379 housing units on 77 acres of area on the upper bench. The plan includes encroachment onto the bluff separating the upper and lower bench area for constructed wetlands, water treatment facilities, detention basins, a maintenance road and trails. Southern Tar Plant species are also slated for relocation to the lower bench. These features alone should bring the lower bench into the mandatory planning process for the proposed project.

Nonetheless, the applicant declines further discussion of the lower bench, arguing that inasmuch as it is a separately defined legal parcel, that it is separate and distinct and need not be addressed. The applicant further makes general statements indicating that there are no plans for the development of the lower mesa. Given the applicant's currently pending litigation at the appellate court level regarding its entitlement to develop the lower bench and it's failure to dedicate or otherwise define the lower bench as open space habitat area, it is clear that the applicant's intent is to secure development approval for its separate parcels in piecemeal fashion without reference to the environmental impacts of cumulative development of its adjacent parcels.

The Coastal Commission has previously agreed with its consulting experts, that the Bolsa Chica ecosystem requires careful protection of environmentally sensitive habitat areas and that any development on the upper mesa must be conditioned upon the absolute and permanent preservation of the lower mesa as open space habitat area. The current application obviously attempts to circumvent that important finding.

The failure of the applicant to fully and completely disclose its intentions for development on the lower mesa or to dedicate that area as conservation area leaves the potential for development of devastating environmental impact.

Compliance with Section 30240 necessarily requires that any Coastal Development Permit Application for any property within the Bolsa Chica include a full evaluation of development alternatives for other adjacent parcels, and impacts of development on the upper and lower mesas, the wetlands, including the State Restoration area, and other adjacent properties.

2. WATER QUALITY EVALUATION DOCUMENTS PRESENT FALSE AND MISLEADING STATEMENTS REGARDING THE IMPACTS OF THE PROJECT UPON THE STATE OWNED BOLSA CHICA WETLANDS AND WETLAND RESTORATION AREA.

The applicant proposes to release storm water into the 42 acre pocket wetland that lies between the north embankment of the Wintersburg flood control channel and the Bolsa Chica mesa bluff. While toxic materials may be reduced in some of this runoff (the first flush of a storm flow) by its diversion through a constructed wetland, the Application for Coastal Development Permit does not adequately address what the overall impact the total volume of storm water will have on the pocket wetland. The applicant claims the impact will be insignificant and may even improve the wetland.

This misleading claim is based on the erroneous assumption that the pocket wetland will have no connection with outer Bolsa Bay. The Application frequently refers to the pocket area as being "isolated". In fact, the pocket wetland is part of the major restoration of the Bolsa Chica wetlands and will be connected to outer Bolsa Bay. Through limited tidal flow, the area will become a muted tidal wetland. Plants typical of muted saltwater tidelands such as *Salicornia* (Pickleweed) and *Spartina* (Cord Grass) can be established in the pocket. These plants are critical for the survival of the endangered species Belding's Savannah Sparrow and the California Light Footed Clapper Rail. What impact will flow from a major storm have on these saltwater plants? Being subject to muted tidal flow, the flushing action of the tide may not be adequate to reestablish saline conditions in the wetland within a reasonable time following a storm. It is well documented that the intrusion of fresh water into a saltwater wetland leads to the establishment of exotic and weedy plant species and the exclusion of native species.

From the pocket wetland, storm flow will enter outer Bolsa Bay. The Application document fails to discuss what the impact of storm water flow will have on the biological resources of outer Bolsa Bay. At low tide, a 10 acre mud flat is exposed in the outer bay. Of particular concern is the impact of runoff on the populations of invertebrate species in the mud flat, organisms that provide food for thousands of shore birds. Sections 30230 and 30231 of the Coastal Act prohibit adverse impacts of a proposed project on the quality and biological productivity of a coastal resource.

Section 30230 and 30231 of the Coastal Act prohibit adverse impacts of the proposed project on the quality and biological productivity of Coastal Waters. The State and Federal Governments have recognized the importance of mitigating the loss of over 90% of California's Wetlands by approving a massive restoration project for the Bolsa Chica Wetlands. It is imperative that the wetland restoration not be impaired by destructive impacts of residential development.

COASTAL COMMISSION

5-04-192

EXHIBIT # 11

PAGE 3 OF 5

3. ENVIRONMENTALLY SENSITIVE HABITAT AREAS MUST BE PROTECTED BY RESTRICTED USE BUFFER AREAS OF SUFFICIENT AREA AND QUALITY TO ENSURE CONTINUED VIABILITY OF THE ESHA.

Although the applicant has provided for areas around acknowledged ESHAs, including an existing wetland, to be free of residential buildings, those areas have been incorporated into landscape plans for active use areas which would bring significant intrusion and disruption to the ESHAs. We note that an important "existing wetland" area is **immediately** surrounded by a swimming pool, tot lot and picnic area. A "Habitat Park" adjacent to eucalyptus and wetland ESHAs located along the bluff edge includes active uses such as bicycling, parking, hiking, a emergency vehicle access. Such uses would render the ESHAs to be of virtually useless environmental utility. It could further be expected that the homeowner maintained ESHAs would ultimately cease to function entirely due not only to human intrusion but to vector control measures and possible destruction resulting from homeowner recognition of the ESHAs as human safety and health hazards.

It further appears that the applicant has attempted to take advantage of compromised buffers allowed by the Coastal Commission in 2000 which were conditioned on the maintenance of the entire lower bench of the mesa as open space. As the applicant has refused to designate the lower bench as open space, no reduction in buffer area should be allowed around individual ESHAs, which must be maintained in natural condition, free of active uses associated with the residential development. Existing wetlands and other ESHAs must be maintained with sufficient non-active use buffer areas to ensure their continued biological viability.

4. BLUFF AREAS SEPARATING THE UPPER AND LOWER MESA BENCHES MUST BE PROTECTED.

As previously noted by the Coastal Commission Staff, the application insufficiently defines and fails to protect the integrity of the bluff edge separating the upper and lower benches and the top area of the southern bluff. Cut and fill operations will affect those bluffs and detention basins and water treatment areas appear to encroach dangerously upon the bluff edge.

The applicant's contentions in regard to the mesa are further muddied by its inconsistent arguments that although the bluff edge cannot be defined and is actually a natural "slope", the project is contained entirely on the upper bench of the mesa and therefore the lower mesa is not subject to the commission's review during these proceedings. The proposed construction of drainage and water treatment facilities, Southern Tar Plant relocation on the bluff edge and lower mesa as a part of the proposed project also belies any argument that the project is contained on the upper bench of the mesa.

The project must provide for protective setbacks from bluff edges which should remain free of active uses, water treatment or drainage facilities, utilities, parking areas or other uses which could impair the integrity of the bluffs.

COASTAL COMMISSION
5-04-192

EXHIBIT # 11
PAGE 4 OF 5

5. THE DATA SUBMITTED FAILS TO DETAIL THE DESIGN AND EFFECTIVENESS OF THE PROPOSED CONSTRUCTED WETLANDS.

It is not clear from the information in the applicant's Water Quality Management Plan what criteria were used in the design of the constructed wetland. It appears that the size of the wetland was based solely on the estimated volume of runoff that the development would produce without regard to pollutant loading. There is no discussion of the pollutant concentrations that would accompany the runoff, a critical factor in the design of any BMP. Pollutant concentrations are not uniform across the country and are highly dependent on local conditions, including climate. National averages for pollutant concentrations are derived from locales in mostly humid climates where frequent storms produce relatively low pollutant loads in the first flush. Pollutant loads generally tend to be higher in semi-arid locales where rains are relatively rare, such as Southern California. The WQMP should be more specific in explaining how the size of the constructed wetland was determined to assure that the wetland will adequately fulfill its purpose. If it fails, the runoff from this project will be in clear violation of Section 30231 of the Coastal Act.

The health of the plants in a treatment wetland is of paramount importance. Being wetland plants, most tend not to tolerate drought conditions. The document proposes a daily dry weather input of 5600 gallons, a figure apparently based on about 80 acres of developed space producing 70 gal per acre. The source of this figure is not explained. But then the document states that because of irrigation controls, water efficient landscaping and other water conservation measures, the volume of dry weather runoff may actually be lower. How much lower? Enough to maintain healthy wetland plants during 7 months of dry weather?

The applicant should be required to provide sufficient data and modeling to establish the efficacy of its proposed water treatment facilities and constructed wetlands.

Further, provisions for monitoring, continued maintenance, and funding of onsite wetlands and water treatment facilities must be required. Funding should be established prior to development permitting and the operation of such facilities must be supervised by an appropriate government agency to insure continued operation.

6. THE PROPOSED PROJECT FAILS TO ADEQUATELY PROTECT SIGNIFICANT ARCHEOLOGICAL RESOURCES.

Several significant archeological sites are located on the Bolsa Chica Mesa. The applicant acknowledges location of numerous artifacts and human remains and indicates prior and intended future relocation of artifacts from the site. Given the significance of sites such as ORA-83, the applicant should be required to preserve and avoid further destruction of unique archeological and historical sites. Mere relocation of discovered artifacts may result in the ultimate loss of highly significant resources.

We appreciate the opportunity to participate in the public planning process for Bolsa Chica and look forward to discussing these issues with you further at your convenience. **5-04-192**

Sincerely,

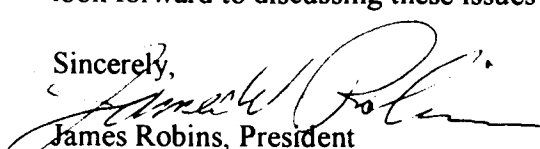

James Robins, President

EXHIBIT #

PAGE

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5 OF 5

Bolsa Chica Land Trust
5200 Warner Avenue, Suite 108
Huntington Beach, CA. 92649-4029

January 19, 2004

Teresa Henry
District Manager
South Coast District Office
California Coastal Commission
200 Oceangate, 10th Floor
Long Beach, Ca. 90802-4416

RECEIVED
South Coast Region

JAN 20 2004

CALIFORNIA
COASTAL COMMISSION

Subject: Brightwater Development (CDP Application No. 5-02-375)

Dear Ms. Henry:

Thank you for the opportunity to comment on the Coastal Development Permit for the Brightwater Development Project in Orange County, Ca. (CDP Application No. 5-02-375) These comments are submitted on behalf of the Bolsa Chica Land Trust.

Background

The proposed Coastal Development Permit (CDP) would allow the development of 379 residential units, an underground water reservoir, and recreation/conservation open space on approximately 105 acres on the upper bench of the Bolsa Chica Mesa in Orange County, California. In July 2002, the Orange County Board of Supervisors approved a Master Site/Area Plan, Project Site Development Plans, and Vesting Tentative Map No. 15460 in furtherance of the proposed development. At that time, the Board of Supervisors also certified Subsequent Environmental Impact Report (SEIR) No. 551, which is an attachment to the Coastal Development Permit application submitted by the applicant, Hearthside Development.

Over the years, numerous coastal planning efforts have ensued for the Bolsa Chica. Most recently, in November 2000, the Coastal Commission approved a modified Local Coastal Program (LCP) for the entire Bolsa Chica Mesa. This approval permitted development of the upper bench of the Bolsa Chica Mesa while preserving the lower bench as open space. In its approval, the Commission recognized the value of resources on the upper bench, but weighed impacts on these resources against the benefit to be gained from preserving the lower bench. The County of Orange failed to accept the LCP as approved by the Commission, and the LCP approval therefore became of no effect.

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EXHIBIT # 11a

PAGE 1 OF 21

Current Application

The Current application fails to answer the question: What is the true scope of the proposed project? The applicant is now apparently seeking to gain approval of a development plan for just the upper bench, although the proposed project is located on legal lots that extend onto the lower bench. Because, on the one hand, the application only seeks approvals for upper bench development, but, on the other hand, the developer has for years consistently in court (including most recently in Signal Landmark; Hearthside Homes, Inc. v. California Coastal Commission and County of Orange, Superior Court of California, County of San Diego, Case No. GIC 764965), in public, and before this Commission repeated its intention to build on the entire Mesa, the Land Trust, the public and the Commission are left to wonder -- what exactly is the project here?

Lucy Dunn, executive vice president of Hearthside Homes, the project developer, was quoted in a *Los Angeles Times* discussion of Brightwater on August 14, 2001 stating: "We're not conceding the lower [tier]... This is a way to move forward with part of the project".

The developer advertises in its Petition in the above-referenced action that the entirety of the Mesa "is the ideal place for new development." (Petition p. 10 – emphasis in original)

The developer asserts many reasons why development on the entire mesa is so "ideal." Here excerpted are just two:

it is ideal because:

- the mesa is physically suitable, being comprised of two relatively flat plateaus which will require little grading...
- Access is outstanding: the mesa fronts on a major arterial highway (Warner avenue) which intersects with pacific coast highway" (Petition at p. 10-11)

Further, Orange County in its active support of the developer's claims in the above-referenced action states:

The County remains committed to that program [the development for the Mesa reflected in its rejected LCP] and is ready to proceed with it." (Response of Real Party County of Orange to Demurrer, Nov. 26, 2001, p. 3)

Maintaining the development as planned [meaning, as set forth in its rejected LCP] is important to the County. (Response of Real Party County of Orange to Demurrer, Nov. 26, 2001, p. 5)

Elsewhere, the County reiterates its knowledge that the developer wants to do more on the Mesa than build "Brightwater" and reiterates that it too wants more than the analyzed project to be built on the Mesa:

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5-04-192

EXHIBIT # 11a
PAGE 2 OF 21

The Commission wants severe restrictions on the use of the Mesa. The County wants homes there. (Response of Real Party County of Orange to Demurrer, Nov. 26, 2001, p. 6)

Thus, both the applicant and Orange County, which is the local planning agency, have verbalized a clear intention to develop homes on both the upper and lower benches of the Bolsa Chica Mesa.

As additional evidence of the true extent of the actual project, the developer sought and obtained, over the objection of the City of Huntington Beach and the Land Trust, Public Utilities Commission approval to extend a nearly seven mile long water and wastewater pipeline weaving through several jurisdictions (Seal Beach, Westminster and Huntington Beach) to serve over one thousand proposed homes on 183 acres; meaning, the entire mesa. (PUC Decision 01-02-043) Key to the PUC's decision to permit such a radical step (when the City of Huntington Beach literally has an available pipeline right across the street from the Mesa) was that

[a]lthough the Coastal Commission's approval of the Bolsa Chica LCP significantly reduced the allowable acreage for the development, the number of residential units approved remained the same. Thus, the pipeline extension project continues to be appropriate to meet the public need for water.¹

The current application apparently contemplates a reduced reservoir, from about 4 million gallons designed to serve over one thousand homes, to about 2 million – designed to serve 387 homes? This “reduction” is further evidence that the application as submitted constitutes only “part of the project”, just as Lucy Dunn concedes.

Finally, the CDP application maps and makes reference to Areas 3A, 3B, 4B, 7-1 to 7-4 and 8. What of Areas 1, 2, 5, and 6? Aren't they “part of the project”? What of plans for these areas? Are they located on the lower bench?

As if in answer this last question, SEIR 551 asserts (P.2-11) that “No development is proposed on the lower bench or in the Bolsa Chica Lowlands.” While this statement may be explained away as applicable only to the immediate time frame, other materials submitted by the applicant imply the precise opposite--that the developer intends to preserve the lower bench as open space.

For example, the May 1, 2003 Translocation Plan for Southern Tarplant, Brightwater Development Project, prepared by LSA Associates, Inc. (Brightwater CDP Attachment 23) states that:

...this plan provides for the translocation of the southern tarplant from within the limits of the proposed development area to an identified open space area to be *permanently preserved on the lower portion of the Bolsa Chica Mesa.* [emphasis added]

¹ Indeed, if it does not so clarify that point, at a minimum, the assumptions underlying the PUC's approval of the pipeline are moot, and a new PUC proceeding is required.

COASTAL COMMISSION

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How can it be asserted that open space for tarplant translocation will be "permanently preserved on the lower portion of the Bolsa Chica Mesa" when the lower portion of the mesa is not even included in this application? Does the applicant intend to commit to preservation of the lower bench as a part of this application? If that were indeed the case, the developer—and the Brightwater project application-- would certainly have the support of the Bolsa Chica Land Trust.

In the meantime, however, unless and until the developer definitively clarifies its intent as to the lower bench, the Commission cannot approve the proposed permit for the simple reason that it does not know what it is approving: A stand alone project that preserves the lower bench and brings final repose to Bolsa Chica planning or just the first phase of a broader mesa development that will raise the exact same issues as the prior LCPs?

The LSA Associates, Inc. Analyses of Potential Effects of Development of the Upper Terrace of Bolsa Chica Mesa on Avian Predation on Nesting Waterbirds in the Bolsa Chica Wetlands (Brightwater CDP Attachment 20) repeatedly refers to "a slight loss of habitat on the upper mesa" for raptors that "probably would be inconsequential" in its effects on predation of nesting waterbirds at Bolsa Chica. The study concludes that:

Residential development of the upper terrace of Bolsa Chica Mesa would result in lost habitat for some of the predatory species and enhanced habitat for others... the proposed development on the Bolsa Chica Mesa is not expected to have a significant effect on nesting waterbirds in the wetlands.

This flies in the face of conclusions reached by the several raptor authorities reporting to the Coastal Commission in November 2000, as discussed below. The only way such a statement makes any sense at all, when considered in the light of the recognized authorities, is if the stated "residential development of the upper terrace" constituted the whole of any development ever contemplated for the entire Bolsa Chica Mesa. Is that what the applicant's biologist was given to understand?

The tract map itself appears to anticipate no future development of the lower bench. As currently proposed, the Brightwater project would provide no connection to the lower bench. No streets within the Brightwater project appear designed to extend to the lower bench. Thus, access would ostensibly be limited to Warner Avenue.

As stated in the attached October 4, 2001 letter from Howard Zelefsky, Huntington Beach Director of Planning:

The City has always maintained the position that only one vehicular access point from any development in the Bolsa Chica area to Warner Ave. would be acceptable. This reduces the points of ingress and egress along Warner Ave. minimizing impacts to traffic flow on this major arterial. As proposed, development on the upper mesa would have one connection to Warner Ave. and

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any future development on the lower mesa would have another connection. This is unacceptable...

In fact, public safety considerations require multiple access points for any residential development consisting of more than a very few homes. Thus, it is likely that residential development of the lower bench would require *more* than one additional connection to Warner Avenue. This would be difficult due to the location of Warner Pond adjacent to the road along a substantial portion of the lower bench. This is further complicated by the grade and the curve of the road.

On the other hand, could the applicant be anticipating provision of access to the lower bench via Bolsa Chica Road? Will the areas now designated for public parking, buffers for environmentally sensitive habitat areas and even the sensitive habitat areas themselves eventually be sacrificed to provide access to the lower bench? Will the proposed "multi-use trail" now planned for pedestrian and bicycle use be widened to serve as an access road for development on the lower bench?

Such a scenario is particularly jarring when one considers the following statements in SEIR 551 regarding a perimeter road which would, to a large extent, follow the same general alignment as any accessway from Bolsa Chica Road to the lower bench.

In its recommendations on a Bolsa Chica LCP in November, 2002, the Coastal Commission proposed a similar [perimeter] road for the purpose of maximizing public access to the perimeter trail, to separate private residential land use from public areas, to preserve scenic views of the lowland and the ocean, and to allow for public safety and emergency vehicle access to the public areas, with parallel parking permitted along the road.

Implementation of the perimeter access road will introduce a public road adjacent to the Eucalyptus ESHA and the pocket lowlands, resulting in greater noise and light intrusion impacts, and leaving less area for trails and pedestrian staging. Unfettered public access to the perimeter open space areas will also adversely impact the native plant revegetation that will take place on the perimeter of the project... Additionally, the size and use of the constructed wetlands would likely increase because of more runoff from a larger impervious surface area along the transition area.... The impacts associated with the perimeter access road are more significant than the preferred circulation system for the proposed project, and the proposed project's circulation system will better meet the objectives identified by the County (and conceivably by the Coastal Commission). Therefore this project alternative will not be further analyzed.

One is left to wonder how, then, the applicant imagines access to any future development of the lower bench will be accomplished. This points up the folly of considering what is essentially one project in such a piecemeal fashion.

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Balancing of Resource Needs

Planning for the Bolsa Chica Mesa as one entity--instead of using the present piecemeal approach-- would allow for greater balancing of environmental impacts and benefits. This could result in improved protection of coastal resources. As stated in Section 30007.5 of the Coastal Act:

The Legislature further finds and recognizes that conflicts may occur between one or more policies of the division. The Legislature therefore declares that in carrying out the provisions of this division such conflicts be resolved in a manner which on balance is the most protective of significant coastal resources. In this context, the Legislature declares that broader policies which, for example, serve to concentrate development in close proximity to urban and employment centers may be more protective, overall, than specific wildlife habitat and other similar resource policies.

The Commission cited this policy in their November 2000 Coastal Commission staff report for the Bolsa Chica Local Coastal Program Land Use Plan Amendment No. 1-95/Implementing Actions. This policy created the framework for the Commission's decision to concentrate development on the upper bench of the Bolsa Chica Mesa. The negative effects on resources on the upper bench were balanced by the benefits to be gained by preserving the large intact area of the lower bench. For example:

Concentrating residential development on the upper bench will have some adverse biological impacts... However... concentrating development on the upper bench of the mesa in close proximity to existing developed areas and conserving the lower bench of the mesa is more protective overall of significant coastal resources than protecting each specific habitat area in conjunction with development of the entire mesa.

And, as an explanation for requiring only minimal buffers:

The 100 foot buffer and the fifty foot buffers are appropriate in this case for the following reasons... The Commission finds that residential development must be concentrated on the upper bench of the Bolsa Chica Mesa. Limiting residential development to the upper bench preserves the lower bench as a component of the overall Bolsa Chica wetland/upland ecosystem. The preservation of the lower bench as natural open space is vital to the functioning of the existing ESHA resources which are principally found on the lower bench. Though buffers on the upper bench will not totally eliminate the adverse impacts of the residential development, they will still minimize the disturbance that would be created...

This same balancing of resource impacts and opportunities was cited by Chuck Damm, Senior Deputy Director of the Coastal Commission, in his review of planning efforts for the Bolsa Chica speaking before the Commission on November 16, 2000:

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Back in early 1996...The situation then was staff was recommending that 900 acres of lowlands be dedicated. We were recommending that the residential development be clustered on the entire mesa, upper bench, and lower bench, but we were doing so because we were recommending that there be 900 acres of lowlands dedicated...

It should not be interpreted that meant staff did not feel that there was no environmental issue associated with the Bolsa Chica Mesa. In fact, the record will support that there was much testimony...as to the importance of the upland habitat on the Bolsa Chica Mesa... The staff simply felt, at that time, it was not reasonable to require further clustering of the development when we were already asking that the residential development in the lowlands be clustered on the mesa.

This LCP also required the major property owner... to spend approximately \$50 million on the actual wetland restoration for the lowlands.

Subsequently, the lowlands were purchased by the State of California. In addition, the principal property owner, now Hearthside Homes, successor to the Koll Company which was then the applicant, was relieved of the financial obligation for wetland restoration.

Thus, under conditions as they exist today, any balancing of resource values must be limited to that property the applicant or its predecessor, Koll, has not already sold. This would include the entire Bolsa Chica Mesa. However, the applicant has attempted to bisect consideration of the habitat units comprising the Bolsa Chica Mesa obviating the opportunity for balancing of resource values and resulting in a decidedly inferior development proposal.

Biological Resources and Coastal Act Requirements

Section 30240 of the Coastal Act requires:

- (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.
- (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas

As noted by Steve Rynas, Coastal Commission Orange County Area Supervisor, in a January 17, 2002 letter to Grace Fong of Orange County Environmental and Project Planning Services Division:

The fundamental problem with the preferred alternative of the DSEIR [Brightwater] is that it is inconsistent with Section 30240 of the Coastal Act, which protects environmentally sensitive habitat areas (ESHA)....

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Comments submitted to the Commission from the scientific community during the Bolsa Chica LCP process document that the Bolsa Chica Mesa and the adjacent lowlands constitute one integrated ecosystem. Consequently specific areas can not simply be protected based on one defined biological issue such as preservation of the Eucalyptus grove for the benefit of raptors. Therefore, to maintain the functionality of the Bolsa Chica Mesa as an integrated ecosystem (large enough to provide a wide range of habitat values) a sufficient area must be protected as natural open space. Furthermore, current research dictates that the area to be preserved for conservation must be connected to larger areas of habitat (such as the lowlands), that it should not be fragmented, and that it should be concentrated to minimize the perimeter to area ratio.

It is worth noting, based on this scientific evidence, that the Commission concluded, in its November 2000 decision on the Bolsa Chica LCP, that residential development must be concentrated on the upper bench of the Bolsa Chica Mesa in order to preserve the lower bench as conservation open space.

Commission staff strongly recommends that the FSEIR incorporate the Commission's decision on the Bolsa Chica LCP in its alternatives analysis. We note that it is an alternative that could be found consistent with the Coastal Act specifically, this new alternative requires concentration of residential development on the upper bench, with the lower bench preserved as open space within one comprehensive development plan. Moreover, this alternative must include provisions that no development can occur on the Mesa in the absence of a conservation plan for the entire Mesa. The Commission's environmental review process has been certified by the Secretary of Resources as functionally equivalent to the EIR process. Consequently, based on Section 21080.5(d)(2)(A) of the California Public Resources Code, the Commission cannot approve or adopt a proposed activity if there are feasible alternatives or feasible mitigation measures which would substantially lessen any significant adverse effect the activity may have on the environment. Based on the policies of the Coastal Act, concentrating residential development on the upper bench in order to preserve the lower bench as conservation constitutes a feasible alternative to the currently proposed project, containing mitigation that would substantially lessen any significant adverse effects on the environment.

Habitat Buffers

The proposed project provides fragmented habitat, habitat that generally maximizes the perimeter to area ratio due to its elongated configuration, minimal buffers and buffers of questionable value due to the placement of recreational uses in the buffer areas. The importance of adequate buffers has been repeatedly reiterated and cannot be reiterated too often.

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As stated by Peter Bloom in his October 20, 2000 letter to Susan Hansch, Coastal Commission Chief Deputy Director:

The rigors of migration are hard on birds and in the case of predatory birds, being disturbed prematurely several times before capturing prey after hunting for several hours, can in the long term be terminal if it happens frequently enough ...If a hiking trail were placed within 50", paralleling the eucalyptus ESHA, I would predict that even the Red-shouldered Hawk, normally a very tolerant raptor would also stop nesting...

And Brian Walton in his October 20, 2000 letter to Susan Hansch, Coastal Commission Chief Deputy Director:

If raptor use is desired, then the original plan with passive recreation is unacceptable. The modified plan with no trails but with enhancement would still be subject to much fight/flight distance pressure and only the final modified plan [preservation of the lower bench] seems to offer hope of continued use of the area for breeding.

The applicant proposes to establish a supposed "Upland Habitat Park" adjacent to the eucalyptus and wetland ESHAs located along the bluffs on the upper bench. As discussed below, vegetation in the habitat park will be modified from its natural condition both as to species included and density of growth. Permitted activities within the "Upland Habitat Park" include hiking, bicycle riding, parking, and access for emergency and maintenance vehicles. At one location, the proposed multi-use trail/access road is mapped immediately adjacent to the eucalyptus ESHA, with no buffer at all.

The paltry nature of the proposed buffers is illustrated by the proposed fuel modification plans which designate areas near homes where fuel modification would be pursued to protect the proposed homes from brush fires. The fuel modification areas, as mapped in the applicant's CDP submittals, extend well into the proposed buffers, and even into the habitat itself.

Even worse, the buffer for the wetland near Los Patos Avenue is quite small and includes a boardwalk and gazebo barely fifteen feet from the wetlands. Picnicking areas are delineated approximately thirty feet from the wetland, a tot lot and wading pool are mapped within ninety feet, and a recreation building is to be provided at about one hundred feet from the resource. Not only does this fail to buffer the habitat consistent with the provision of Coastal Act Section 30240(b), but the provision of such minimal buffers also conflicts with Section 30231 which calls for natural buffers to reduce impacts on water quality and wetlands.

This is unacceptable and illegal. Buffers for all ESHAs must be a minimum of one hundred meters as previously recommended by the California Department of Fish and Game (Environmentally Sensitive Habitat Areas at Bolsa Chica, June 3, 1982) and the U.S. Fish and Wildlife Service (U.S. Fish and Wildlife Service Special Report; Bolsa Chica Area, May 1979). Further, no recreational uses or fuel modification at all should be permitted in the fifty meters

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closest to the resource, with any human activity within buffer areas to be avoided to the extent feasible.

Even a one hundred meter buffer may be considered ineffective by some standards. Professor Scott Findlay of the University of Ottawa has recommended that buffers of at least 150 meters be provided at Bolsa Chica, with the statement that a buffer of one hundred meters is not likely to be adequate. Findlay has also stated that research indicates that wetlands may be affected by development as far distant as a kilometer. This occurs due to water quality impacts and invasion by non-native species.

As noted in the attached report by Noss, Case, and Fisher, buffer zones of 275 meters, 100 to 500 meters and 164 meters have been recommended by various studies. The report stated:

Given the increasing evidence that very wide upland buffers are often required to maintain the ecological integrity of wetlands and other aquatic ecosystems, we believe that the narrow (on the order of 100 m) buffer zones proposed by some people for Bolsa Chica are unlikely to be sufficient. Therefore, we recommend that the presently undeveloped mesa upslope from the wetlands be protected *in its entirety* [emphasis added] and restored to natural vegetation.

Although in its November 2000 action the Coastal Commission assented to lesser buffers in some locations, this was in recognition of the preservation of consolidated habitat on the lower bench. The proposed project contains no such guarantees and should not be permitted to piggy-back the reduced buffering onto the new project if it includes only a portion of the mesa.

Raptor Forage Areas

A primary concern has been the provision of adequate upland forage for raptor species, in order to minimize predation on sensitive wetland species. All three raptor biologists retained by the Coastal Commission in 2000, Brian Walton of the UC Santa Cruz Predatory Bird Research Group, Ron Jurek of the California Department of Fish and Game and Peter Bloom of the Western Foundation for Vertebrate Biology (reports attached), concluded on an independent basis that retention of a large, consolidated habitat at Bolsa Chica Mesa would best address problems with raptor predation and maintenance of high interest species. This led to the decision to move all development to the upper bench.

Even if the eucalyptus ESHA were removed from the Brightwater property, this would still be an issue, because, as noted by Ron Jurek in his October 20, 2000 letter to the Commission, certain raptors such as kestrels have been noted to prey on chicks over a mile from the kestrel nesting site. Thus, elimination of the eucalyptus ESHA would not only leave the problem of predation in the wetlands unsolved it would eliminate habitat for sensitive species as well. Predation by crows and ravens has also been noted to be a problem.

In recognition of this impact, SEIR 551 recommended, and the Orange County Board of Supervisors adopted, the following measure:

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Prior to issuance of grading permits, the applicant shall establish a trust fund in an amount to be determined in consultation with CDFG, to assist in the ongoing management of raptor predation upon nesting sensitive target species of other sensitive species after the implementation of residential development on the Bolsa Chica Mesa. This fund will be available to CDFG and USFWS if it can be demonstrated by DEFG and USFWS, to the satisfaction of the County Environmental and Project Planning Division, that the residential development results in an increase in raptor predation. If no such effect is demonstrated within five years of completion of project construction, the trust fund shall revert to the Applicant.

It should be noted that Department of Fish and Game personnel requested that the fund be maintained for seven years, longer than the five years specified in the SEIR.

Now, two years later, the applicant has submitted a study prepared by LSA Associates which indicates that the primary avian predators on wetland species at Bolsa Chica are kestrels, crows, and ravens. The study concludes that although development of the mesa could have some effect on certain predators, with continued trapping by the California Department of Fish and Game the problem can be controlled.

This information is used to justify non-implementation of the above condition. The applicant claims, in its Response to Requests from Commission Staff to Hearthside Homes in a Letter dated December 5, 2002, that:

Mitigation Measure 9.1 was originally included in EIR 551 for the Bolsa Chica LCP. Certified in 1996, EIR 551 ... concluded that "the loss of raptor foraging habitat in the uplands may cause some raptors to prey on nesting birds in the wetlands." In order to maintain consistency between the two environmental documents, Mitigation Measure 9.1 was included in SEIR 551 for the 388-units Brightwater project. Since the certification of SEIR 551, additional research has been conducted...As a result of this additional research, Hearthside Homes believes that Condition # 35 [Mitigation Measure 9.1] is no longer necessary.

It should be noted that SEIR 551 was prepared at the direction of the applicant, was submitted on behalf of the applicant and subject to additional review by the applicant during the public review period. Now, long after SEIR 551 was certified, new information is presented to release the applicant from responsibility for implementing an adopted condition. The applicant suggests that no mitigation will be necessary on the applicant's part as long as the California Department of Fish and Game continues to trap at the public's expense.

The applicant claims that the mitigation measure was a "carryover" from the original EIR 551. They claim they were more concerned with maintaining consistency with an old, out-dated EIR than with accurately presenting and analyzing the environmental impact of their proposed Brightwater project—in the EIR they themselves commissioned. Has the applicant then knowingly presented information they believe to be inaccurate in other portions of SEIR 551 as well? In other documents as well?

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In any case, other impacts and mitigation measures contained in EIR 551 were not carried over. These deal with factors as diverse as provision of utilities to oil spill cleanup. This "carryover" would certainly not be ascribed to an artifact of word processing inasmuch as the two documents were prepared by different consultants. Even stranger, a review of the old Revised EIR 551 for the Bolsa Chica LCP reveals that, while the potential for raptor foraging in the wetlands was acknowledged, mitigation was to be as follows:

If raptors begin to prey upon nesting sensitive target species or other sensitive species, the Applicant shall consult with CDFG and USFWS and prepare a relocation program for these raptors.

Bolsa Chica Land Trust urges that, if the Commission were to vote to approve the Brightwater project, that adequate open space be maintained to provide for raptor foraging in order to minimize predation of in the wetlands, optimally through preservation of the lower bench, and that Mitigation Measure 9.1 above be adopted with the trust fund to be maintained for seven years as requested by Fish and Game.

Upland Values

The proposed project appears to dismiss the value of upland habitat. However, as noted in the November 2, 2000 Costal Commission staff report:

The Bolsa Chica Mesa is considered ecologically valuable. According to both the California Department of Fish & Game and the US Wildlife Service, the Bolsa Chica Mesa and the lowland wetlands are biologically interdependent. These biological interdependencies are vital to maintaining biological productivity and diversity. Residential development on the Mesa will impair biological productivity of the Mesa itself and the adjacent lowland wetlands.

And:

The maintenance of ecological links between uplands and wetlands is thought to be of extreme conservation importance...studies...have demonstrated that uplands and wetlands should be considered integrated parts of a larger ecosystem...The importance of upland pollinators for plants like saltmarsh bird's beak and saltmarsh goldfields has also become widely recognized. As more is learned about the biology of native solitary bees, more examples will no doubt be discovered. The presence of the wetland-upland complex is also critical for many species of insects...without the appropriate mix of habitats adjacent to one another, such species will disappear from coastal ecosystems. Therefore, significant blocks of upland habitat should be maintained adjacent to coastal wetlands...

Thus, apart from any intrinsic value in the uplands themselves, which value does indeed exist, preservation of uplands is necessary to fulfill the purposes of Section 30240 of the Coastal Act

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which requires that habitat values be preserved and that development in areas adjacent to environmentally sensitive habitat areas be sited and designed to prevent impacts which would significantly degrade those areas and be compatible with the continuance of those habitat and recreation areas.

Coastal Sage Scrub

The uplands themselves provide useful habitat on their own. The upper bench contains 1.36 acres of coastal sage scrub habitat, which is widely recognized to be the fastest disappearing habitat in southern California, due to ongoing development pressures. In fact the U.S. Fish and Wildlife Service has characterized the Coastal Sage Scrub community as "the most threatened upland vegetation type in southern California".

Although definitions of the various plant communities vary, it is generally agreed that dominant shrub species in coastal sage scrub are California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), coastal prickly-pear (*Opuntia littoralis*), toyon (*Heteromeles arbutifolia*), laurel sumac (*Malosma laurina*), lemonadeberry (*Rhus integrifolia*), sugarbush (*R. ovata*), and fuchsia-flowered gooseberry (*Ribes speciosum*). (Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California; Munz, P.A. 1974. A flora of southern California). Coastal sage scrub supports a diverse fauna, including many species that are in decline. Among these are the California gnatcatcher (*Polioptila californica*) and coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*). On the Brightwater site, the coastal sage scrub community is dominated by salt bush (*Atriplex* spp.), prickly pear and Encelia.

While most of the coastal sage scrub on-site is said to be "preserved", a review of grading plans reveals that coastal sage scrub on-site is located in an area slated for grading. Thus, it will be removed and replanted. If the project were to move forward, any removal and replanting should be conducted at typical re-planting ratios required for this habitat.

The applicant proposes to establish an open space area known as an "Upland Habitat Park" which will include 1.50 acres of coastal sage scrub and 12.36 acres of coastal bluff scrub. Coastal bluff scrub habitat is similar to the coastal sage scrub but subject to slightly more marine influence. The "Upland Habitat Park" will also include ESHA buffer areas, a multi-use trail and water treatment ponds.

A significant portion of the "Upland Habitat Park" is in the fuel modification zone, and thus certain species will be prohibited under the terms of Fuel Modification Plan submitted by the applicant as Attachment 34 to the CDP application. Although an unlabelled attachment to the CDP titled "Answers to CDFG Questions" indicates that with proper management and use of fire resistant construction techniques more flexibility may be appropriate, the Fuel Modification Plan included with the CDP application lists prohibited species to include California sagebrush, buckwheat, and black sage. These same species are prohibited under the proposed Covenants, Conditions and Restrictions for the Brightwater project. Although an *Opuntia* species is proposed for use, the species proposed is not the prickly pear already on the site, but Coast

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Cholla. Further, the areas will be subject to periodic thinning of vegetation and occasional irrigation.

The impact of this change in species composition and growth habit on habitat values is not known. This is of particular interest as it affects prey species. Unfortunately, the fuel modification plan was not studied or included in the public review for SEIR 551, despite requests from the Bolsa Chica Land Trust and others that it be provided. Thus, the "Upland Habitat Park" may be of value or it may not. It is suggested that, where sage scrub communities lie within buffer areas, the vegetation be allowed to remain undisturbed and that sage scrub species already existing in the area be allowed to remain. If adequate buffers and open space were provided, the overlap of fuel modification into buffer areas would not be a problem.

Grasslands

The bulk of the Brightwater site is in annual grassland or ruderal. Even this habitat is of value, a primary factor being forage areas for raptors. As stated by Senior Deputy Damm at the November 16, 2000 Commission hearing:

The California Department of Fish and Game emphasized the importance of non-native grasslands to raptor habitat in their recent comments on the Hellman properties in Seal Beach. In that letter, they recommended a mitigation ratio of .5 to 1 for non-native grasslands that were going to be lost in that project.

The bulk of this habitat on the project site will be lost to residential development. Mitigation should be provided consistent with that required at Hellman Ranch.

Normally, even suburban residential areas would be expected to support populations of rodents and other small prey. However, the AMEC Earth & Environmental, Inc. report attached as Attachment 10.2 to the CDP Application includes the following as a critical, ongoing element in addressing soil issues on the site:

Any burrowing rodents on the lots should be exterminated and their burrows should be filled and sealed at the ground surface with clayey soil...

Not only would this reduce available prey species, depending on how rodents were exterminated, additional impacts could result. Chemical poisons could move up the food chain to predator species. The proposed Covenants, Conditions and Restrictions for the Brightwater project prohibit large-scale use of pesticides by unlicensed applicators, but they are not prohibited altogether. Control measures for burrowing rodents should be reconsidered as a strategy, and use of poisons must be prohibited, especially in light of the proximity of the development to ecologically sensitive areas.

Introduced Flora

The applicant has submitted a list of invasive species that will be prohibited from the Brightwater project. However, the Covenants, Conditions and Restrictions for the Brightwater

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project require landscape limitations only in front yards and common areas. Many of the invasive species listed broadcast their seeds over fences quite easily. Thus, the project C,C&Rs, absent a prohibition invasive exotics in all parts of the Brightwater development, do not provide adequate means to prevent planting of invasive species within the proposed residential development, and the project does not provide protection for invasions of such species in nearby ESHAs, whether on or off the subject property. The program also lacks an effective means of enforcement.

Predation by Pets

The Brightwater C,C&Rs require that dogs be leashed and that cats be kept inside. A detailed trapping program for feral cats is included. However, the C,C&Rs then go on to recommend that cat owners provide their pets with collars and tags to avoid being included with the trapped feral cats. This presents an inherent contradiction, since if the cats were inside as required, they wouldn't get trapped. This also points up the difficulty of enforcement. Reasonable enforcement responsibilities must be identified.

Lighting

Night lighting can disrupt sensitive species. Although project documents indicate that lighting will be controlled and will be directed away from sensitive areas, the Brightwater C,C&Rs contain no limitation on lighting by the individual homeowners. Such limitations should always be required for any development in such a sensitive area.

Additional Study

To verify the presence or absence of this sensitive invertebrate species, the project site must be re-surveyed for two rainy seasons or one wet and one dry season to investigate this possibility as well as to further delineate on site wetlands. U.S. Fish and Wildlife Service protocol assumes the presence of endangered and threatened vernal pool species where appropriate vernal pool, or "seasonal pond" habitat is found. Further, ponding has been observed in areas not designated as wetlands in project mapping. The two surveys must verify the presence or absence of wetlands in additional areas.

Water Quality

Section 30231 of the Coastal Act states that:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

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A small portion of site runoff will be directed to Huntington Harbor. Huntington Harbor has been designated an impaired water body and as such is not to receive any additional pollutants at all. The applicant proposes that catch basin inserts be used to treat drainage to Huntington Harbor.

According to information contained in the Water Quality Management Plan (attachment 11.3 to the CDP submittal), such inserts would remove 69 to 90 percent of oil and grease, leaving 10 to 31 percent behind. The inserts trap a lesser proportion of suspended solids and heavy metals. Thus, even though some pollutants would be removed, others would make their way into the already impaired waters of Huntington Harbor. This is unacceptable.

The applicant proposes to direct the bulk of urban runoff from the project to a series of detention basins/constructed freshwater wetlands and then into the Bolsa Chica lowlands. The detention basins would be designed to capture low flows and first flush runoff. In larger storms, water would be diverted away from the treatment wetlands to the existing pocket wetland and a detention basin. The water would eventually be discharged into the isolated lowland area planned for restoration with as yet unknown affects.

Information contained in the Water Quality Management Plan indicates that this type of wetland detention and treatment system could be expected to remove 87 percent of petroleum residues, but only 67 percent of suspended solids, 49 percent of phosphorus and a mere 28 percent of nitrogen. Thus, a considerable proportion of pollutants will still remain.

Unfortunately, the Water Quality Management Plan does not provide information on total loading. Thus, one doesn't know whether almost clean water would be rendered nearly pristine or whether absolutely filthy water would be cleaned to the point where it's just fairly polluted.

Although the Brightwater C,C&Rs ban large-scale use of pesticides, fertilizers and other chemicals by unlicensed individuals, nothing prevents such use on a small scale by many individuals working in their own yards. Thus, it is probable that at least some pesticides and fertilizers will enter the drainage system along with at least some animal waste and other pollutants.

As discussed above, even under a best case scenario, the water will not be fully cleaned. This is of greatest concerns for the water which would be most polluted, typically low flows and first storm flush of the season. Directing low flows to the Orange County Sanitation District treatment plant would be consistent with the action of the Coastal Commission in November 2000. This would also cause drainage to more closely approximate natural conditions under which little or no moisture would enter the wetlands involved during the dry months. At no time should any project drainage be permitted to enter Warner Pond.

The applicant has indicated that the drainage improvements discussed above will be maintained by the homeowners' association and the City of Huntington Beach. Inasmuch as the project is located in an unincorporated Orange County, it appears that this may be an error.

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In any case, some oversight of onsite drainage and water quality treatment facilities will be required to ensure compliance by the homeowners' association. It is suggested that the homeowners' water quality monitoring and maintenance of the wetlands and catch basin inserts be supervised by Orange County, with annual reports to be provided to the Coastal Commission for review if the Commission approves the proposed development.

Section 30231 does not limit issues involving water discharge to direct surface flows. Drainage reaching the pocket area adjacent to the Mesa eventually reaches Outer Bolsa Bay generally through subsurface or muted tidal action. Under certain restoration options, tidal flows would be extended to the pocket area, increasing direct effects of runoff on Outer Bolsa Bay. Thus, some very sensitive resources under the jurisdiction of the Coastal Commission could be involved. If the proposed development is approved, the Coastal Commission must reserve the right to review maintenance of water quality draining from the site and impose additional pollution control measures at any time.

In addition, the applicant should participate in funding for additional water quality studies as well as ongoing sampling efforts for affected resources, including studies of total maximum daily loads (TMDLs) for the Bolsa Chica Bay prior to any development at Bolsa Chica. These TMDLs are long overdue and are an essential component of determining the scope and impact of proposed development on the surrounding and adjacent protected coastal resources. These numeric criteria will certainly be impacted by any new development on the Mesa; and vice versa, the Project itself may be constrained by statutory requirements that do not permit increased loading into an already water quality limited Area. The U.S. Environmental Protection Agency (USEPA) has established regulations (40 CFR 122) requiring that National Pollutant Discharge Elimination System (NPDES) permits be revised to be consistent with any approved TMDL. Federal regulations, effective October 2001, require that implementation plans be developed along with the TMDLs.

The applicant has indicated that the project will be covered under the general permit to discharge storm water associated with construction activity, and has submitted a copy of a receipt of a notice of intent from the State Water Resources Control Board dated December 8, 1998, over five years ago. This was well before the project was designed and well before even the November 2000 hearing on the now-defunct Local Coastal Program. The notice of intent should be resubmitted if construction ever proceeds on the Bolsa Chica Mesa.

As stated in the attached January 21, 2000 letter from Gerald Thibeault, Executive Officer of the California Regional Water Quality Control Board, Santa Ana Region:

The Regional Board at all times retains the right to issue waste discharge requirements where it is necessary to do so to protect water quality and beneficial uses. Board staff will consider the propriety of issuing individual requirements to Hearthside Homes when the project is finally defined and approved.

Thus, the December 8, 1998 document should not be considered to be a carte blanche for any development that may ensue on the Bolsa Chica Mesa.

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The applicant has submitted an erosion control plan for the project. However, as submitted, the plan is inadequate. The plan consists solely of a map indicating where sandbags will be placed on the site once mass grading has been completed and building pads and street beds have been established. There is no information as to how erosion will be controlled during grading. This is inadequate, and project processing should not be permitted to move forward until such time as additional erosion control measures have been developed. It is especially critical that all erosions be controlled due to the sensitive resources in the surrounding area and the former use of the site for hunting and military purposes, leading to the potential deposit of lead from ammunition on the site.

The Water Quality Management Plan includes a potpourri of attachments including articles and flyers regarding water quality issues. It is not clear what, if any, measures mentioned in these attachments will actually be taken. This must be clarified.

As currently proposed, the Brightwater project fails to fulfill the purposes of the Coastal Act regarding water quality.

Cultural Resources

Section 30244 of the Coastal Act provides that:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

The Bolsa Chica Mesa includes a number of highly significant archaeological sites, including ORA-83 and ORA-85. ORA-83 is almost certainly the last major coastal habitation site remaining between Los Angeles and San Diego. The site has been nominated to the Register of Historic Places, and qualifies based on the value of the site, but cannot be listed due to the owner's refusal to agree to listing.

In the light of statements from recognized experts urging "complete avoidance", declaring that we must "do everything in our power to preserve", and mourning the potential loss of ORA-83 as a "tragedy" (attached), site avoidance must be viewed as the only reasonable mitigation measure for ORA-83.

Although some materials from ORA-83 will be recovered under test programs, the remainder of the site must be preserved in perpetuity for future generations. Following data recovery, the site must be capped to reduce the potential for looting of potentially significant resources.

Even if only data recovery were necessary as mitigation, the currently proposed research design is not adequate. As noted in the attached comments by Patricia Martz:

Part 2: Research Implementation is very general and superficial and lacks sufficient detail regarding the research questions and data requirements to address the themes and models discussed in Part 1. The majority of the questions that are

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presented are about data requirements and not formulated to advance knowledge regarding past human behavior.

Thus, further refinement of the proposed archaeological research design is necessary.

Visual Resources

Section 30251 of the Coastal Act provides that:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

The proposed project will entail alteration of existing landforms and construction of hundreds of homes on a previously vacant site. As noted SEIR 551:

Residential development will permanently alter the undeveloped appearance of the Bolsa Chica Mesa within the public viewsheds as seen from Pacific Coast Highway near Warner Avenue and Pacific Coast Highway at the State Ecological Reserve Overlook, adjacent to Inner Bolsa Bay and along Los Patos Avenue at Bolsa Chica Street.

This finding was also adopted by the Orange County Board of Supervisors as part of their Statement of Facts and Findings when they approved the Brightwater project.

However, the applicant has chosen to deny this finding of fact, instead averring that the statement in SEIR 551 was another "holdover" from the previous EIR 551. As noted above, SEIR 551 was prepared at the direction of the applicant, was submitted on behalf of the applicant and was subject to additional review by the applicant during the public review period. Further, the County's Findings of Fact were adopted as a separate document, which the applicant also had the opportunity to review.

In fact, this impact has increased somewhat from the time SEIR was certified. Under current plans, grading will be balanced, with no export of soil off-site. This will result in one to six foot increases in building pad elevations, increasing the visual intrusion of homes on the raised pads.

If it is the desire of the Commission to approve the proposed project, additional open space should be required for visual buffering. This is important not only along the edge of the project adjacent to the lowlands, but along the bluff separating the lower bench and the upper bench.

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The bluff must be fully delineated and preserved consistent with the provision of Section 30253 of the Coastal Act which states, in part:

New Development shall assure stability and structural integrity and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

In addition, restrictions on night lighting must be adopted as a condition of approval and incorporated into the Brightwater C,C & Rs. Reflective materials should be prohibited. Both of these measures would also benefit wildlife.

Homes on the project site are projected to exceed thirty feet in height, equivalent to a three story structure. This can result in an imposing appearance for structures that rise straight up, but can and should be softened by a lower limitation on the heights of structures along the perimeter of the site.

Housing

Section 65590(d) of the Government Code imposes on local agencies, in this case the County of Orange, the duty to ensure that:

“new housing developments constructed within the coastal zone shall, where feasible, provide housing units for persons and families of low or moderate income...Where it is not feasible to provide these housing units in a proposed new housing development, the local government shall require the developer to provide such housing, if feasible to do so, at another location within the same city or county, either within the coastal zone or within three miles thereof”.

The local agency is also required to offer incentives for the provision of low and moderate income housing.

Section 65590 acts in concert with, but independent of, the previous sections (65580 through 65589.8) of the Government Code governing local housing elements, which by State mandate must address housing issues in all areas subject to County jurisdiction, including the Coastal Zone. Thus, the affordable housing provisions of Section 65590 must be implemented whether or not they are included within the local agency's adopted housing element or other locally adopted program.

As described by staff of the California Department of Housing and Community Development (HCD), local agencies are charged with implementation of Section 65590, for the legitimate government purposes established by the California State Legislature in Section 65580, specifically:

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“(a) The availability of housing is of vital statewide importance, and the early attainment of decent and a suitable living environment for every California family is a priority of the highest order...

(d) Local and state governments have a responsibility to use the powers vested in them to facilitate the improvement and development of housing to make adequate provision for the housing needs of all economic segments of the community.”

Under Section 65590, low or moderate income housing must be provided in new residential development in the Coastal Zone where feasible. As defined under Section 65590(g)(3):

“‘Feasible’ means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technical factors.”

Staff of the California Department of Housing and Community Development (HCD) has indicated that they believe an assumption of feasibility must be made barring evidence to the contrary. This position has been upheld by the courts.

Thus, County government is responsible for ensuring that affordable housing is included in new developments such as the proposed Brightwater. Inasmuch as a ten percent exclusionary requirement is imposed by the City of Huntington Beach immediately adjacent to the project site, which is in the City’s adopted sphere of influence, it is reasonable to conclude that it would be feasible to provide ten percent of *all* units in the project, i.e. thirty eight units, as affordable units. These units must be provided as part of the proposed project. The applicant and the County have yet to take steps to implement this requirement or address the feasibility of doing so.

Proposition 50

Proposition 50, passed in November 2002 added Section 79572 to the Water Code appropriating \$750,000,000 to the Wildlife Conservation Board. Money appropriated is to be used for the acquisition, protection, and restoration of lands in or adjacent to urban areas. Eligible projects are limited to:

- Acquisition, protection, and restoration of coastal wetlands identified in the Southern California Coastal Wetlands Inventory as of January 1, 2001, published by the State Coastal Conservancy, located within the coastal zone, and other wetlands connected and proximate to such coastal wetlands, and upland areas adjacent and proximate to such coastal wetlands, or coastal wetlands identified for acquisition, protection, and restoration in the San Francisco Baylands Ecosystem Habitat Goals Report, and upland areas adjacent to the identified wet lands.
- Acquisition, protection, and restoration of coastal watershed and adjacent lands located in Los Angeles, Ventura, and Santa Barbara Counties.
- Not less than three hundred million dollars (\$300,000,000) for projects within Los Angeles and Ventura Counties.

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CALIFORNIA STATE LANDS COMMISSION

Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202



April 14, 2003

PAUL D. THAYER, Executive Officer

(916) 574-1800 FAX (916) 574-1810

California Relay Service From TDD Phone 1-800-735-2922
from Voice Phone 1-800-735-2929

Contact Phone: (916) 574-1850

Contact FAX: (916) 574-1855

ATTACHMENT 18

Brightwater CDP

Ms. Lucy Dunn
Executive Vice President
Hearthside Homes
6 Executive Circle, Suite 250
Irvine, California 92614

Re: Brightwater Development Project

Dear Ms. Dunn:

This letter is in response to Condition of Approval #27 contained in The Orange County Board of Supervisors' Resolution No. 02-221 for Hearthsides Homes' Brightwater development project located on the Bolsa Chica Mesa. The project was approved by the Orange County Board of Supervisors together with its Subsequent Environmental Impact Report 551(SCH # 1990371064), on July 23, 2002.

The State of California, acting by and through the California State Lands Commission, obtained title to the Bolsa Chica lowland property, including the "pocket" area, on February 14, 1997 from Hearthsides Homes' affiliate company, Signal Bolsa. In paragraph 2.4 of the deed to the state the seller retained, over the "pocket" area, "A non-exclusive easement for the construction, operation, and maintenance of drainage facilities to handle drainage and flood waters." The deed was recorded on February 14, 1997 in the County of Orange, California, as document No. 19970069448. We have reviewed the plans for the Brightwater project drainage facility, as prepared by Hearthsides Homes, and believe the plans meet the easement requirements.

Sincerely,

A handwritten signature in black ink, appearing to read "Frederick O. Ludlow II". The signature is fluid and cursive, with a large, sweeping flourish at the end.

Frederick O. Ludlow II
Assistant Chief Counsel

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CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
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26 May 2004

GEOTECHNICAL REVIEW MEMORANDUM

To: Teresa Henry, South Coast District Manager
From: Mark Johnsson, Staff Geologist
Re: CDP 5-04-192 (Brightwater)

With regard to the above-referenced CDP application, I have reviewed the following documents:

- 1) Forma 2004, "Slope analyses graphics, Attachment 49--Maps A, B, and C, CDP Application 5-02-375 (Brightwater)", 3 p. letter to Mark Johnsson dated 8 January 2004 and signed by P. Edwards.
- 2) AMEC Earth and Environmental, Inc. 2003, "Response to review comments, stability of southerly perimeter slopes, Section 30253(2) of the Coastal Act, proposed vesting tentative tract no. 15460, Brightwater Development Project, Orange County, California", 5 p. letter to Mr. Ed. Mountford dated 15 July 2003 and signed by S. T. Kerwin (CEG 1267).
- 3) AMEC Earth and Environmental, Inc. 2003, "Stability of southerly perimeter slopes, Section 30253(2) of the Coastal Act, proposed vesting tentative tract no. 15460, Brightwater Development Project, Orange County, California", 3 p. letter to Mr. Ed. Mountford dated 27 February 2003 and signed by D. Dahncke (GE 2279) and S. T. Kerwin (CEG 1267).
- 4) AMEC Earth and Environmental, Inc. 2002, "Geotechnical review update, proposed vesting tentative tract no. 15460, Brightwater Development Project, Orange County, California", 2 p. letter to Mr. Ed. Mountford dated 31 October 2002 and signed by D. Dahncke (GE 2279) and S. T. Kerwin (CEG 1267).
- 5) AMEC Earth and Environmental, Inc. 2001, "Preliminary geotechnical review, possible alternative grading concept, vesting tentative tract no. 15460, Brightwater Development Project, Orange County, California", 2 p. letter to Mr. Ed. Mountford dated 8 November 2001 and signed by D. Dahncke (GE 2279) and S. T. Kerwin (CEG 1267).
- 6) AMEC Earth and Environmental, Inc. 2001, "Addendum geotechnical review, revised tract map, vesting tentative tract no. 15460, Brightwater Development Project, Upper Bolsa Chica Mesa, Orange County, California", 29 p. geotechnical report dated 26 September 2001 and signed by D. Dahncke (GE 2279) and S. T. Kerwin (CEG 1267).
- 7) AMEC Earth and Environmental, Inc. 1997, "Geotechnical evaluation report, Phase I rough grading plans, Vesting tentative tract 15460, Bolsa Chica Mesa, South of Warner/Los Patos Avenues, Orange County, California", 60 p. geotechnical report submitted to the Koll Real Estate Group dated 1 December 1997 and signed by D. Dahncke (GE 2279) and S. T. Kerwin (CEG 1267).
- 8) Woodward-Clyde Consultants, 1987, "Evaluation of hazards due to fault surface rupture at Bolsa Chica Mesa and in the Bolsa Chica lowland, Orange County, California", p. report for Signal Landmark, Inc. and Orange County Environmental Management Agency dated October 1987 and signed by Woodward-Clyde Consultants.

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- 9) Woodward-Clyde Consultants, 1984, "Report addendum: Response to questions and review comments raised by CDMG re: surface faulting, seismicity and earthquake ground motions, Bolsa Chica planning unit, Orange County, California", 21 p. report for Signal Landmark, Inc. and Orange County Environmental Management Agency dated 26 October 1984 and signed by Woodward-Clyde Consultants.
- 10) Woodward-Clyde Consultants, 1984, "Preliminary evaluation of surface faulting, Bolsa Chica Local Coastal Program, Bolsa Chica Planning Unit, Orange County, California", 43 p. report for Signal Landmark, Inc. and Orange County Environmental Management Agency dated January 1984 and signed by Woodward-Clyde Consultants.

I also have reviewed the original CDP application, dated November 2002, and three "supplemental submittals" dated May 2003, July 2003, and September 2003. These documents contain reports and graphics that bear on some of the geotechnical issues regarding the project. I have had numerous discussions with the applicants, their consultants, and, especially with Mr. Scott Kerwin of AMEC, principal geotechnical consultant for the project. I also have visited the site on several occasions over the past three years.

In this memorandum I will address what I perceive to be the principal geotechnical issues related to the proposed development. These are: geomorphology and landscape evolution, seismic safety, and slope stability.

Geomorphology and Landscape Evolution

The subject parcel straddles the Upper and Lower Bolsa Chica Mesas, which represent an uplifted marine terrace. The two mesas are separated by a slope approximately 25 feet high with an average gradient of about 10-15%. At the toe of the slope, and running parallel to it, lies the surface trace of the Newport-Inglewood fault, suggesting that the slope is a "fault line scarp," and owes its existence to differential movement across the fault. This is one of the few places in Orange County where such a feature can be observed, as most fault line scarps associated with the Newport-Inglewood fault zone or other faults have largely been destroyed by grading and urbanization.

The southeastern edge of the project area is marked by a much steeper slope, averaging approximately 45% and locally nearly vertical. This slope ranges from 25 to 30 feet high, and cuts across both mesas. To the southeast of the toe of the slope lie the Bolsa Chica lowlands and the Wintersberg flood control channel. This slope represents a river bluff, formed by fluvial erosion from when the Santa Ana River occupied this part of the lowlands in the past.

Previous development at the site has resulted in the physical alteration of these natural landforms. In the early 1900's access roads were graded across the site. In the mid-twentieth century additional grading resulted from farming, oil field operations, construction and demolition of two large military bunkers, and the excavation of fill material from two large borrow pits. This grading has resulted in an altered appearance to both the fault line scarp and the river bluff, but both maintain their basic topographic integrity.

The applicant proposed to grade the bluff edge, adding fill to one large barrow pit, building out the bluff edge, thereby "restoring" the bluff configuration as it existed prior to major

modification. The relative merits of such a "restoration" are debatable, but in my opinion it is clear that the proposed grading represents significant alteration of a natural landform.

I have had extensive discussion with the applicants and their consultants on ways to delineate the limits of these landforms. The applicants contend that these landforms have been so altered that they do not constitute natural landforms. In my opinion this is incorrect; they clearly represent fundamental natural topography that simply has been altered by human activities. The applicants also contend that only the river bluff meets the definition of the term "bluff," although neither they nor the Coastal Act provide a definition for the term. I concur that the slope separating the Upper and Lower Mesas probably is gradual enough, except where modified by road grading, that most geomorphologists would not consider it a bluff. Nevertheless, Commission staff asked the applicant to provide a delineation of the top-of-slope, which could prove helpful in evaluating various aspects of the project. The applicants initially declined to do so, indicating that "any attempt to draw a precise line defining the top of bluff is fraught with complications and nuances that render such delineation meaningless for the purpose of determining compliance with Section 30253" (from "second supplemental submittal"). Eventually they acquiesced, and produced a map showing a line midway down the slope ("Attachment 46" in the "third supplemental submittal.") Apparently, this line was drawn along the top of steep roadcuts on the slope and interpolated between them. This certainly does not conform to the top of the natural, but altered, slope. I do agree, however, that the gradual rounding of the top of the slope makes choosing an appropriate top-of-slope very difficult. It is probably best to delineate the slope face on the basis of its measured gradient, which is markedly steeper than the very gentle gradient of the mesas above and below. The applicant made an analysis of slope across the property, little modified by human activities, from a 1939 stereo pair of aerial photographs. The slope can clearly be distinguished on this map on the basis of its steeper average gradient. To refine this map and to extend the analysis to existing and planned topography, the applicants prepared reference (1). Unfortunately, the gradient intervals are too coarse to delineate the slope on these maps. When asked to produce a map with finer gradient intervals, the applicant declined. Thus, we are left with a clear natural landform, but we have no definitive, objective means of defining its boundaries.

Attachment 46 also contains a line corresponding to the edge of the river bluff. This line was apparently drawn with reference to the bluff edge guidelines found in the Coastal Commission regulation Section 13577 (h)(2). Reference (1) contains similar lines drawn on the 1939 and on the proposed topography. Although there may be some small areas of disagreement between this line and where I would draw the top of slope, there only is one major discrepancy. This is in the area of the large borrow pit midway along the Upper Mesa. The maps in reference (1) place the top of bluff at the outer edge of the broad "step" cut in the bluff. Section 13577 (h)(2) states, however, that "in a case where there is a steplike feature at the top of the cliff edge, the landward edge of the topmost riser shall be taken to be the cliff edge." Accordingly, I draw the bluff edge considerably inward of the line in reference (1) and Attachment 46 in this area (see exhibit).

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Seismic Safety

The site is traversed by the Newport-Inglewood fault zone, generally recognized as the source of the M 6.25 Long Beach earthquake of 1933 that killed 120 people and resulted in passage of the Field Act. The fault has been designated an Earthquake Fault Zone by the State Geologist under the Alquist-Priolo Act, but the area has not been identified as an area susceptible to earthquake-induced landslides or liquefaction hazard on the Seismic Hazard Map prepared by the California Geological Survey under the Seismic Hazard Mapping Act.

References (8), (9), and (10) report on fault studies undertaken in compliance with the Alquist Priolo Map. These studies demonstrated that the North Branch Fault (of the Newport-Inglewood Fault Zone) does, indeed, show Holocene movement and thus should be considered an active fault. In addition, a detailed trenching and mapping program was undertaken to locate the surface trace of the fault. In accordance with the Alquist-Priolo Act, which requires that no structure for human habitation be built across an active fault, 50-foot setback zones from the mapped fault traces were identified. These setback zones are intended to assure that buildings for human habitation will not be damaged by surface rupture of the fault. Inasmuch as the fault seems to be well established at its present location (i.e., there is little evidence for faulting far from the fault zones identified in the trenches), I concur that such a setback is sufficient. Indeed, no lots even abut the mapped setback line. The fault does cross the area of the excavated detention basins ("created wetlands"), and these features could be damaged during an earthquake. Even if they contained water at the time of the earthquake, however, flood danger would be minimal since these features are excavated below grade and because no structures are built on the Lower Mesa, the area that is most likely to be inundated.

The proposed project includes the creation of a 14 acre residual parcel on the Lower Mesa. The fault zone runs through a portion of this parcel, and the setbacks required from the fault zone under the Alquist-Priolo act place constraints on the amount and nature of development that may be possible on the residual parcel. I recommend that the applicant be asked to identify and communicate to us the intended use of this residual parcel, and demonstrate that the parcel can be developed consistent with the applicable Chapter 3 policies of the Coastal Act.

Despite the fact that the project site does not lie in a seismic hazard zone as defined by the Seismic Hazard Mapping Act, slope stability analyses in references (6) and (7) contain pseudostatic analyses that demonstrate high (<1.1) factors-of-safety against sliding for all of the proposed slopes during earthquake loading events.

Reference (7) also contains a liquefaction analysis making use of cone penetrometer data. From these data, I concur with the applicants that there is little liquefaction risk in the dense sands of the terrace deposits that make up the Upper and Lower Mesa surfaces. Liquefaction during an earthquake is likely, however, in the alluvial lowlands below the two mesas. However, no development is being planned for this area.

Finally, ground shaking at the site is likely to be severe during a major earthquake on the Newport-Inglewood fault or one of the other faults that traverses southern California. Reference

(7) contains a probabilistic seismic hazard assessment and seismic design criteria consistent with the International Building Code that should be followed during design of all structures.

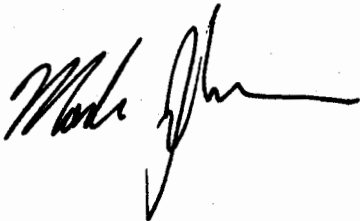
Slope Stability

Reference (7) contains the results of direct shear tests undertaken on relatively undisturbed samples collected at the site. These tests were used to derive soil strength parameters for use in quantitative slope stability analyses of all of the proposed slopes in the project. When the grading plan was changed in order to balance grading on site, analyses of the new slopes were performed and are reported in reference (6).

I concur with the applicants that these tests demonstrate that the proposed slopes are stable. Surficial instability could result from erosion of these slopes, and so the recommendations in reference (7) should be followed regarding drainage and vegetation of these slopes.

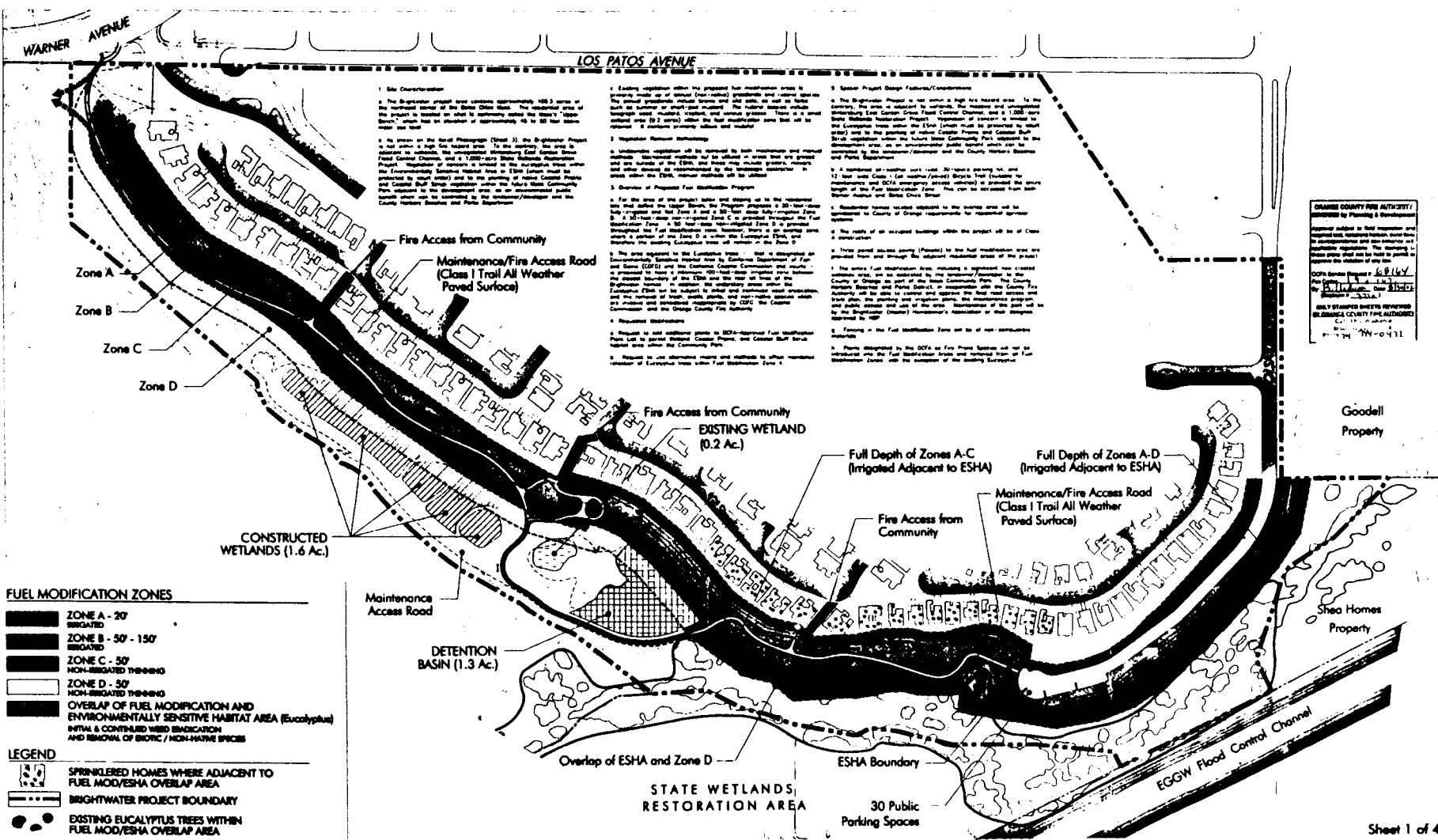
I hope that this review is helpful. Please do not hesitate to contact me if you have any questions.

Sincerely,



Mark Johnsson, Ph.D., CEG, CHG
Staff Geologist

COASTAL COMMISSION
5-04-192
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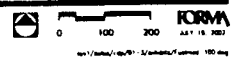
- FUEL MODIFICATION ZONES**
- ZONE A - 20' IRRIGATED
 - ZONE B - 50' - 150' IRRIGATED
 - ZONE C - 50' NON-IRRIGATED THRESHOLD
 - ZONE D - 50' NON-IRRIGATED THRESHOLD
 - OVERLAP OF FUEL MODIFICATION AND ENVIRONMENTALLY SENSITIVE HABITAT AREA (Eucalyptus) INITIAL & CONTINUED WEED ERADICATION AND REMOVAL OF BIOTIC / NON-NATIVE SPECIES
- LEGEND**
- SPRINKLERED HOMES WHERE ADJACENT TO FUEL MOD/ESHA OVERLAP AREA
 - BRIGHTWATER PROJECT BOUNDARY
 - EXISTING EUCALYPTUS TREES WITHIN FUEL MOD/ESHA OVERLAP AREA

- 1 Site Description
- 2 The Brightwater project (total estimated) 485.5 acres at the northeast corner of the Bolsa Chica State. The residential area of this project is located on a 100-acre parcel that will be subdivided into 20 lots.
- 3 The area of the project (Sheet 3) is the Brightwater Project. The project is located on a 100-acre parcel that will be subdivided into 20 lots. The project is located on a 100-acre parcel that will be subdivided into 20 lots.
- 4 The project is located on a 100-acre parcel that will be subdivided into 20 lots. The project is located on a 100-acre parcel that will be subdivided into 20 lots.
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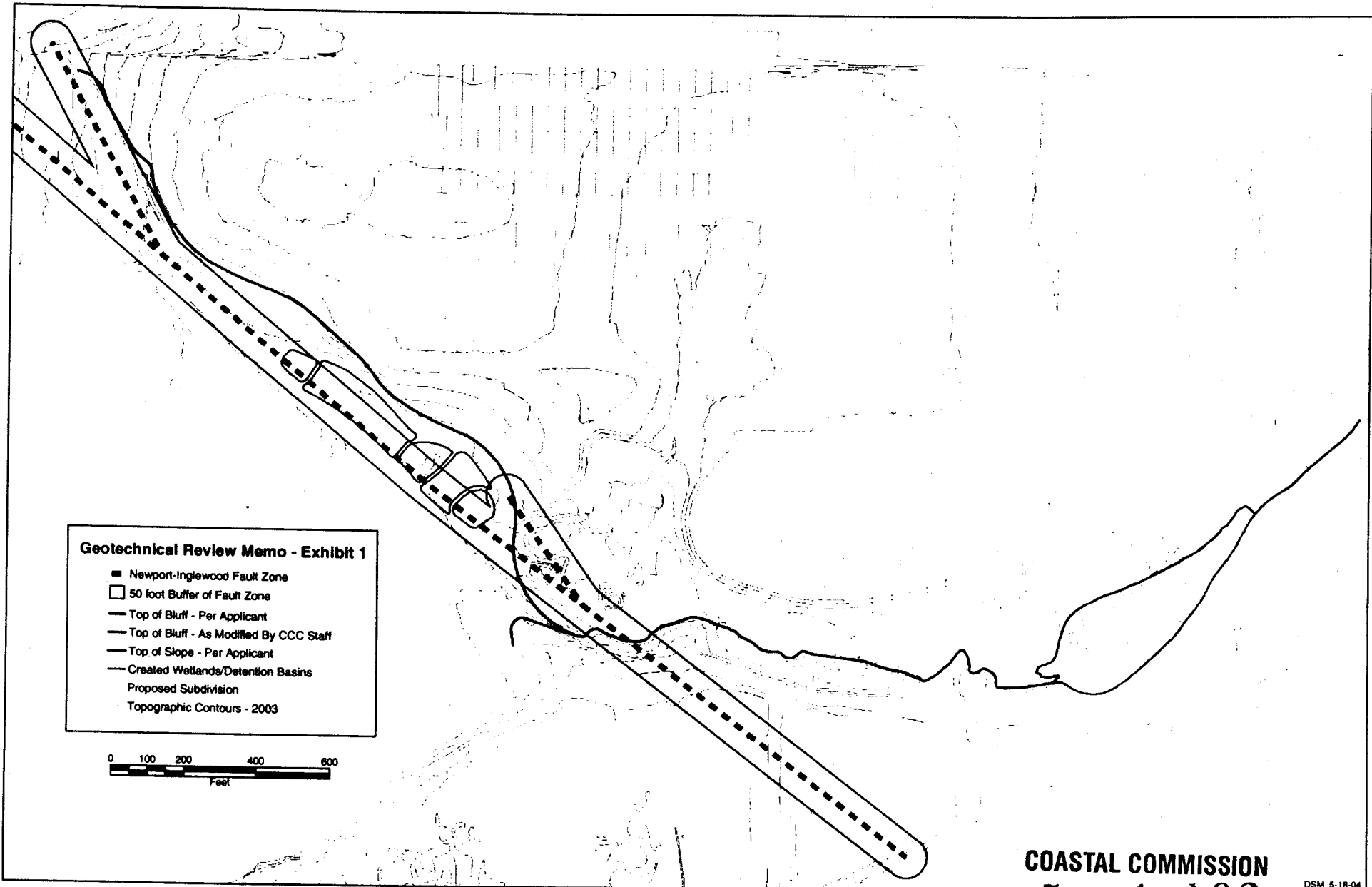
ORANGE COUNTY FIRE AUTHORITY
 AUTHORIZED BY PLANNING & DEVELOPMENT
 DEPARTMENT, BRIGHTWATER DEVELOPMENT
 PROJECT, BRIGHTWATER DEVELOPMENT
 SHEET 1 OF 4
 DATE: 11/15/2011
 ONLY STAMPED SHEETS RETURNED
 TO BRIGHTWATER DEVELOPMENT
 PROJECT, BRIGHTWATER DEVELOPMENT
 SHEET 1 OF 4
 DATE: 11/15/2011

BRIGHTWATER DEVELOPMENT
 Bolsa Chica Planned Community

Zones and Program Description
 Conceptual Fuel Modification Plan



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Geotechnical Review Memo - Exhibit 1

- Newport-Inglewood Fault Zone
- 50 foot Buffer of Fault Zone
- Top of Bluff - Per Applicant
- Top of Bluff - As Modified By CCC Staff
- Top of Slope - Per Applicant
- Created Wetlands/Retention Basins
- Proposed Subdivision
- Topographic Contours - 2003



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TARPLANT 1999

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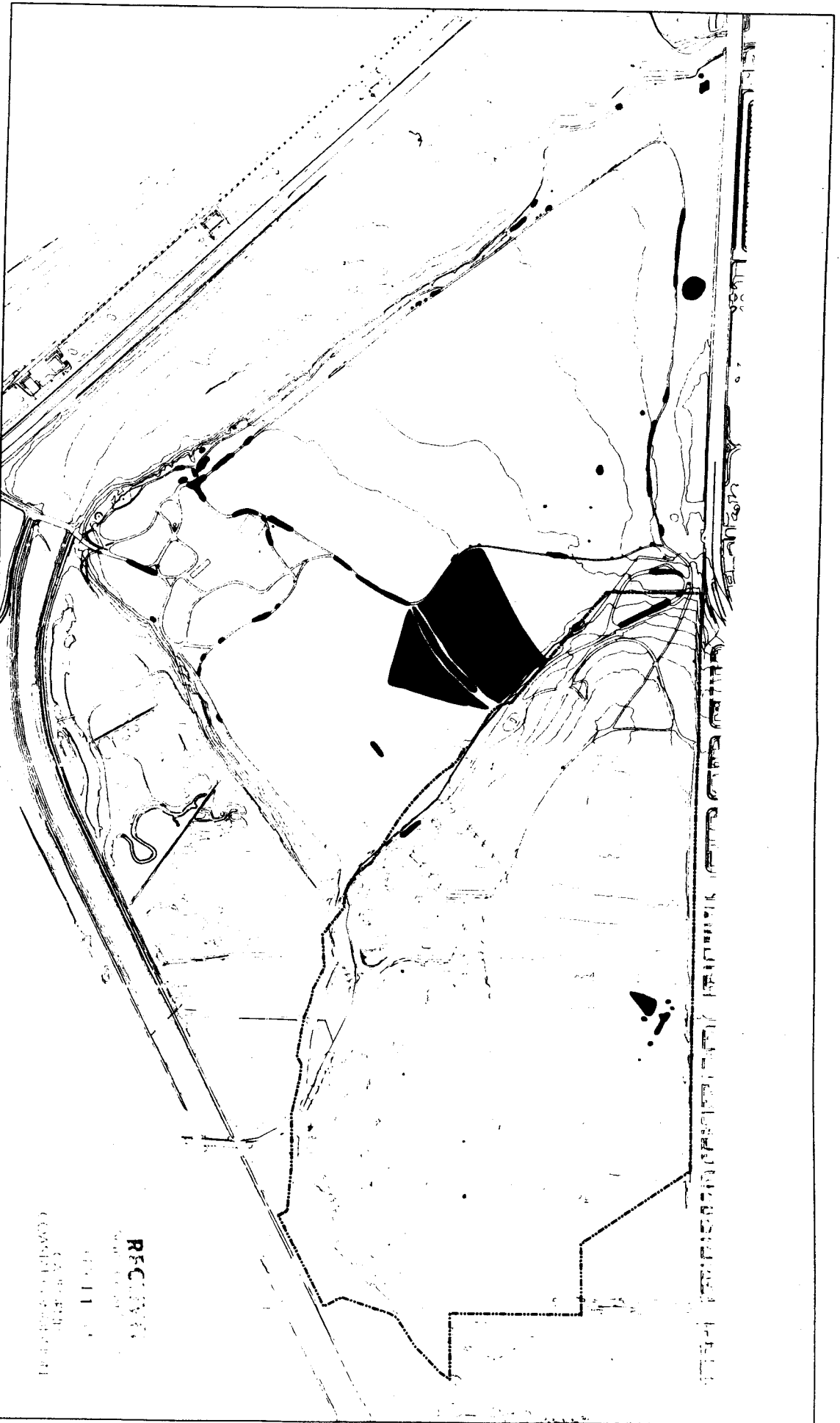
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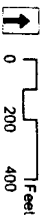
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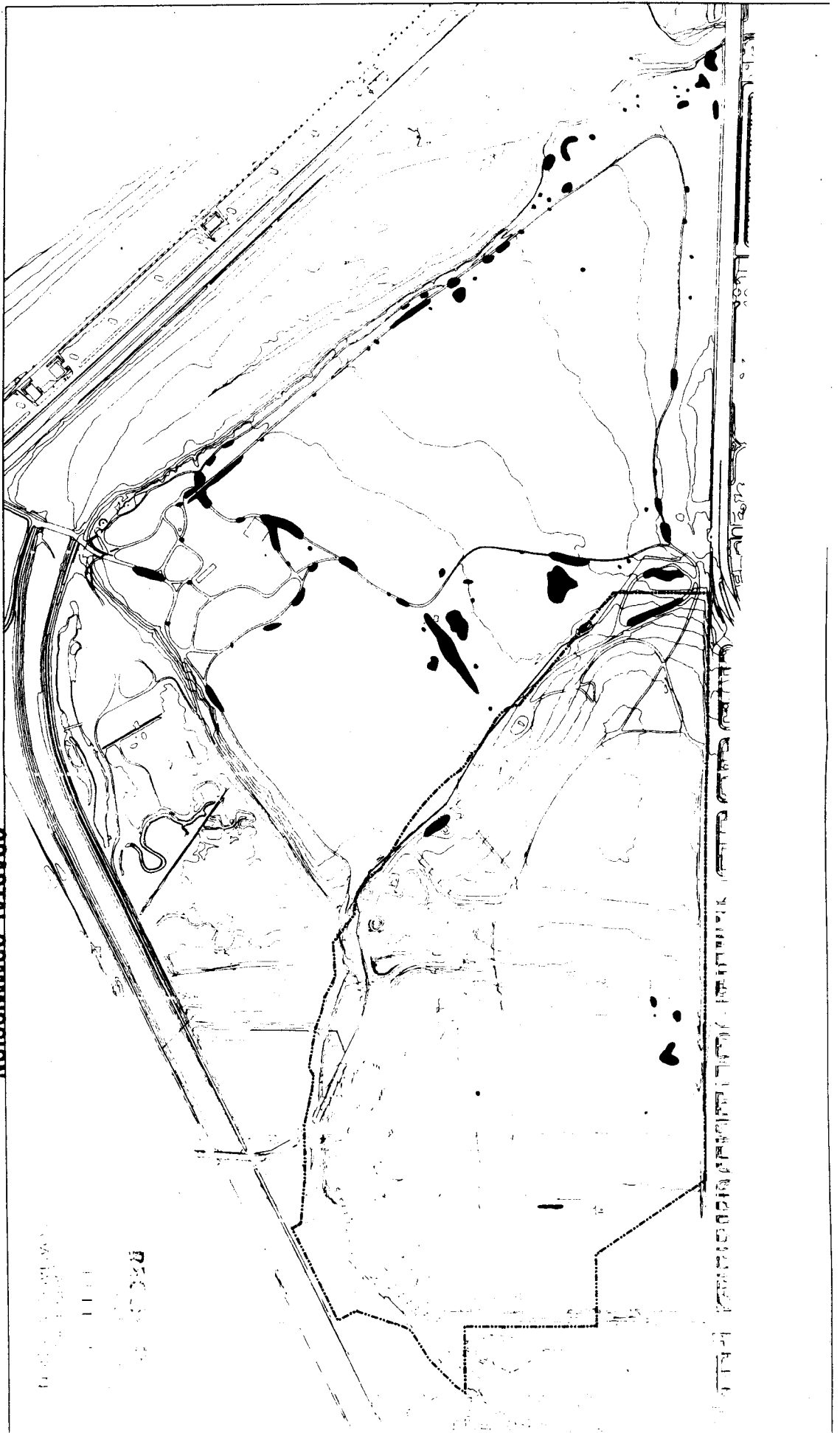
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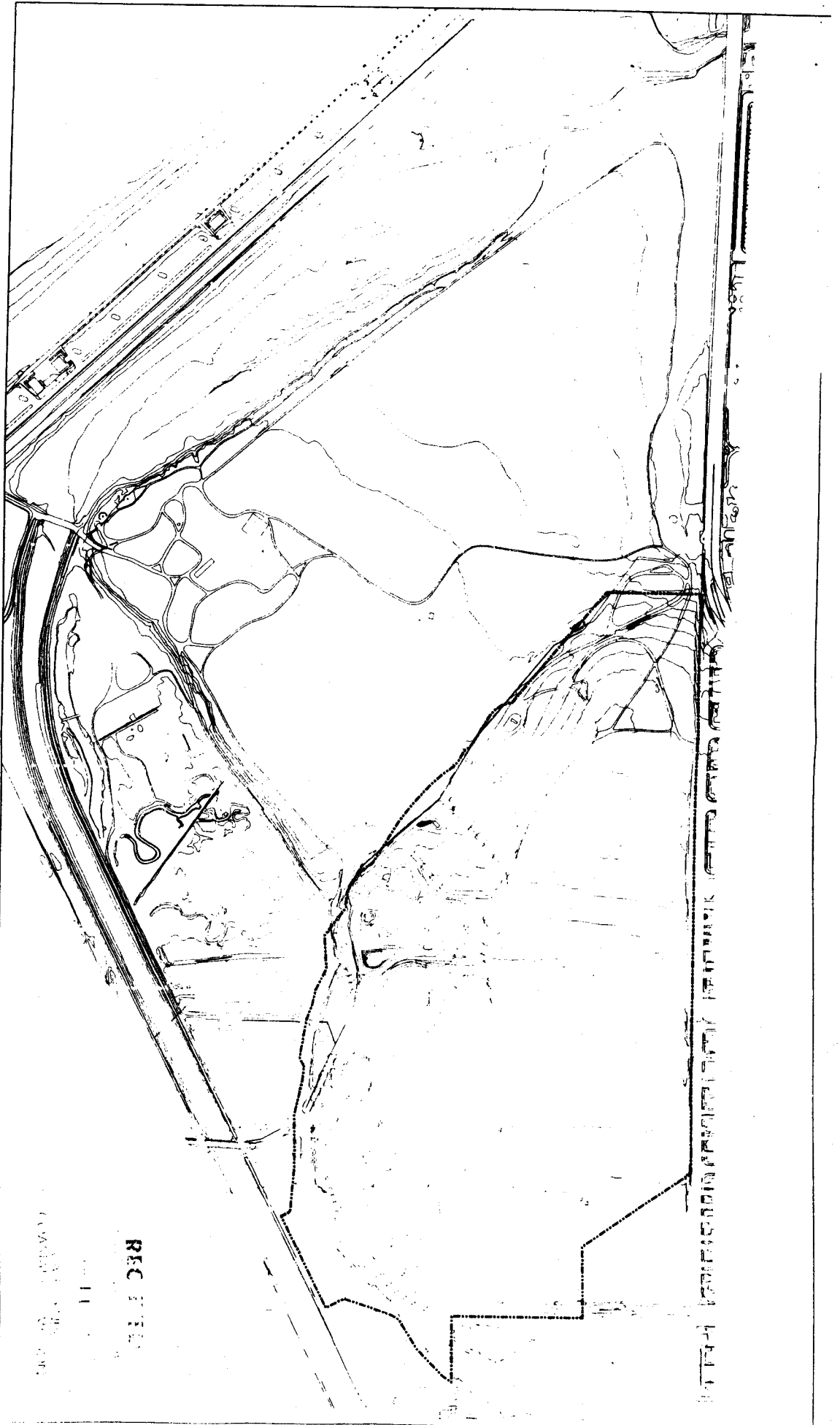


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FORM
FEB 2004

RECEIVED
South Coast Region

JUN 15 2004

CALIFORNIA
COASTAL COMMISSION

June 11, 2004

Dr. John Dixon
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, California 94105

Subject: California Ground Squirrel Distribution in the Lower Bolsa Chica Mesa Area

Dear Dr. Dixon:

At your request, LSA Associates, Inc. (LSA) surveyed for California ground squirrel (*Spermophilus beecheyi*) activity in the vicinity of the Lower Bolsa Chica Mesa in Orange County, California. The burrowing owl (*Athene cunicularia*)—a California Species of Special Concern and of widespread conservation concern elsewhere in western North America—uses the burrows of rodents such as the California ground squirrel. Up to two burrowing owls wintering on Bolsa Chica Mesa in recent years frequented the World War II era borrow area identified by the concentration of squirrel locations midway along the south side of the development area boundary shown on Figure 1. Because of the possibility that adjacent development might reduce the suitability of the borrow area for burrowing owls, specific alternative areas and/or mitigation for this species are being considered.

STUDY AREA AND METHODS

LSA biologists Richard Erickson and Leo Simone conducted the survey between 9:00 a.m. and 1:00 p.m. on June 2, 2004; squirrels were active on the surface throughout the period. The area surveyed included all of the lower mesa, which is bounded on the west by Bolsa Bay, on the north by Warner Avenue, on the east by the upper mesa development area, and on the south by the lowlands adjacent to the East Garden Grove-Wintersburg Channel. Also surveyed were all of the lowland areas north of the channel and west of a line extending directly south from the end of Bolsa Avenue (the same line forming the eastern boundary of the development area).

Most of the survey area was covered on foot. Areas of disturbance or with a break in topography were examined most thoroughly. On an aerial photograph, each observer marked all squirrels detected by sight or sound and all burrows showing signs of current use. These were later combined to create Figure 1.

RESULTS

Approximately 130 squirrel locations were mapped. This number should not be considered an accurate population estimate but rather a rough approximation of how squirrels are distributed on the site. Inspection of Figure 1 reveals several areas where squirrel activity is concentrated. There is a break in topography in all of these areas: along the periphery of the development area where the

6/11/04<P:\HSH930\squirrel survey.wpd>

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upper mesa gives way to the lower mesa on the west and to the Bolsa Chica lowlands on the south, and on the periphery of the lower mesa where it drops off to Bolsa Bay on the southwest and to the Bolsa Chica lowlands on the southeast. Most of the occupied areas have little or low vegetation, but many of the squirrels at the eastern end of the study area were found among Brewer's saltbush (*Atriplex lentiformis* ssp. *breweri*) and other bushes.

DISCUSSION

California ground squirrels are widely distributed in the study area, primarily in areas that have either been subject to considerable pedestrian traffic (i.e., southwestern and southeastern edges of the lower mesa, southern edge of the upper mesa) or adjacent to the proposed development area on the upper mesa (i.e., the break between the upper and lower mesas). Since burrowing owl use of potential habitat could be limited by high levels of pedestrian traffic, efforts to mitigate for potential impacts to burrowing owl habitat through habitat conservation should consider the ultimate locations of trails and other high levels of human activity.

Therefore, the best way to offset potential impacts to burrowing owl habitat would be to enhance owl habitat suitability somewhere on the lower mesa where human disturbance could be managed. Under current conditions, the best place for owl mitigation would be near the middle of the mesa, farthest from human disturbance and in an area affording maximum visibility for owls. If there is ultimately a desire to have pedestrian access to most of the lower mesa, an alternative owl mitigation area could be established in the vicinity of the heronry at the old gun club site, where at least seasonal closures are anticipated.

Creation of a series of low berms and mounds would likely result in additional ground squirrel colonization and might lead to at least occasional use by burrowing owls as well. This topography could include features that are similar to those where LSA observed wintering burrowing owls in 2001/2002 and 2002/2003, which were also artificially created.

Sincerely,

LSA ASSOCIATES, INC.

A handwritten signature in cursive script that reads "Art Hennighausen for".

Richard Erickson
Associate/Biologist

cc: Teresa Henry
Ed Mountford



LSA

● CALIFORNIA GROUND SQUARED LOCATION

ST

RECEIVED
South Coast Region

JUN 15 2004

CALIFORNIA
COASTAL COMMISSION California Ground Squared Locations June 2004

Page One of Two

Scale: 1 inch = 100 feet
Aerial Photo Source: TopView
California Coastal Commission, Sacramento, California 95833

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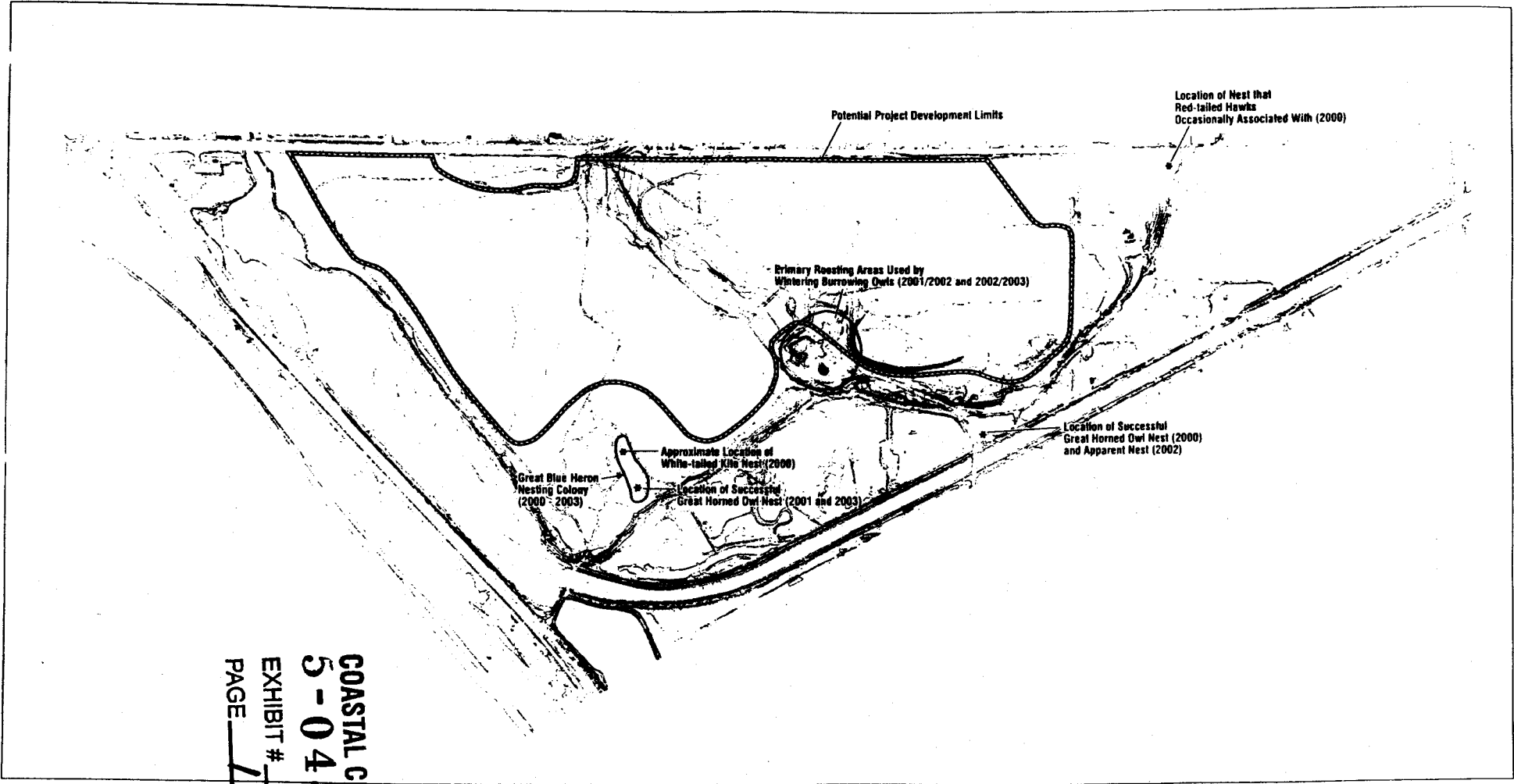
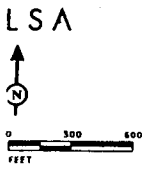


FIGURE 1

Bolsa Chica ESHA
 Heron and Raptor Locations, 2000 - 2003

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1315193040-Heron & Raptor Locations.cdr (9/10/03)

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400

**MEMORANDUM**

FROM: John Dixon, Ph.D.
Ecologist / Wetland Coordinator

TO: Teresa Henry

SUBJECT: Proposed Brightwater Development on Bolsa Chica Mesa

DATE: July 15, 2004

Documents reviewed:

General Resource Issues

1. California Department of Fish and Game. June 3, 1982. Environmentally sensitive areas at Bolsa Chica. A report to the California Coastal Commission.
2. County of Orange. 1996. The Bolsa Chica Report, Local Coastal Program. 1996 Recirculated Draft Environmental Impact Report. County Project Number 551. State Clearinghouse Number 93-071064.
3. R. Feldmeth (Ecological Research Services). December 4, 1989. An analysis of environmentally sensitive habitat areas at Bolsa Chica in 1981 and 1989. A report to Signal Landmark, Inc.
4. Ferren, W. (U.C. Santa Barbara). October 28, 2000. Wetland edges, transitions, and adjacent uplands. Letter to J. Dixon (CCC).
5. Findlay, C. (U. of Ottawa). No date (received at CCC February 9, 2000). Letter to CCC concerning wetland buffers at Bolsa Chica.
6. Guthrie, D. December 10, 1981. Bird studies at Bolsa Chica: Significance of aquatic and terrestrial habitats. A report to Signal-Landmark Properties and Nossaman, Krueger and Marsh.
7. Homrighausen, A. and R. Erickson (LSA). November 23, 1999. Buffer design for Bolsa Chica Eucalyptus ESHA. Letter to S. Rynas (CCC).

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8. Homrighausen, A. (LSA). November 5, 2002. Revisions to vegetation community mapping: Brightwater Project. A letter report to E. Mountford (Hearthside Homes).
9. LSA Associates, Inc. November 17, 2001. Draft subsequent environmental Impact report, Volume I, Brightwater Development Project, Orange County, California, SCH #1993071064. A report to the County of Orange.
10. LSA Associates, Inc. November 17, 2001. Draft subsequent environmental Impact report, Volume II: Appendices, Brightwater Development Project, Orange County, California, SCH #1993071064. A report to the County of Orange.
11. Mitech. October, 1989. Results of a small mammal trapping study at the Bolsa Chica wetlands and associated upland habitat. A report to the Army Corps of Engineers.
12. Mitech. September, 1989. Preliminary report, Bolsa Chica insect survey. A report to the Army Corps of Engineers.
13. Noss, R. (U. Central FI), T. Case (UCSD), and R. Fisher (USGS). No date (submitted to CCC on November 20, 2002). Evaluation of the biological significance of the Bolsa Chica Mesa. A report commissioned by the Bolsa Chica Land Trust.
14. Raysbrook, C. (CDFG). January 16, 2002. Draft subsequent environmental impact report for the Brightwater Development Project, County of Orange and City of Huntington Beach, California (SCH 1993071064). Letter to G. Fong (County of Orange).
15. Schoenherr, A. 2001. When wetlands are not enough. California Wild 54:32-35+53.
16. Soule, M. October 23, 2000. Letter to the CCC concerning effect of development on the Bolsa Chica mesa on top predators and biodiversity.
17. U.S. Fish and Wildlife Service, Ecological Services, Laguna Niguel, CA. May 1979. U. S. Fish and Wildlife Service Special Report: Bolsa Chica Area.
18. Zedler, J. (U. Wisconsin). Bolsa Chica Local Coastal Program, Land Use Plan Amendment No. 1-95. Letter to CCC concerning ecological implications of development on the mesa.

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Raptors

19. Bloom, P. (U.C. Santa Cruz Predatory Bird Research Group). April 15, 1982. Raptor inventory and habitat assessment for the Bolsa Chica area, Orange County, California. Report to U.S. Fish and Wildlife Service.
20. Bloom, P. (Research Biologist). March 21, 2000. Solicited letter to J. Dixon (CCC) concerning the significance of the Bolsa Chica Mesa to raptors and potential effects of development.
21. Bloom, P. (Research Biologist; Member, Independent Review Committee appointed by CCC, CDFG & Hearthside Homes). October 22, 2000. Letter to S. Hansch (CCC) concerning probable effects of development on raptors at Bolsa Chica Mesa.
22. California Burrowing Owl Consortium. April 1993. Burrowing Owl survey protocol and mitigation guidelines.
23. California Department of Fish and Game. September 25, 1995. Staff Report on Burrowing Owl Mitigation. A report transmitted by Interim Director C. F. Raysbrook on October 17, 1995.
24. Center for Biological Diversity and 5 others. 2003. Petition to the State of California Fish and Game Commission and supporting information for listing the California population of the Western Burrowing Owl (*Athene cunicularia hypugaea*) as an endangered or threatened species under the California Endangered Species Act. A petition received by the Fish and Game Commission on April 8, 2003.
25. Guthrie, D. (Claremont Colleges). December 10, 1981. Bird Studies at Bolsa Chica (Preliminary Draft). Report to Signal-Landmark Properties and Nossaman, Krueger and Marsh.
26. Hamilton, R. (Consulting Biologist). January 26, 1998. Animal species observed at Bolsa Chica Mesa. Letter report to N. Donovan (Bolsa Chica Land Trust).
27. Jurek, R. (CDFG; Member, Independent Review Committee appointed by CCC, CDFG & Hearthside Homes). October 16, 2000. Letter to S. Hansch (CCC) concerning probable effects of development on raptors at Bolsa Chica Mesa.
28. Keane, K. (Keane Biological Consulting). November 14, 2000. Letter to S. Hansch (CCC) concerning indirect effects of development of the Bolsa Chica Mesa on raptor predation in the adjacent lowlands.

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29. Keane, K. (Keane Biological Consulting). January 27, 2004. Analysis of potential effects of development of the upper terrace of Bolsa Chica Mesa on avian predation on nesting waterbirds in the Bolsa Chica wetlands, Coastal Development Permit Application Number 5-02-375. Letter to T. Henry (CCC).
30. LSA Associates, Inc. October 6, 1999. Eucalyptus ESHA preservation and management plan: Bolsa Chica, Orange County, California. A report prepared for Hearthside Homes.
31. LSA Associates, Inc. September, 2003. Analysis of raptor and special interest species use of the Bolsa Chica Area, including the mesa.
32. LSA Associates, Inc. September 10, 2003. GIS shape files and Map labeled "Figure 1, Bolsa Chica ESHA, Heron and Raptor Locations, 2000-2003." The map bears the following computer file identification number: I:/HSH930/G/Heron & Raptor Locations.cdr (9/10/03).
33. LSA Associates, Inc. June 11, 2004. California ground squirrel distribution in the lower Bolsa Chica Mesa area. Letter report to J. Dixon (CCC).
34. Tierra Madre Consultants. December 5, 1999. Raptor habitat assessment of the Bolsa Chica Mesa. Report to Bolsa Chica Land Trust.
35. Walton, B. (U.C. Santa Cruz Predatory Bird Research Group). September 15, 2002. Letter to P. Imhoff (CCC) concerning the significance of foraging habitat and the effects of development.
36. Walton, B. (U.C. Santa Cruz Predatory Bird Research Group; Member, Independent Review Committee appointed by CCC, CDFG & Hearthside Homes). October 23, 2000. Letter to S. Hansch (CCC) concerning probable effects of development on raptors at Bolsa Chica Mesa.
37. Zam, M. (U.S. Bureau of Land Management). 1974. Habitat Management Series of Unique or Endangered Species. Report 11. Burrowing Owl, *Speotyto cunicularia hypugaea*. BLM Technical Note T-N-250.

Southern Tarplant

38. LSA Associates, Inc. May 1, 2003. Translocation Plan, Southern Tarplant (*Centromadia parryi ssp. australis*), Brightwater Development Project, Bolsa Chica Mesa, Orange County, California. A report to Hearthside Homes.

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39. F. Roberts, Jr. (California Native Plant Society). January 24, 2004. Southern Tarplant (*Centromadia parryi* ssp. *australis*) translocation plan for the Brightwater Development Project, Bolsa Chica Mesa, Orange County, California. Letter to M. Reilly (Chairman, CCC).
40. F. Roberts, Jr. (Biologist). No Date (Figures dated 10 March 2000). Southern Tarplant (*Centromadia parryi* ssp. *australis*) on the Bolsa Chica Mesa, Orange County, California. A report to the Bolsa Chica Land Trust.
41. R. Hamilton (California Native Plant Society). November 22, 1999. *Hemizonia parryi* ssp. *australis* at Bolsa Chica. Letter to S. Rynas (CCC).
42. FORMA. February 2004. GIS shape files showing southern tarplant distribution and abundance in 1999, 2000, 2001, and 2002 (upper mesa and slope only) from field surveys conducted by LSA Associates, Inc.

General Ecological Considerations

The Bolsa Chica wetlands once covered over 30 square miles and, on the Bolsa Chica and Huntington Mesas, were bounded by coastal sage scrub communities that interacted ecologically with the wet lowlands. Although the wetlands have been reduced to less than two square miles and the adjoining mesas have been substantially developed and the remaining open space much altered, the U. S. Fish and Wildlife Service in 1979 (17¹) nonetheless identified the Bolsa Chica ecosystem as "one of the last remaining viable wetland-bluff ecosystems in southern California." This viewpoint was echoed by conservation biologists (13) over twenty years later: "...Bolsa Chica is one of the last remaining areas in coastal southern California with a reasonably intact upland-wetland gradient, which is of high ecological importance and generally lacking in representation in reserves in the region." In nearly all other coastal marsh ecosystems in southern California, the upland components have succumbed to urban development. Uplands provide pollinators for wetland plants, nesting and denning sites for avian and mammalian predators that forage in wetlands, important alternative prey populations for many of those predators, and critical habitat for primarily upland species (4, 13, 15, 18). Many species have life-stages that rely on both wetland and upland habitats. For example (4), "The caterpillar[s] of the Pygmy Blue Butterfly eat only marsh and edge species of plants belonging to the Spinach Family and the caterpillars of the Wandering Skipper eat only Saltgrass. Adults of both butterflies nectar mostly on summer and fall flowering plants belong (sic) to the Sunflower Family that occur in adjacent palustrine marshes (e.g. Western Goldenrod) and shrubs of coastal scrub, grassland, and dune habitats including Coast Golden Bush and Mock Heather. Because many native coastal butterflies are dependent on specific host plants, without an appropriate mix of native habitats that support native plant communities, these edge-dependent species are not likely to survive in coastal wetland ecosystems."

¹ References are presented as document numbers in the above review list.

The mesa and associated bluffs provide habitat for over 88 species of land birds, including some 33 resident species, 38 migrants, 15 wintering species and 3 summering species (6, 9, 10). Reptiles are represented by the southern pacific rattlesnake, gopher snakes, king snakes, and several species of lizards. At least 10 species of mammals are also supported by Bolsa Chica Mesa habitats. Many of the species that utilize the mesa also are found in the adjacent lowlands.

In addition to it's important ecosystem functions as an integral part of the Bolsa Chica wetland-upland ecosystem, the Bolsa Chica mesa provides specific direct support for a number of species and habitats that are of particular intrinsic value. These include fresh and saline wetland habitats, foraging and nesting habitat for hawks and owls, foraging and reproductive habitat for a variety of mammals, appropriate physical habitat for the rare southern tarplant, and coastal bluff habitat that supports remnant stands of coastal sage scrub.

The entire Bolsa Chica mesa is not included in the current development proposal. The proposed residential development and associated infrastructure is confined to the upper bench and adjacent southern bluff, to the transitional slope between the upper and lower benches of the mesa and to a small area on the lower bench proposed as a mitigation site for impacts to southern tarplant. However, the various biological assessments that have been done generally have not distinguished between the upper and lower benches when describing the resources of the mesa. In addition, resource use is not constrained by property or parcel boundaries. Therefore, I will discuss the biological resources present on the entire mesa and examine their ecological relationships in the context of the local ecosystem, which is comprised of both upland and wetland habitats. This is necessary both to analyze the potential impacts of the proposed development and to determine the location of Environmentally Sensitive Habitat buffers that may affect the development footprint.

Wetlands

The Bolsa Chica Mesa is bounded to the south by degraded historical salt marsh that will be returned to a muted tidal regime as part of the ongoing lowland restoration project. The western edge of the mesa is part of the Department of Fish and Game's Ecological Reserve and is bounded by outer Bolsa Bay. There are three wetlands on the mesa itself. Warner Pond is remnant tidal open water and marsh on the lower bench that was recognized as an Environmentally Sensitive Habitat Area (ESHA) by the Department of Fish and Game, (1) and by the Coastal Commission and developer, as noted by the courts (71 Cal. App. 4th 493, 514 (1999)), largely due to the important ecological services it provides for a great variety of bird species. There are also two freshwater palustrine wetlands present. One is a seasonally ponded depression near Los Patos Avenue on the upper bench of the mesa, which is dominated by herbaceous vegetation, including the rare southern tarplant. The second is a seasonal freshwater wetland in a small borrow pit in the transitional area between the upper and lower

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benches, which is dominated by a stand of willows and mulefat with little understory vegetation.

Raptor Habitat.

The Bolsa Chica Mesa has long been recognized as being of particular significance to a large suite of birds of prey (1, 19). The annual grassland and ruderal vegetation on the mesa provide foraging habit for many species, as do adjacent lowland habitats. The Eucalyptus and palm trees along the southern bluff provide perching, roosting or nesting opportunities for at least 12 of the 17 species of raptors that are known to occur at Bolsa Chica (19, 20, 31, 34). Seven of those species are designated "special animals" in California². The white-tailed kite is a California fully protected species³. Species of special concern⁴ include the Northern Harrier, sharp-shinned hawk, Cooper's hawk, prairie falcon, burrowing owl, and loggerhead shrike

Because of their important ecosystem functions, the grove of trees on the mesa and along the southern bluff has long been recognized as an environmentally sensitive habitat area (1; 71 Cal. App. 4th 493, 506-08 (1999)). Some of the raptors that use the Eucalyptus trees forage in the wetlands, some forage in the mesa grasslands, and some forage within the coastal sage scrub along the bluff edge (20, 31, 34). Many forage in more than one habitat. The need for hunting perches and roosting or nesting sites cannot be separated from the need for an effective hunting area. The Eucalyptus grove would cease to function as ESHA were there not adequate foraging habitat nearby. This point is made by the U.S. Fish and Wildlife Service (17: "...the success and presence of the many birds of prey found in the Bolsa Chica have been attributed to the eucalyptus groves and the extensive foraging areas provided by the mesas and

² These taxa generally fall into one or more of the following categories: Officially listed or proposed for listing under the State and/or Federal Endangered Species Acts; State or Federal candidate for possible listing; Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the CEQA Guidelines; Taxa considered by the Department to be a Species of Special Concern; Taxa that are biologically rare, very restricted in distribution, declining throughout their range, or have a critical, vulnerable stage in their life cycle that warrants monitoring; Populations in California that may be on the periphery of a taxon's range, but are threatened with extirpation in California; Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands, vernal pools, etc.); Taxa designated as a special status, sensitive, or declining species by other state or federal agencies, or non-governmental organization (NGO). (http://www.dfg.ca.gov/endangered/special_animals.html)

³ "DFG: Fully protected and Protected: Fully protected and Protected species may not be taken or possessed without a permit from the Fish and Game Commission and/or the Department of Fish and Game." (http://www.dfg.ca.gov/endangered/special_animals.html)

⁴ "DFG: CSC: California Special Concern species: It is the goal and responsibility of the Department of Fish and Game to maintain viable populations of all native species. To this end, the Department has designated certain vertebrate species as "Species of Special Concern" because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as "Species of Special Concern" is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long term viability." (http://www.dfg.ca.gov/endangered/special_animals.html)

lowlands."), by the EIRs (2, 9: "In the case of Bolsa Chica, the raptor foraging habitat may be considered sensitive because it plays a valuable role in sustaining the migratory population of raptors."), and by Peter Bloom (20), a raptor biologist with over 30 years research experience in southern California ("...on the local and regional scale, the grasslands at Bolsa Chica are the principal reason for the abundance of raptors, and therefore could be considered an environmentally sensitive habitat area⁵"). Therefore, the ecological significance of the Bolsa Chica Mesa to birds of prey is the combination of foraging habitat and perching, nesting, and roosting habitat, which, for most birds, is the Eucalyptus grove.

The requirements of the burrowing owl (California species of special concern) are qualitatively different from most of the other birds of prey. These owls utilize small mammal burrows as protective shelter during both the nesting and wintering seasons. They choose areas with low vegetation and good visibility, frequently in active ground squirrel colonies, near foraging areas with relatively low vegetation. This species is in general decline in California, except in the Imperial Valley, due to loss of burrow habitat associated with development and rodent control activities (22, 23, 24, 26). Losses have been particularly severe in the coastal zone. The Bolsa Chica Mesa supports 1 or 2 wintering birds and probably stop-overs by an unknown number of migrants (P. Bloom, personal communication; 21, 31). Ground squirrel colonies at Bolsa Chica are concentrated in areas where there is a sharp break in topography, principally on the slope between the upper and lower benches of the mesa, along the bluff adjacent to Outer Bolsa Bay, and along the southern bluff face (33). Wintering burrowing owls have been documented to use burrows at the old borrow site at the border between the upper and lower benches of the mesa (31). The grassland and ruderal habitats on both the upper and lower benches of the mesa are appropriate foraging habitat for this species whose prey consists of insects and small vertebrates (37).

Mammalian Habitat

Small mammals provide an important prey base for many birds, reptiles, and larger mammals. At the Bolsa Chica Mesa the harvest mouse and house mouse, which inhabit grassland and shrubland, and ground squirrels, which occur in open areas with breaks in topography, are the major prey species (9, 11). Cottontail rabbits and black-tailed jack rabbits (California species of special concern) also rely on the grasslands and shrublands for habitat. Mesopredators (middle-sized predators) and scavengers, such as opossums and skunks, are present. The introduced red fox may also occasionally hunt on the mesa and is a potential threat to nesting birds in the lowlands. The top predator in this system is the coyote. Coyotes are commonly observed on the mesa and at least one pair has been documented to den on the southern bluff.

In order to maintain bird species diversity, it is critically important that coyotes be maintained in the upland-lowland ecosystem (16). Coyotes control mesopredators,

⁵ Mr. Bloom was using the phrase "environmentally sensitive habitat area" in an ecological sense, not necessarily as a legal term of art under the Coastal Act (P. Bloom, personal communication).

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including domestic and feral house cats, that can have devastating effects on local bird populations. Large areas of open space and connectivity to other such areas are necessary to maintain coyotes in the system. At Bolsa Chica, the mesa habitats are important for coyotes and will become increasingly so as more and more of the lowlands are subjected to tidal inundation as the wetland restoration proceeds.

Southern Tarplant Habitat

Southern tarplant is a Federal "Species of Concern" and a California Native Plant Society "1B species" (rare, threatened, or endangered in California and elsewhere). List 1B species meet the requirements for listing under the California Endangered Species Act. Southern tarplant is an annual species that favors damp disturbed areas and is characteristically found in seasonally moist alkali grassland⁶ near the coast or on other saline or alkaline soils that are subject to irregular shallow flooding (39). Due to loss of its native habitat, it has become rare in California and its remaining habitat is particularly valuable. On the Bolsa Chica Mesa, southern tarplant is most abundant near trails and other open disturbed areas. However, based on recent surveys, it tends to be much more widely distributed among such habitats on the lower bench than on the upper bench where it is almost entirely confined to the area surrounding the seasonal pond adjacent to Los Patos Avenue. This suggests that there may be differences in habitat between the two benches that are significant to the tarplant. For example, it is likely that the lower bench is wetter on average than the upper bench due to its topographic position. In addition to differences between the two benches, annual surveys conducted during the period 1999-2002 demonstrate that both the abundance and spatial extent of southern tarplant individuals varies by orders of magnitude from year-to-year within suitable habitat. This probably reflects temporal differences in environmental conditions, especially patterns of rainfall. The long-term health of the population depends on an extensive seed bank. The population at Bolsa Chica is one of the more significant in terms of numbers in southern California.

Coastal Bluff Habitat

The particular association of scrub habitat along the southern bluff slope at the Bolsa Chica Mesa has variously been categorized as Coastal Bluff Scrub (2) or coastal sage scrub (9). In 1979, the U.S. Fish and Wildlife Service (17) referred to this community as, "...the most threatened upland vegetative type in southern California because of extensive urban developments." The status of the coastal sage scrub has not improved during the intervening twenty years. At Bolsa Chica, coastal sage scrub occurs in relatively small stands along the southern bluff slope and is being restored along the bluff adjacent to Outer Bolsa Bay by personnel of the ecological reserve working with community volunteers. In some areas of the southern bluff, the scrub vegetation is essentially intact, and in others it has been nearly completely displaced by exotic

⁶ Hickman, J.C. ed. 1993. The Jepson Manual. Higher plants of California. University of California Press, Los Angeles.

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species. Although degraded, the importance of this vegetation is amplified by its landscape position adjacent both to perching sites for raptors and to wetlands. This importance will increase as the wetlands are restored.

Environmentally Sensitive Habitat Areas (ESHA)

Section 30107.5 of the California Coastal Act defines an Environmentally Sensitive Habitat Area as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments."

In the November 2, 2000 Commission staff report concerning a proposed amendment to the Bolsa Chica Local Coastal Program, the following Environmentally Sensitive Habitat Areas (ESHA)⁷ were identified: (1) the Eucalyptus grove on and along the edge of the mesa; (2) Warner Pond, a marine habitat connected by culvert to Huntington Harbor; (3) the natural habitats within the California Department of Fish and Game Ecological Reserve along the western edge of the mesa; (4) the coastal sage scrub community; (5) habitat of the southern tarplant; and, (6) the degraded wetlands in the lowlands that are part of a restoration plan. Although the Eucalyptus trees, Warner Pond, and the Ecological Reserve were generally depicted in the map labeled Figure 1 in the staff report, the locations of the other ESHA types were not mapped.

There has been no change in circumstances that would cause one to remove any of these habitats from the recommended list of environmentally sensitive habitat areas on or adjacent to the Bolsa Chica mesa. The Eucalyptus trees and Warner Pond have long been recognized by CDFG and the Coastal Commission as ESHA because of their important ecosystem roles of providing habitat for many bird species, including sensitive species, and their susceptibility to human disturbance (1; 71 Cal. App. 4th 493, 506-08 (1999)). The Bolsa Chica Ecological Reserve includes the coastal bluff above Outer Bolsa Bay and the transitional salt marsh and coastal sage scrub communities. Such an ecological system is rare in southern California because most have been destroyed by human activities and the remaining habitats are extremely important because of their important roles in the wetland-upland ecosystem. Coastal sage scrub

⁷ Due to a typographic error, the ESHA findings in the staff report appear partially contradictory. In the introduction, the staff report identifies ESHA as follows (pages 26-27): "The mesa contains significant ESHA areas such as the Eucalyptus grove, coastal sage scrub community, wetlands, and the Southern Tarplant." In subsequent sections, there are discussions of a court decision regarding an earlier Commission action that identified the Eucalyptus grove and Warner Pond (but not other habitats) as ESHA. Later, the staff report (page 233) notes that, "...various portions of the Mesa contain environmentally sensitive habitat areas (ESHA) (Figure 1 on Page 5). These ESHA areas include a Eucalyptus tree grove and Warner Pond. Other habitat areas which have previously (emphasis added) not been identified as ESHA because they are not a predominate vegetate (sic) type but are considered sensitive include Coastal Bluff Scrub habitat on the southwest bluff slope of the Bolsa Chica Mesa and two colonies of Southern Tarplant. The Southern Tarplant is a California Native Plant Society "1B species" which qualifies it as a rare, threatened or endangered Plant." But, on page 252, the staff report omits the word "previously" and states: "Though not designated as ESHA, the Bolsa Chica Mesa also contains habitat types which include sensitive or rare plant communities. For example, the Southern Tarplant is known to exist on both the upper and lower bench." This sentence should have read: "Though not previously designated ESHA...."

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is one the most heavily impacted terrestrial communities in California. Over 85 percent of historical CSS has been destroyed by agricultural and urban development. Nevertheless, 10s of thousands of acres are still present in southern California. However, much less remains in the coastal zone and still less adjacent to coastal wetlands. It is this landscape position that makes the restored coastal sage scrub within the Ecological Reserve and the remnant patches of this vegetation on the southern bluff so ecologically significant and qualifies it as ESHA both for its rarity and for its important role in the Bolsa Chica wetland-upland ecosystem, in addition to its vulnerability to disturbance or degradation by human activities and developments. Southern tarplant meets the definition of ESHA because of its rarity and because of its documented vulnerability to loss of habitat by development activities. The majority of the extant populations of southern tarplant have fewer than 1,000 individuals and, before field surveys were conducted at the Bolsa Chica Mesa, only two populations of southern tarplant were known to support more than 5,000 individuals (39). Estimates of the population at Bolsa Chica were 3,399 individuals in 1999, 10,496 individuals in 2000 and 8,656 plants in 2001⁸, of which 0, 854 and 919 plants, respectively, occurred on the upper bench around the seasonal pond (42). Except for an additional handful (≤ 13) of scattered plants on the upper bench, the rest of the plants present each year were found on the lower bench. Such large year-to-year variability in numbers is common among annual plants and is probably most closely related to patterns of rainfall. In terms of numbers and geographic distribution, the southern tarplant populations on the lower bench and on the upper bench at the seasonal pond are significant to the species.

It is difficult to delineate the habitat for a temporally variable annual species like the tarplant. Appropriate habitat is more extensive than is observed occupied in any one year. However, there have been three years of useful surveys for tarplant on the Bolsa Chica mesa and an additional year during which only the upper bench and transitional area between the two benches were surveyed. I recommend delineating the tarplant ESHA boundaries adjacent to the proposed development by drawing a line between all observed locations of tarplant growing on the eastern edge of the lower bench or on the between-bench slope that are adjacent to the proposed development area⁹ and by drawing a line between observed locations of tarplants growing adjacent to the seasonal pond near Los Patos Avenue on the upper bench.

Two other categories of habitat require an ESHA analysis because of the potentially important roles they play in the ecosystem by supporting birds of prey. The first is burrowing owl habitat. Burrowing owls are in decline throughout most of the state and have become rare in coastal areas because of loss of habitat. It is raptor biologist Peter Bloom's professional opinion (21, and personal communication to J. Dixon) that migrant and wintering burrowing owls use the Bolsa Chica Mesa during most years. One or two

⁸ These figures were obtained by adding the numbers shown on the maps obtained from FORMA and differ slightly from those in the Draft Subsequent EIR.

⁹ Since the development proposal is mainly restricted to the upper bench, it is not necessary to delineate all the tarplant habitat on the lower bench at this time and I would not necessarily recommend this procedure for identifying tarplant habitat on the remainder of the lower bench where plants have been observed widely scattered wherever open, disturbed ground is present.

birds were documented wintering on the mesa in 2001-2002 and 2002-2003 (31). In addition, the mesa formerly supported nesting burrowing owls and is one of the few areas in the region that still has the potential for nesting by this species in the future (20, 31). The burrowing owl is one of three species of raptors at Bolsa Chica that CDFG biologist Ron Jurek thinks is most in need of habitat protection (27). The required habitat for this species includes both foraging and burrow habitat. The same grassland and ruderal habitat that provides foraging opportunities for other species is appropriate foraging habitat for burrowing owls. For this species, ground squirrel burrows are analogous to the Eucalyptus trees for most of the other birds of prey at Bolsa Chica. Recent surveys (33) have shown that ground squirrel activity on the mesa is concentrated in areas where there are distinct breaks in topography along the bluffs and along the slope between the upper and lower benches. Although there is an argument that all appropriate burrow habitat should qualify as ESHA because of its important ecosystem function of supporting the burrowing owl, it is difficult to justify such a recommendation for any particular burrows in the absence of pertinent data and there have been few formal surveys conducted that could document habitat use by this species. Therefore, I recommend that the Commission adopt an approach analogous to its decision in the case of the Arco Dos Pueblos Golf Links (December 11, 2002 Commission Hearing). In that case, the Commission designated only trees known to have been used by white-tailed kites for nesting or perching and adjacent trees as ESHA. In the present instance, LSA Associates has identified the area containing burrows known to be used by wintering burrowing owls. Burrowing owls tend to reuse burrows year after year and an area should be considered occupied if at least one burrowing owl has been observed occupying a burrow there within the last three years (22, 23). Therefore, the LSA field observations are good evidence of occupied habitat, and I recommend that the Commission designate as ESHA the area mapped by LSA as the "Primary roosting areas used by wintering burrowing owls" (32) in recognition of its important role in the ecosystem of providing support to a species of special concern that has nearly been extirpated from the coastal zone by conversion of habitat to urban uses.

The second additional habitat issue that requires some discussion is that of foraging habitat for birds of prey. A very large proportion of existing raptor foraging habitat in California is dominated by annual grasses and ruderal vegetation. Because the dominant species in these communities are non-native, in the past there has been little concern about conversion of such communities to urban uses. However, in recent years, the Department of Fish and Game and others have come to realize that because of the loss of native prairies, annual grasslands and ruderal habitats are essential for maintaining healthy populations of many birds of prey and other native species. For this reason, the Department has recommended mitigation under the California Environmental Quality Act for the loss of such foraging habitat. In over 60 recent actions, the Department has required preservation of foraging habitat at a ratio of 0.5 acres preserved to each acre lost to development (W. Tippetts, CDFG, personal communication to T. Henry, CCC). At Bolsa Chica, the foraging habitat on the mesa is absolutely necessary for the continued presence of many of the raptors that utilize the Eucalyptus ESHA. In an independent review (27), CDFG biologist Ron Jurek wrote that

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the Eucalyptus ESHA "...is a zone of trees with good perching and nesting conditions within raptor habitat. It is not the raptor habitat itself. In my professional opinion, for most of the raptor species known to use the ESHA, raptor use depends primarily on the availability of the food resources of the surrounding lands...." Although there seems to be consensus among experts that the value of the Eucalyptus ESHA is dependent on the presence of adequate foraging habitat (9, 17, 20, 27), and despite the objections of the California Department of Fish and Game (14), the draft subsequent EIR (9) nevertheless suggests that the proposed loss of foraging habitat at the Bolsa Chica mesa will not be significant because: (a) there is substantial wintering habitat elsewhere in the region; (b) there will still be considerable habitat on the mesa¹⁰; and, (c) according to raptor expert Brian Walton (36), the overall population status will not be changed for any species of raptor at Bolsa Chica. The latter is no doubt true. However, in the context of resource conservation decisions, it would be a very low standard that ignores the local or regional significance of a species' presence. It simply means that the viability of the species in California is unlikely to be measurably decreased by local losses. Similar claims can be made of impacts even to many endangered species where the loss of a few individuals is unlikely to push the species to extinction. That fact is, however, not a compelling argument for additional impacts. To put these issues in perspective, I include two quotations from Mr. Walton. The first is from an email¹¹ to the Department of Fish and Game:

Pete [Bloom] and I have studied raptors in coastal California for the last 25+ years. No one else can say that. We still feel that the raptors and the Bolsa Chica habitat are important. That has been a consistent opinion for nearly 20 years from the only two people who have been continuously focused on these species in these locations.

During that period ... the rest of Orange County has largely been paved over and upland grasslands near coastal wetlands are almost non-existent. Hence, it would be likely that the opinions we had in 1982 on the importance of this habitat are even more relevant in 2000. I have difficulty in understanding why any development is allowed to occur in this area. If the Coastal Commission and the Department of Fish and Game has [sic] any area of southern California in their jurisdiction that warrants protection because it is [a] unique remnant wildlife habitat, this has got to be one of those places.

The second quotation is from a letter (35) written by Mr. Walton in response to a request from Coastal Commission staff for his professional opinion concerning a project that would impact raptor foraging habitat in central California:

The facts of the matter concerning impacts of development on raptors are that loss of, and changes to, habitat does indeed result in loss of individual raptors and some

¹⁰ However, nearly all the remaining foraging habitat would be outside the project boundary. Within the project area, 54.4 acres of the 55.9 acres of annual grassland would be eliminated by development, as would 20.7 acres of the 26.7 acres of ruderal habitat. Both are habitats that are currently used by foraging raptors.

¹¹ B. Walton. November 17, 2000, 0947 AM. Email to R. Haight and R. Rempel (CDFG), subject: "Bolsa Chica letter of 14 November", with copies to R. Jurek (CDFG) and P. Bloom (raptor biologist).

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impacts to populations. This loss is difficult to observe when one house is allowed to be built in Big Sur. However, if you examine the situation in Orange County where near complete development of the coastal zone has occurred, you can clearly see the cumulative nature of impacts on raptors and all other coastal bird species.

At some point, the Coastal Commission should probably address how the impacts of all the developments it regulates have minor to significant impacts on raptor and prey populations. Exactly where that impact begins to occur is difficult to assess. As a result of this vagueness, it is difficult to determine if any one Commission action is actually 'the straw that breaks the camel's back' and has a significant impact on local raptors; there always seems to be a window for the Commission to allow some development of each site. The clearest case where development is impacting raptors and their prey species but where the Commission still is uncertain of the real impact on raptor populations, is in Orange County. There, most raptor species have been completely eliminated from the coastal zone as breeders and most of the region has vastly reduced wintering population range. Even still, the last bit of available open space (Bolsa Chica) is being considered for some development, with the idea that the remaining raptors will move elsewhere or not be impacted, or live in remnant open space within the developed area.

It is not accurate, in fact, that individual raptors when impacted by development simply move elsewhere and everyone survives. If that were true, there would be areas of incredible density in non-developed areas, where the impacted raptors have moved and are now living with pre-existing birds. This philosophy would be analogous to thinking that if you tore down one of two adjacent apartment buildings, that all the residents would simply move into the remaining building and live two families to an apartment. The density of raptors is dependent on a variety of things, so birds cannot actually just get denser in adjacent areas by moving off development sites.

I think the importance of the foraging habitat at the Bolsa Chica Mesa to many birds of prey is clear. It is also clear that a reduction in foraging habitat on the mesa will translate to a reduction in the average number of raptors present. Given these facts, does the ecosystem function of the foraging habitat rise to the level of ESHA?

ESHA determinations are a matter of informed judgment. Implicit in the determination of whether a species or habitat meets the definition in the Coastal Act, is an interpretation of the words "rare" and "especially valuable" in the ESHA definition. In making recommendations to the Commission, I consider the facts and then interpret the ESHA definition in the light of answers to three queries: 1. What standards have the Commission and the courts established in prior actions? 2. Has there been a change in the ecological context that would affect the Commission's deliberations? 3. Knowing that nothing is "special" if everything is "special," is the ecological value of the resource clearly far above the norm? To my knowledge, the Commission has never considered annual grassland or ruderal habitat to be ESHA in past actions, except where these vegetation types were included in the nesting territory of the threatened California gnatcatcher. However, the ecological context has changed over the years, and the area of annual grasslands has declined as development has increased. The Commission has recognized the increased importance of annual grassland for raptors in the coastal

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zone by requiring mitigation for grassland loss (at a ratio of 0.5 ac preservation to 1.0 ac of loss) at Hellman Ranch (October 11, 2000 Commission Hearing; Permit 5-97-367) following the recommendations of the Department of Fish and Game. The raptor foraging habitat at Bolsa Chica is clearly of high ecological value because of the landscape context and the importance of maintaining raptors in the system, as evidenced by 20 years of recommendations and decisions by raptor experts, the resource agencies and the Coastal Commission. Nevertheless, within the proposed development area, I do not think that the foraging habitat, *per se*, rises to the level of ESHA. However, the importance of foraging habitat is clearly such that the loss of a large amount at Bolsa Chica would result in "impacts which would significantly degrade" the adjacent Eucalyptus tree ESHA such that it would no longer be especially valuable to birds of prey. Therefore, to be in compliance with Section 30240(b) of the Coastal Act, development must be sited such that this does not occur.

Therefore, because of the significant adverse effects on coastal resources, I recommend that the Commission follow the recommendation of the Department of Fish and Game (14) and seek mitigation for the destruction of any annual grassland or ruderal foraging habitat on the Bolsa Chica Mesa by preserving 0.5 acres of such habitat for each acre lost to development. Preservation should be on the project site adjacent to the Eucalyptus tree ESHA and could reasonably include the recommended buffer areas for the Eucalyptus trees and for the burrowing owl habitat described below.

Wetland and ESHA Buffers and Allowable Uses

CDFG (1) determined that the eucalyptus grove adjacent to and on the Bolsa Chica mesa and Warner Avenue pond are ESHAs and recommended that "a buffer area of no less than 100 meters in width should surround these areas to maintain their integrity and protect their resource values." The U.S. Fish and Wildlife Service (17) recommended that, if planning adhered to USFWS guidelines, 100-m buffers would be established around the Eucalyptus groves, coastal bluffs, and Warner Pond, and, "No development or access of any type would be allowed in the buffer area. Park corridors could border the zone but not intrude into it." Others have suggested that even wider buffers would be necessary to maintain the integrity of the ESHAs at Bolsa Chica (5).

I recommend that a minimum of 100-m (328-ft) buffers be established around the Eucalyptus tree ESHA and Warner Pond. I recommend that 30.5-m (100-ft) buffers be established around the seasonal, freshwater wetlands and that 15.25-m (50-ft) buffers be established adjacent to ESHA boundaries defined by the presence of southern tarplant or coastal sage scrub habitat. The Commission has used these standards for wetlands and sensitive vegetation in past actions (e.g., Marblehead application 5-03-13, approved June 11, 2003). In order to avoid disturbing burrowing owl habitat, the California Burrowing Owl Consortium (22) and the California Department of Fish and Game (23) recommend 50-m (164-ft) buffers during the non-breeding season, 75-m (246-ft) buffers during the breeding season, and a minimum of 6.5 acres of foraging habitat maintained adjacent to the burrows. Given that the existing use of the Bolsa

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Chica Mesa is by wintering and migrant birds, I recommend that a 50-m buffer be established around the defined burrowing owl habitat.

The buffer around the Eucalyptus tree ESHA is particularly important if those trees are to continue to function as nesting habitat for a variety of raptors. The California Department of Fish and Game and the U.S. Fish and Wildlife Service recommended a 100-m buffer. A literature review¹² found that raptor biologists recommended buffers for various species of nesting raptors from 200 m to 1500 m in width, with the exception of 50-m buffers from visual disturbance for kestrels and prairie falcons. In the case of the ARCO Dos Pueblos Golf Links, the developer's consultant, avian biologist Jeff Froke¹³, suggested that white-tailed kites would be tolerant of "low-frequency and non-disruptive activities" to within 150-200 ft (46-61 m) of the small grove containing the nest tree and raptor biologist Peter Bloom¹⁴ recommended a minimum of 100 m, but felt that "a considerably more effective buffer" would be 200 m. In an independent review (36) concerning a prior development proposal at Bolsa Chica with 100-foot (30-m) buffers, raptor expert Brian Walton opined that developers "...often rely on buffers that I find largely ineffective for reducing raptor fright/flight response." and "They describe unusual tolerance, habituated individuals or exceptions to normal raptor behavior rather than the more common behavior of wild birds." Based on these various recommendations, it is my opinion that a minimum 100-m buffer is necessary if the Eucalyptus trees are going to function as nesting sites in the future. Larger buffers are necessary during the extraordinary disturbance that takes place during construction. If raptors are nesting, a 152-m (500-ft) buffer should be established around the nest during construction activities. The sensitive habitat areas and the recommended buffers are shown in Figure 1.

Buffers serve several important functions. They allow for some error in assigning boundaries (for example, extent of wetlands or southern tarplant habitat), they keep disturbance at a distance, they provide important auxiliary habitat (e.g., foraging or pollinator habitat), and they provide water quality functions around wetlands. They should not be used for activities that have negative effects on the resources that are being protected. In general, I agree with the U.S. Fish and Wildlife Service recommendation that no development or access of any type be allowed in the buffer area. However, I recommend that trails be allowed in the outer 5 m of 100-m buffers on the upper bench. In particular, there should be no roads, parking lots, recreational facilities or fuel modification activities in buffers. The current plan to extend the bluff to earlier contours and to install a road and public parking at the bluff edge would introduce disturbance at about the same height of potential nests. Such disturbance would degrade the Eucalyptus tree ESHA and would not be compatible with the continuance of the functions of that ESHA. Possible exceptions to the "no

¹² Table 1 in: Richardson, C.T. and C.K. Miller. 1997. Recommendations for protecting raptors from human disturbance: A review. *Wildlife Society Bulletin* 25(3):634-638.

¹³ Froke, J.B. Conservation of White-Tailed Kites at Dos Pueblos Golf Links in Santa Barbara County, California. A report to Culbertson, Adams & Associates dated October 10, 2002.

¹⁴ P. Bloom (Raptor Biologist). June 5, 2000. Solicited letter to J. Dixon (CCC) concerning probable effects of golfing activities on white-tailed kites.

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development" standard that might reasonably be considered are temporary ground disturbances that are then restored to appropriate native vegetation and will not be disturbed in the future. The entire ESHA area and associated buffers should be physically separated from the surrounding residential uses by dog-proof fencing. Dogs should be kept on leash when walking on trails.

In order to insure the future viability of the Environmentally Sensitive Habitat Areas, habitat buffers, and preserved foraging habitat within the project area, there should be a Management plan funded in perpetuity. The management plan should include habitat management, maintenance, restoration activities, domestic and feral animal control, and public education. The ESHAs, buffer areas, and preserved foraging habitat should be placed in permanent conservation status.

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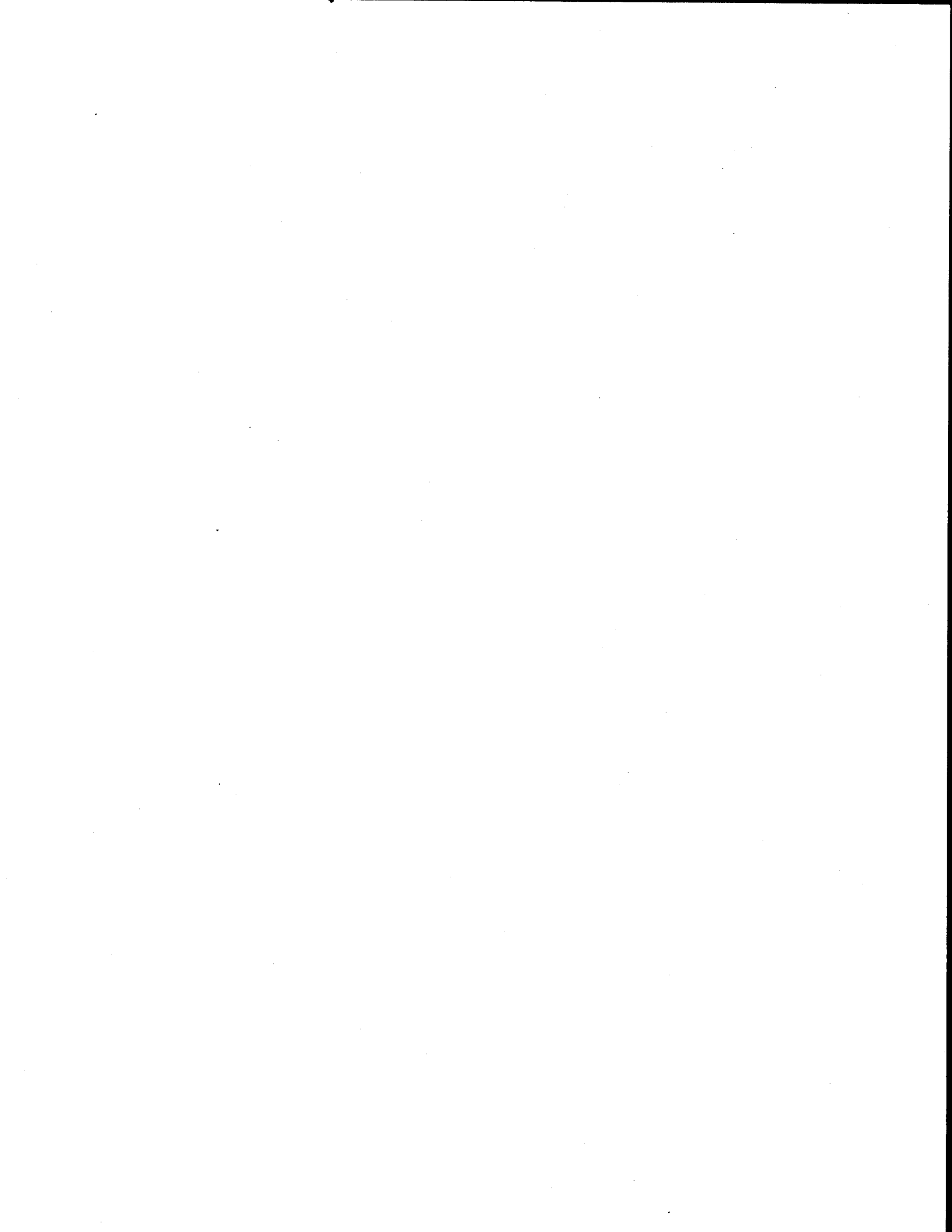
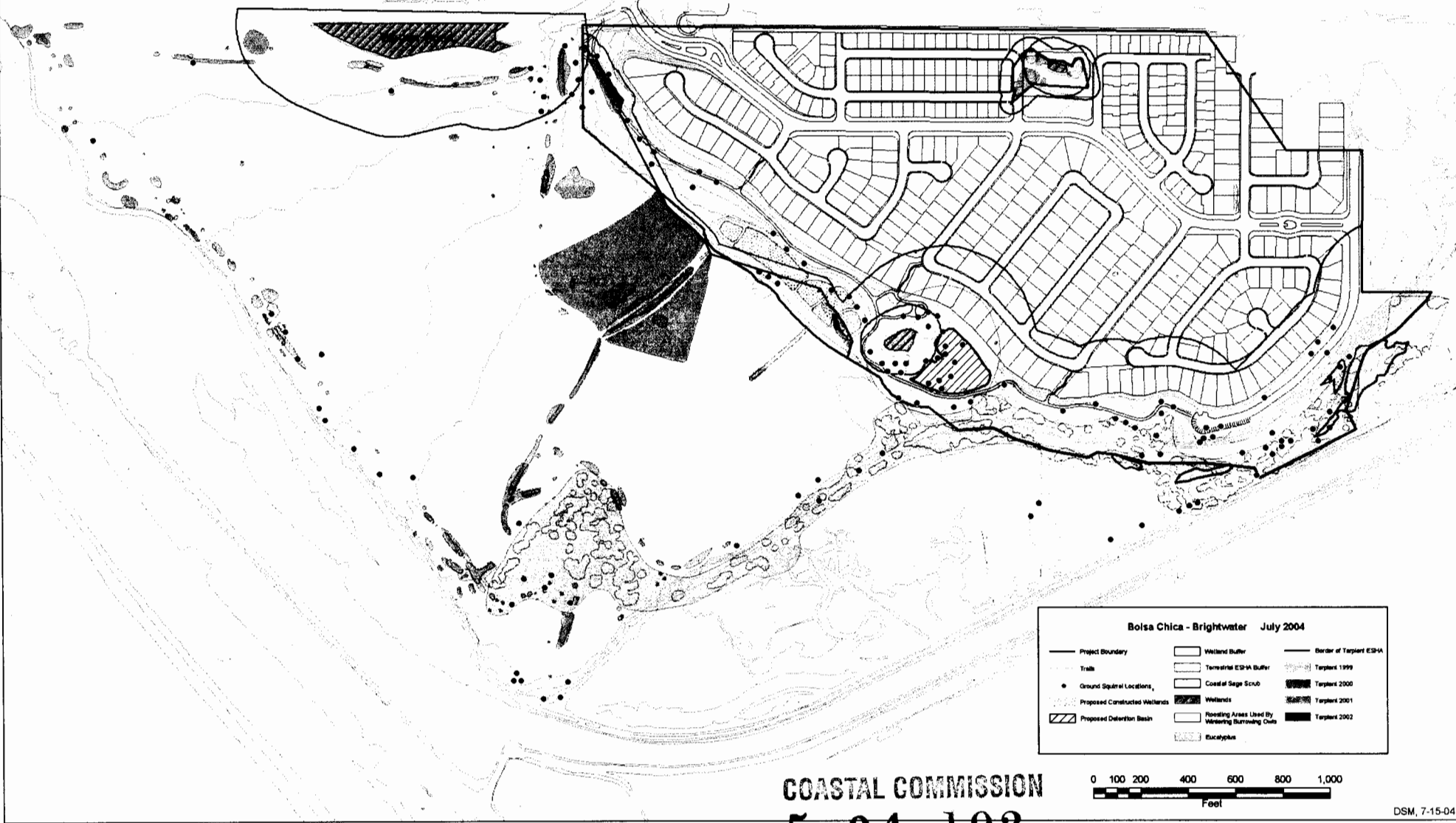


Figure 1: J. Dixon Memo re: Proposed Development on Bolsa Chica Mesa Dated 7/15/04

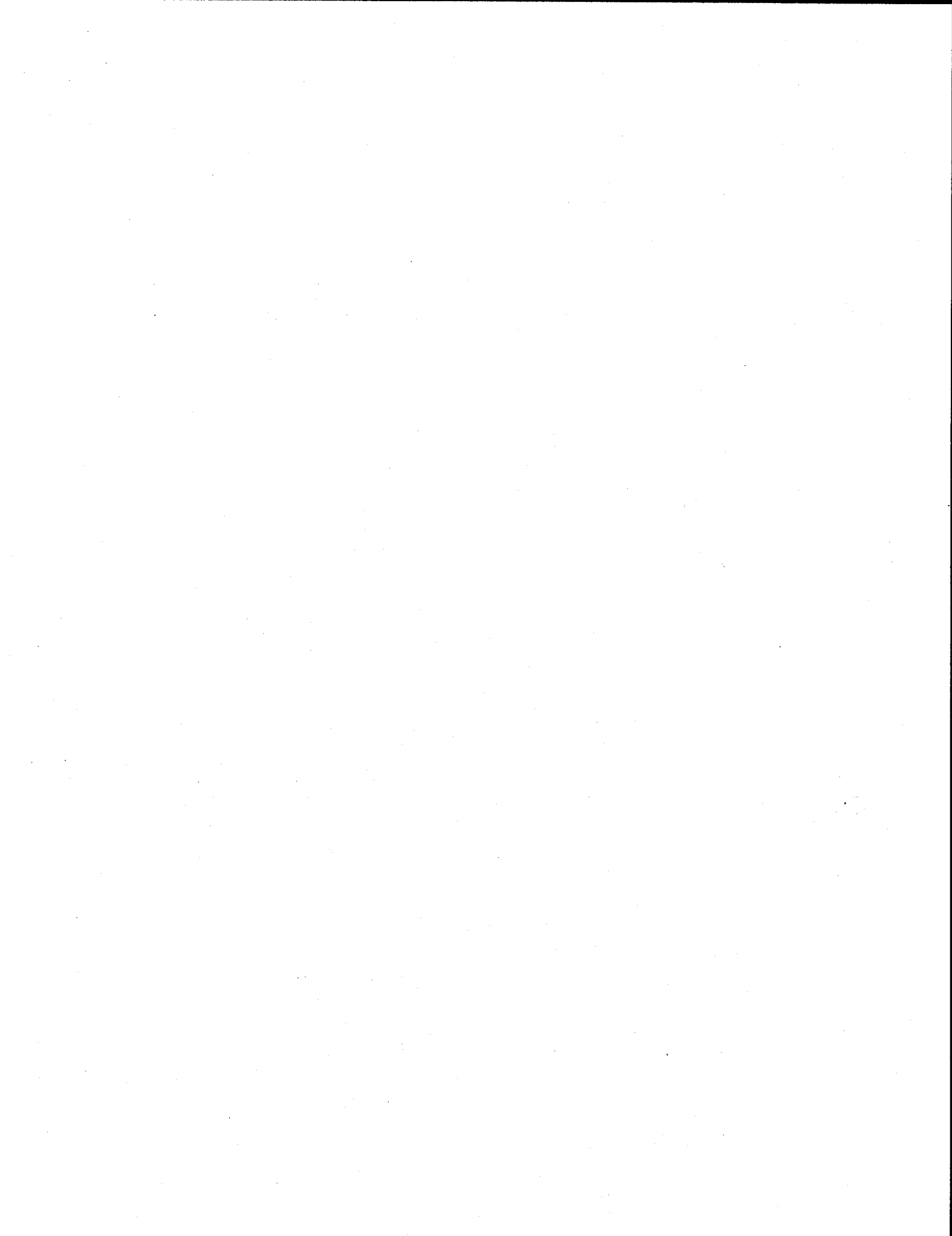


Bolsa Chica - Brightwater July 2004

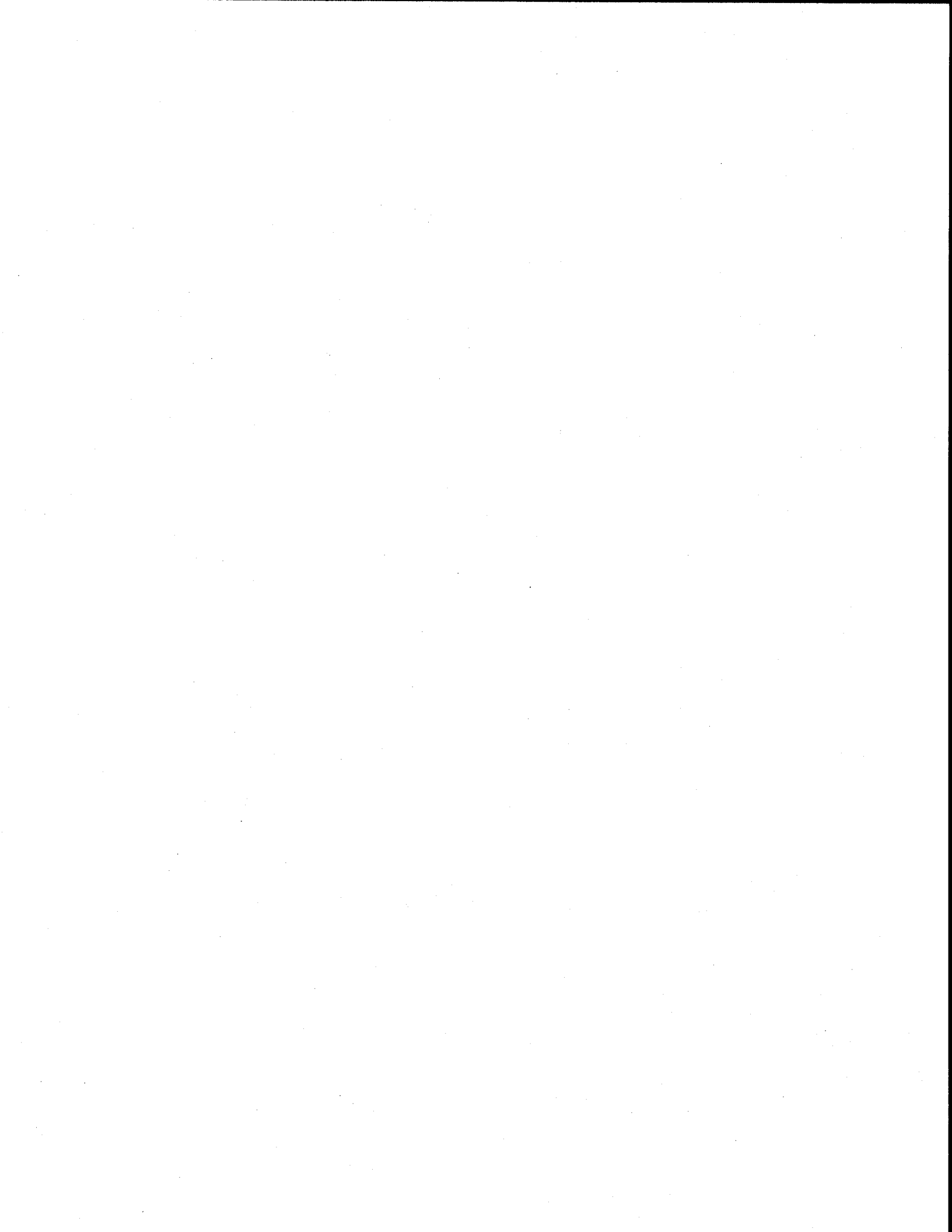
Project Boundary	Wetland Buffer	Border of Terrestrial ESHA
Trails	Terrestrial ESHA Buffer	Terrestrial 1999
Ground Squirrel Locations	Coastal Sage Scrub	Terrestrial 2000
Proposed Constructed Wetlands	Wetlands	Terrestrial 2001
Proposed Detention Basin	Roosting Areas Used By Wintering Burrowing Owls	Terrestrial 2002
	Eucalyptus	



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Letters from Organizations or
Individuals Commenting on
Aspects of the Project



Bolsa Chica



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November 20, 2002

Mr. Peter Douglas

Executive Director

California Coastal Commission

45 Fremont Street #2000

San Francisco, Calif.

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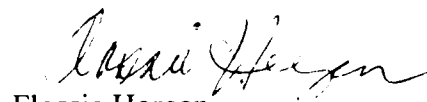
Dear Mr. Douglas,

Enclosed you will find the scientific report that the Trust commissioned. The title is *Evaluation of the Biological Significance of the Bolsa Chica Mesa*, by Reed Noss, Ted Case, and Robert Fisher.

The Trust has had many concerns about the lack of information regarding buffers and other issues at Bolsa Chica. We felt that the concerns needed to be addressed.

We hope that the Commission and staff will find this useful.

Sincerely,



Flossie Horgan
Executive Director

Endorsements:

Amigos de Bolsa Chica
Peninsula Open Space Trust
Sierra Club Angeles Chapter
Wildlands Conservancy
Sea and Sage Audubon
Surfrider Foundation
Coastwalk

City of Huntington Beach
Orange Coast League of Women Voters
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Tree Society

Huntington Beach Tomorrow
Huntington Beach Wetlands Conservancy
California Trails and Greenway Foundation
Rural Canyons Conservancy Fund
Ballona Wetlands Land Trust
Anza Borrego Foundation



EVALUATION OF THE BIOLOGICAL SIGNIFICANCE OF THE BOLSA CHICA MESA

Reed Noss, Dept. of Biology, University of Central Florida, Orlando, FL 32816-2368, 407-823-0975, rnoss@mail.ucf.edu

Ted Case, Dept. of Biology, University of California – San Diego, LaJolla, CA 92093, case@biomail.ucsd.edu

Robert Fisher, U.S. Geological Survey, 5745 Kearny Villa Drive, Suite M, San Diego, CA 92123, 858-637-6882, rfisher@usgs.gov

EXECUTIVE SUMMARY

The Bolsa Chica wetlands and mesa contain unique ecological values and offer scientific and educational opportunities that are not present elsewhere in southern California. Perhaps most significantly, Bolsa Chica is one of the last remaining areas in coastal southern California with a reasonably intact upland-wetland gradient, which is of high ecological importance and generally lacking in representation in reserves in the region. The Bolsa Chica wetlands and mesa exist in one of the major biological hotspots of the nation and the world. Although the Bolsa Chica ecosystem is not as rich in rare and endemic species – nor as pristine – as some other sites in southern California, it surpasses other areas in its scientific and educational opportunities related to ecological restoration.

Preservation and restoration activities and proposals at Bolsa Chica have focused on the wetlands. We suggest that increased effort be made to protect the bordering mesa. The Bolsa Chica mesa serves as a buffer zone for the wetlands, which have been a focus of considerable public interest and state expenditures and are of extremely high value for birds and other wildlife. The width of upland buffer needed to protect wetlands from changes in water quality from urban or agricultural runoff, or to provide habitat for species that use both uplands and wetlands, have not been studied in this area. However, studies elsewhere have shown that substantial upland buffers – sometimes on the order of 1 or 2 km – are needed to maintain the ecological integrity of wetlands. Moreover, the upland habitat is also used as habitat by wetland species when extreme high water events take place.

In summary, we offer the following conclusions:

- The wetland is a breeding site for the federally endangered species of Snowy Plovers and California Least Terns and the state endangered Belding's Savannah Sparrow. With suitable habitat restoration, and protection from predators, the wetlands could potentially support breeding of Light-Footed Clapper Rails.
- Bolsa Chica provides values that other areas in southern California do not, in particular, an opportunity to protect and restore a relatively intact coastal upland-wetland gradient and, in so doing, provide unique opportunities for science and education.

- The width of terrestrial buffer zone necessarily to protect the ecological integrity of the wetlands of Bolsa Chica cannot be determined from available data. However, consideration of studies conducted elsewhere, combined with the precautionary principle, suggest that the currently undeveloped mesa adjacent to the Bolsa Chica wetlands should be protected in its entirety and restored to natural vegetation.
- Despite being dominated by non-native and ruderal vegetation that developed after agricultural abandonment in the 1970s, the Bolsa Chica mesa has relatively high wildlife values. Several species, among them fence lizards, rattlesnakes, and several raptors, have high population densities. Bolsa Chica may support critical coastal populations for these species in southern California.
- The abundance of several species on the mesa may produce a variety of ecological benefits, including reduced incidence of Lyme disease, reduced nest predation resulting from coyote predation on mesopredators, and reduced fire ant invasion.
- If the mesa, or a significant portion of it, is lost to development, a number of undesirable ecological effects are likely, including reduced buffering of the wetlands and loss of coastal populations of several wildlife species.
- The value of the Bolsa Chica mesa as an educational resource to the human community of the region may be its greatest asset, with attendant social, economic, and scientific benefits.

INTRODUCTION

Biodiversity is not distributed randomly or uniformly across the landscape. Rather, no matter how we measure it, biodiversity tends to be concentrated in certain areas, which conservation biologists call “hotspots.” Southern California has been recognized in several analyses as a global hotspot of biodiversity, that is, a region with concentrated occurrences of rare and endemic species and communities whose continued existence is highly threatened by human activities (Noss and Peters 1995, Dobson et al. 1997, Ricketts et al. 1999, Chaplin et al. 2000, Myers et al. 2000).

For example, Chaplin et al. (2000) employed a rarity-weighted richness index to produce a contour map of the United States that highlights areas with large numbers of limited-range species – the peaks of rarity and richness. Southern California, including both coastal and inland habitats, is one of the five highest peaks in the U.S. Similarly, in a global analysis of biodiversity hotspots, Myers et al. (2000) located 25 regions that together comprise only 1.4% of the earth’s land surface, but hold an estimated 44% of all species of vascular plants and 35% of all species of vertebrates. Only three regions in North America – the California Floristic Province, Mesoamerica (including tropical regions of Mexico) and the Caribbean (including southern Florida) – are included in these global hotspots.

With financial resources and political capital limited, it makes sense for conservation agencies and organizations to direct their efforts largely to areas where they can get the

most bang for their buck. By definition, hotspots fall into this category. But if southern California as a whole qualifies as a hotspot, how should conservation agencies decide among sites in the region in determining protection and restoration priorities? The conventional approach is to conduct a hotspots analysis at a finer scale, i.e., to look for concentrated occurrences of endemic and other rare species and natural communities within the region. This approach might be supplemented by protecting the most pristine or highest-quality examples of all other communities native to the region. This combined approach is exemplified by the “last of the least and the best of the rest” strategy pursued for many years by The Nature Conservancy (Noss and Cooperrider 1994).

Yet the conventional approach of focusing on hotspots and the highest-quality examples of natural communities would leave many ecosystem types unrepresented in a protected areas network. Some of these ecosystems have suffered major declines, such that few or no high-quality examples remain (Noss et al. 1995). Hence, these ecosystems will be represented in a reserve network only through intensive ecological restoration.

The Bolsa Chica mesa and the adjacent wetlands are a case in point. By southern California standards, Bolsa Chica has relatively few rare taxa and is far from pristine. Nevertheless, it is relatively rich in species – especially birds – and offers one of the last opportunities to represent a relatively intact coastal wetland-upland gradient in southern California. Moreover, it has high archaeological importance, is a significant population reservoir for several native wildlife species, and has enormous scientific and educational value as a land laboratory for restoration ecology. Bolsa Chica should not have to compete for conservation dollars with true hotspots in southern California. It offers a different kind of value and uniqueness and, as such, is in a class of its own.

The following report represents the observations and considerations of the authors, based on 1) a reasonably extensive review of the literature (most of it unpublished) on the Bolsa Chica area; 2) discussions with local experts; and 3) a field visit to the site on June 10, 2002. We recognize several key values, sensitivities, and opportunities for the Bolsa Chica mesa, which we discuss in subsequent sections:

- The importance of uplands contiguous to wetlands
- Current and potential wildlife values of the mesa
- Ecological costs of loss of the mesa
- Opportunities for educational, social, economic, and scientific benefits with restoration of the mesa

THE IMPORTANCE OF UPLANDS CONTIGUOUS TO WETLANDS

One of the fundamental principles of landscape ecology is that the flux of water, nutrients, energy, and organisms across what humans perceive as boundaries between ecosystems is often significant (Forman and Godron 1986, Wiens 1991). The significance extends to the ecology of the individual, recognized ecosystems and to the larger, heterogeneous mosaic – the landscape. Hence, if we are interested in protecting a particular wetland, we must pay attention not only to that wetland, but to the larger

ecological mosaic in which it exists. That is, we must pay attention to ecosystem *context* as well as *content* in determining protection, restoration, and management priorities (Noss and Harris 1986).

The context of the Bolsa Chica wetlands has not received as much attention from planners as the wetland area itself. As noted by Schoenherr (2001), throughout southern California “the land surrounding marshes has largely been ignored in wetland preservation or restoration efforts at great ecological cost.” The state agencies and partners have spent many millions of dollars purchasing the Bolsa Chica wetlands, recognized for their value as habitat for the California least tern and other species, and have proposed to spend millions more on restoration of the wetlands. Yet, these expenditures will be for naught if loss of the adjacent mesa leads to significant and irreversible degradation of the wetlands.

The concept of upland buffer zones to maintain the ecological integrity of wetlands is not new to ecologists. Aldo Leopold (1941) noted that aquatic ecosystems are affected by activities taking place upstream or uphill in the catchment. Since that time, vegetated buffer strips adjacent to aquatic ecosystems have been frequently recommended as a way to reduce the deleterious effects of human land uses. In California, buffer zones have been suggested as a means to protect the upstream portions of catchments that contain aquatic reserves (Moyle and Yoshiyama 1994). In addition, the Statewide Interpretive Guidelines (p. 33) of the Coastal Act state that:

Wetlands are not isolated, independently functioning systems. Rather, they depend upon and are highly influenced by their associated watersheds and upland transition areas. Therefore, when the Commission determines that any adjacent area is necessary to maintain the functional capacity of the wetland, the Commission will require that this area be protected against any significant disruption of habitat values... These areas may be protected either by inclusion in a buffer area subject to land use restrictions or through provision of a buffer area around the ecological related adjacent area itself, or through other means.

The width of buffer zone needed to protect aquatic ecosystem integrity varies with many factors, including soil type, slope, and vegetation. Therefore, optimum buffer zone width must be determined on a site-specific basis (Saunders et al. 2002). This specificity has hampered the development of regulations to protect buffer zones. Hence, current federal and state regulations in the U.S. protect only the wetland itself or some arbitrarily defined portion of adjacent upland habitat. Ecologically meaningful designation of buffer zones must go beyond regulatory requirements, which generally means that land acquisition (both of uplands and wetlands) is a necessary component of wetlands protection.

One important function of terrestrial buffers adjacent to wetlands is to maintain water quality. Uplands often help filter nutrients such as nitrogen and phosphorous out of surface and subsurface waters draining into wetlands, thus helping prevent eutrophication. A review of Scandinavian studies showed that vegetated buffer zones decreased loads of total phosphorous from agricultural runoff water by 27-97%, with the

percentage retention increasing steadily with buffer zone width (Uusi-Kamppa et al. 2000). The status of particular species in wetlands can indicate whether or not an adjacent terrestrial buffer zone is functioning to maintain water quality. For example, in a North Carolina study, the fiddler crab (*Uca minax*) was discovered to be a good indicator of estuarine health, as it was found only in wetlands with low levels of nitrates due to the presence of adjacent upland buffers (George et al. 2001).

Species that use both aquatic and upland habitats, such as amphibians, turtles, and a variety of birds and mammals, have been used in several recent studies to determine desirable buffer widths. For example, Burke and Gibbons (1995) recommended terrestrial buffer zones of at least 275 m around an elliptical wetland to conserve populations of aquatic turtles. Dubois (1991) suggested that a buffer zone 100-500 m wide would protect the majority of amphibians using a watercourse. A summary of literature from many regions on terrestrial habitat use by pond-breeding amphibians concluded that a buffer zone of 164 m would protect 95% of the population of most species (Semlitsch 1998). However, the author suggested caution in applying this standard to more vagile species, which may require wider buffers. Moreover, because habitat conditions around most wetlands are not uniform, the directional component of animal movements should be considered in designing buffer zones, rather than simply drawing a circle of some width around a wetland (Dodd and Cade 1998).

Even species that are almost entirely marsh species (i.e. clapper rails) need the terrestrial habitat during times of high water levels. They often retreat to the edge of the uplands when the marsh is flooded and are at risk to predation by house cats and other mesopredators if there is no upland habitat refugium available.

Findlay and Houlihan (1997) summarized their findings on the effects of surrounding land use on species richness of plants, amphibians, reptiles, birds, and mammals in Ontario wetlands as follows:

...our results indicate that the strongest relationships between species richness and both road density and forest cover occur over distances up to 1000 to 2000 m from the wetland edge. Thus, we conclude that wetland policies, which either do not regulate adjacent land use or regulate only a narrow buffer zone around the wetland edge, are unlikely to adequately protect wetland biodiversity from certain types of human activities.

To our knowledge, scientific studies documenting the use of adjacent uplands by wetland-dependent species have not been conducted at Bolsa Chica. It is likely that critical ecological interactions such as pollination, seed dispersal, and predator-prey relationships depend on a reasonably intact upland-wetland gradient, yet these interactions have not been studied here or, very thoroughly, in similar systems. A precautionary approach in the absence of site-specific data is to consider the results from studies elsewhere and apply biologically conservative standards (i.e., risking to err on the side of the buffers too wide, rather than too narrow). Given the increasing evidence that very wide upland buffer zones are often required to maintain the ecological integrity of

wetlands and other aquatic ecosystems, we believe that the narrow (on the order of 100 m) buffer zones proposed by some people for Bolsa Chica are unlikely to be sufficient. Therefore, we recommend that the presently undeveloped mesa upslope from the wetlands be protected in its entirety and restored to natural vegetation.

CURRENT AND POTENTIAL WILDLIFE VALUES OF THE MESA

Our field observations confirmed previous reports that the mesa is dominated by annual grassland (predominantly non-native species) and ruderal (weedy) habitats, which replaced the agricultural fields that dominated the mesa until the 1970s. There is little native vegetation in the study area (LSA Associates 2001). However, the non-native habitats do hold value for wildlife. For example, the eucalyptus grove serves as nesting and roosting habitat for several species of raptors (e.g., nesting by the White-tailed Kite, a Species of Concern in California) and has been designated an Environmentally Sensitive Habitat Area by the California Department of Fish and Game, as has Warner Avenue Pond.

Birds are the best known species at Bolsa Chica, with abundant observations through Christmas Bird Counts and other amateur surveys. The bird species of greatest concern at Bolsa Chica are the wetland-breeding (1) western snowy plover, federally listed as threatened, which nests at South Island and the diked wetlands; (2) the California Least Tern, federally and state listed as endangered, which nests at South Island and forages in shoreline and open water habitats; and (3) the Belding's Savannah Sparrow, state-listed as endangered, which nests in pickleweed in the salt marshes (Chambers Group 2001). All of these species are shoreline and wetland birds, not birds of the uplands. Nevertheless, protection of the mesa undoubtedly would provide a buffer for these species against disruptive human activities and predation. Furthermore, with suitable habitat restoration, and protection from predators, the wetlands could potentially support breeding of Light-Footed Clapper Rails which breed nearby in the upper Newport Bay and the Seal Beach Wildlife refuge (Chambers Group 2001).

Generally, the wildlife values of the Bolsa Chica mesa, as opposed to the wetlands, have been little studied. Hence, we had to rely on a sparse gray (unpublished) literature and our own limited field observations to draw some tentative conclusions. For the most part, we were quite impressed with the wildlife values of the mesa, despite the disturbed and ruderal nature of the site. It is likely that the populations of several species on the mesa are regionally significant, such that the mesa potentially functions as a source population that sustains smaller, sink populations in the region (albeit, detailed demographic studies would be required to test this hypothesis). Source populations are defined by average annual reproduction exceeding mortality, such that the population grows and excess individuals (generally young) disperse out to other areas. Some of these other areas are sinks, where average annual mortality exceeds reproduction. By definition, sink populations are maintained only by immigration of individuals from sources (Pulliam 1988).

Among the species on the Bolsa Chica mesa with noticeably high population densities for the southern California coastal region are western fence lizard, Pacific rattlesnake, fiddler crabs (at Warner Pond), black-tailed jackrabbit, and several raptors. These high population densities are significant beyond the issue of viability for the species concerned. For example, fence lizards and alligator lizards are alternate hosts for the ticks that carry Lyme disease, yet they possess a chemical in their blood which kills the spirochete that causes the disease (Lane and Quistad 1998, Kuo et al 2000). A dense population of fence lizards may therefore reduce the incidence of Lyme disease in mammals, including humans. Raptors, rattlesnakes, and coyotes control populations of ground squirrels, which might otherwise expand to a level where they affect vegetation cover and increase erosion and exotic plant invasions. Ground squirrels also are reservoirs for plague and thus at high densities are a human health risk.

The red fire ant, *Solenopsis invicta*, has recently invaded southern California and has been spreading in out all directions, although it is still largely confined to urbanized or agricultural habitats which are more mesic. If the mesa were to be developed for housing, the increased irrigation and landscaping would favor fire ants. *Solenopsis invicta* has been implicated in nest failure for at least 7 species of birds and 9 species of reptiles (see Table 3 of Holway et al. 2002). Changes in arthropod communities associated with ant invasions may also contribute to declines of insectivorous vertebrates including loggerhead shrikes (Lymn and Temple 1991, northern bobwhites (Allen et al 1995), and horned lizards (Donaldson et al 1994, Suarez et al 2000, Fisher et al. 2002).

Because rodents are regular nest predators of ground-nesting birds, control of rodents by predators may also aid birds nesting within the Bolsa Chica wetlands, as well as on the mesa. Similarly, coyotes on the mesa likely control the opportunistic mesopredators (e.g., feral cats, raccoons, opossums, skunks, foxes) that have been shown to be serious predators of songbirds in southern California, to the extent that the local diversity of songbirds declines when they are not controlled (Soulé et al. 1988, Crooks and Soulé 1999). When coyote visitation to Seal Beach (or Anaheim Bay) National Wildlife Refuge was interrupted in the 1970s, the abundance of mesopredators (especially non-native red foxes) increased greatly, leading to heavy predation on Light-Footed Clapper Rails and other wetland birds (Zemal 1993, California Coastal Commission 2000).

Similarly, coastal southern California has seen an explosion in the population of American Crows (Unitt 1984, 2002), which are favored with increased urbanization. American Crows are known egg predators of least terns and other ground-nesting birds (Kruse et al 2001). Also, crows are able to cross the water barriers at Bolsa Chica to reach the small man-made islands where tern breeding is concentrated.

ECOLOGICAL COSTS OF THE LOSS OF THE MESA

It is unlikely that any species would go extinct globally as a result of the loss of the mesa. Only one sensitive plant species (southern tarplant, *Hemizonia parryi* ssp. *australis*) is known to occur in the area at present. This subspecies is considered imperiled (S2) by the California Natural Diversity Data Base. No species of plant or animal listed as threatened

or endangered by the U.S. Fish and Wildlife Service or the State of California is known to occur as a breeding population on the mesa at present (LSA Associates 2001, Chambers Group 2001). Nevertheless, the wildlife and biodiversity values reviewed in the preceding section would be greatly reduced if loss of habitat proceeds. It is not unlikely that populations of some species that we hypothesize are regional sources could be converted to sinks or go locally extinct. If so, this change could have regional-scale repercussions, in that other populations that are currently sinks would disappear altogether.

Most obvious, perhaps, if habitat take proceeds on the mesa, the wetlands that have been the focus of previous conservation efforts will be inadequately buffered. Nutrient levels can be expected to increase, causing eutrophication. The birds of concern in the wetlands, such as the western snowy plover and California least tern, can be expected to show declines due to increased nest predation and disturbance by human activities.

OPPORTUNITIES FOR EDUCATIONAL, SOCIAL, ECONOMIC, AND SCIENTIFIC BENEFITS WITH RESTORATION OF THE MESA

One of the potentially greatest values of the Bolsa Chica mesa is as an educational resource to the human community of Orange County and beyond. Along with the educational use of the area will come social and economic benefits in the form of employment in educational and service sectors. The restoration of the mesa will also provide scientific benefits for the young but rapidly growing field of restoration ecology.

Natural areas, protected for their biodiversity values and pristine qualities, offer well-documented educational opportunities. However, by definition such areas are sensitive to human uses, so cannot tolerate high densities of students. Bolsa Chica mesa, because it is not pristine, has a relatively higher capacity for educational uses. Moreover, restoration experiments open to educational use, besides individual graduate student research, are extremely rare. In Bolsa Chica, there is an opportunity to engage students from primary through graduate education in an ongoing experiment in restoration ecology. We are not aware of anyplace in southern California better suited for this educational opportunity.

The scientific value of the restoration on the Bolsa Chica mesa and wetlands is considerable. There are a variety of places in southern California with ongoing restoration of uplands or wetlands. Nevertheless, we know of no place better than Bolsa Chica for studying alternative restoration approaches along an upland-wetland gradient. We caution, however, that restoration and educational activities on the mesa and wetlands should be conducted prudently, so as to not diminish the biological values of the area. For example, restoration should be phased in slowly, site by site, to minimize disturbance to human-sensitive wildlife (e.g., coyotes, which require secure den sites). Such species should be provided with refugia in space and time where humans are not regularly present.

Adding to the educational and scientific values of the Bolsa Chica mesa is its archaeological significance. Indeed, site CA-Ora-83 is recognized as one of the most

important archaeological sites remaining in southern California, and has been recommended for the National Register of Historic Places. Hence, the Bolsa Chica mesa provides a unique opportunity to educate students on cultural as well as natural history. However, we were distressed to observe the highly intensive archaeological excavations currently taking place on the mesa, without concomitant reports of findings and specimens available to the public for research and education.

CONCLUSION

We summarize our findings in this report as follows:

- The wetland is a breeding site for the federally endangered species of Snowy Plovers and California Least Terns and the state endangered Belding's Savannah Sparrow. With suitable habitat restoration, and protection from predators, the wetlands could potentially support breeding of Light-Footed Clapper Rails.
- Bolsa Chica provides values that other areas in southern California do not, in particular, an opportunity to protect and restore a relatively intact coastal upland-wetland gradient and, in so doing, provide unique opportunities for science and education.
- The width of terrestrial buffer zone necessary to protect the ecological integrity of the wetlands of Bolsa Chica cannot be determined from available data. However, consideration of studies conducted elsewhere, combined with the precautionary principle, suggest that the currently undeveloped mesa adjacent to the Bolsa Chica wetlands should be protected in its entirety and restored to natural vegetation.
- Despite being dominated by non-native and ruderal vegetation that developed after agricultural abandonment in the 1970s, the Bolsa Chica mesa has relatively high wildlife values. Several species, among them fence lizards, rattlesnakes, and several raptors, have high population densities. Bolsa Chica may support critical coastal populations for these species in southern California.
- The abundance of several species on the mesa may produce a variety of ecological benefits, including reduced incidence of Lyme disease, reduced nest predation resulting from coyote predation on mesopredators, and reduced fire ant invasion.
- If the mesa, or a significant portion of it, is lost to development, a number of undesirable ecological effects are likely, including reduced buffering of the wetlands and loss of source populations of several wildlife species.
- The value of the Bolsa Chica mesa as an educational resource to the human community of the region may be its greatest asset, with attendant social, economic, and scientific benefits.

LITERATURE CITED

- Burke, V.J., and J.W. Gibbons. 1995. Terrestrial buffer zones and wetland conservation: a case study of freshwater turtles in a Carolina bay. *Conservation Biology* 9:1365-1369.
- California Coastal Commission. 2000. Staff report. Unpublished report. San Francisco, CA.
- Chambers Group. 2001. Final EIR/EIS for the Bolsa Chica Lowlands Restoration Project. Vol. 1. Irvine, CA.
- Chaplin, S.J., R.A. Gerrard, H.M. Watson, L.L. Master, and S.R. Flack. 2000. The geography of imperilment: targeting conservation toward critical biodiversity areas. Pages 159-199 in B.A. Stein, L.S. Kutner, and J.S. Adams, editors. *Precious heritage: the status of biodiversity in the United States*. Oxford University Press, Oxford, U.K.
- Crooks, K.R., and M.E. Soulé. 1999. Mesopredator release and avifaunal extinctions in a fragmented system. *Nature* 400:563-566.
- Dobson, A.P., J.P. Rodriguez, W.M. Roberts, and D.S. Wilcove. 1997. Geographic distribution of endangered species in the United States. *Science* 275:550-553.
- Dodd, C.K., Jr., and B.S. Cade. 1998. Movement patterns and the conservation of amphibians breeding in small, temporary wetlands. *Conservation Biology* 12:331-339.
- Donaldson W, Price AH, Morse J. 1994. The current status and future prospects of the Texas horned lizard (*Phrynosoma cornutum*) in Texas. *Texas Journal of Science* 46:97-113.
- Dubois, A. 1991. Les amphibiens des regions tropicales: facteurs de decline et d'extinction. *Cahiers d'Outre-Mer* 42:393-398.
- Findlay, C.S., and J. Houlahan. 1997. Anthropogenic correlates of species richness in southeastern Ontario wetlands. *Conservation Biology* 11:1000-1009.
- Fisher RN, Suarez AV, Case TJ. 2002. Spatial patterns in the abundance of the coastal horned lizard. *Conservation Biology* 16:205-51.
- Forman, R.T.T., and M. Godron. 1986. *Landscape ecology*. Wiley, New York.
- George, R.Y., G. Bodnar, S. Gerlach, and R.M. Nelson. 2001. Buffer zones promoting oligotrophication in golf course runoffs: fiddler crabs as estuarine health indicators. *Water Science and Technology* 44:591-598.

Holway, D.A., L. Lach, A. V. Suarez, N. D. Tsutsui & T. J. Case. 2002. The ecological causes and consequences of ant invasions. *Annual Review of Ecology and Systematics*. 33:181-233.

Kruse, C.D., H.F. Higgins, and B.A.V. Lee. 2001. Influence of predation on Piping Plover, *Charadrius melodus*, and Least Tern, *Sterna antillarum*: productivity along the Missouri River in South Dakota. *Canadian Field Naturalist* 115:480-486.

Kuo, M.M., R.S. Lane and P.C. Giclas. 2000. A comparative study of mammalian and reptilian alternative pathways of complement-mediated killing of the Lyme disease spirochete (*Borrelia burgdorferi*). *Journal of Parasitology* 86:1223-1228.

Lane, R.S. and G.B. Quistad. 1998. Borreliacidal factor in the blood of the western fence lizard (*Sceloporus occidentalis*). *Journal of Parasitology* 84:29-34.

Leopold, A. 1941. Lakes in relation to terrestrial life patterns. Pages 200-203 in E.J. Kormondy, editor. *Readings in ecology*. Prentice-Hall, Englewood Cliffs, NJ.

LSA Associates, Inc. 2001. Subsequent environmental impact report. Brightwater development project. Unpublished report.

Lynn N., and S.A. Temple 1991. Land-use changes in the Gulf Coast region: links to declines in Midwestern Loggerhead Shrike populations. *Passenger Pigeon* 53:315-25.

Moyle, P.B., and R.M. Yoshiyama. 1994. Protection of aquatic biodiversity in California: a five-tiered approach. *Fisheries* 19:6-18.

Myers, N., R.A. Mittermeier, C.G. Mittermeier, G.A. da Fonseca, and J. Kent. 2000. Biodiversity hotspots for conservation priorities. *Nature* 403:853-858.

Noss, R.F., and A. Cooperrider. 1994. *Saving nature's legacy: protecting and restoring biodiversity*. Island Press, Washington, D.C.

Noss, R.F., and L.D. Harris. 1986. Nodes, networks, and MUMs: preserving diversity at all scales. *Environmental Management* 10:299-309.

Noss, R.F., E.T. LaRoe, and J.M. Scott. 1995. *Endangered ecosystems of the United States: a preliminary assessment of loss and degradation*. Biological Report 28, USDI National Biological Service, Washington, D.C.

Noss, R.F., and Peters, R.L. 1995. *Endangered ecosystems of the United States: a status report and plan for action*, Defenders of Wildlife, Washington, D.C.

Ricketts, T.H., E. Dinerstein, D.M. Olson, C.J. Loucks, W.M. Eichbaum, D.A. DellaSala, K.C. Kavanagh, P. Hedao, P.T. Hurley, K.M. Carney, R.A. Abell, and S. Walters, S.

1999. A conservation assessment of the terrestrial ecoregions of North America. Volume I - The United States and Canada. Island Press, Washington, D.C.

Saunders, D.L. 2002. Freshwater protected areas: strategies for conservation. *Conservation Biology* 16:30-41.

Schoenherr, A.A. 2001. When wetlands are not enough. *California Wild*, Winter 2001:32-35, 53.

Semlitsch, R.D. 1998. Biological delineation of terrestrial buffer zones for pond-breeding salamanders. *Conservation Biology* 12:1113-1119.

Soulé, M.E., D.T. Bolger, A.C. Alberts, R. Sauvajot, J. Wright, M. Sorice, and S. Hill. 1988. Reconstructed dynamics of rapid extinction of chaparral-requiring birds in urban habitat islands. *Conservation Biology* 2:75-92.

Unitt, P. *The Birds of San Diego County*. 1984. San Diego Natural History Museum, San Diego.

Unitt, P. et al. 2002. Breeding bird atlas of San Diego
<http://www.sdnhm.org/research/birdatlas/index.html>.

Uusi-Kamppa, J., B. Braskerud, H. Jansson, N. Syversen, and R. Uusitalo. 2000. Buffer zones and constructed wetlands as filters for agricultural phosphorous. *Journal of Environmental Quality* 29:151-158.

Wiens, J.A. 1991. Ecological flows across landscape boundaries: a conceptual overview. Pages 217-235 in A.J. Hansen and F. di Castri, editors. *Landscape boundaries: consequences for biotic diversity and ecological flows*. Springer-Verlag, New York.

Zemba, R. 1993. The need for corridors between coastal wetlands and uplands in southern California. Pages 205-208 in J.E. Keeley, editor. *Interface between ecology and land development in California*. Southern California Academy of Sciences, Los Angeles.

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South Coast Region

JAN 20 2004

CALIFORNIA
COASTAL COMMISSION

Bolsa Chica Land Trust
5200 Warner Avenue, Suite 108
Huntington Beach, CA. 92649-4029

January 19, 2004

Teresa Henry
District Manager
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California Coastal Commission
200 Oceangate, 10th Floor
Long Beach, Ca. 90802-4416

RECEIVED

South Coast Region

JAN 20 2004

CALIFORNIA

COASTAL COMMISSION

Subject: Brightwater Development (CDP Application No. 5-02-375)

Dear Ms. Henry:

Thank you for the opportunity to comment on the Coastal Development Permit for the Brightwater Development Project in Orange County, Ca. (CDP Application No. 5-02-375). These comments are submitted on behalf of the Bolsa Chica Land Trust.

Background

The proposed Coastal Development Permit (CDP) would allow the development of 379 residential units, an underground water reservoir, and recreation/conservation open space on approximately 105 acres on the upper bench of the Bolsa Chica Mesa in Orange County, California. In July 2002, the Orange County Board of Supervisors approved a Master Site/Area Plan, Project Site Development Plans, and Vesting Tentative Map No. 15460 in furtherance of the proposed development. At that time, the Board of Supervisors also certified Subsequent Environmental Impact Report (SEIR) No. 551, which is an attachment to the Coastal Development Permit application submitted by the applicant, Hearthside Development.

Over the years, numerous coastal planning efforts have ensued for the Bolsa Chica. Most recently, in November 2000, the Coastal Commission approved a modified Local Coastal Program (LCP) for the entire Bolsa Chica Mesa. This approval permitted development of the upper bench of the Bolsa Chica Mesa while preserving the lower bench as open space. In its approval, the Commission recognized the value of resources on the upper bench, but weighed impacts on these resources against the benefit to be gained from preserving the lower bench. The County of Orange failed to accept the LCP as approved by the Commission, and the LCP approval therefore became of no effect.

Current Application

The Current application fails to answer the question: What is the true scope of the proposed project? The applicant is now apparently seeking to gain approval of a development plan for just the upper bench, although the proposed project is located on legal lots that extend onto the lower bench. Because, on the one hand, the application only seeks approvals for upper bench development, but, on the other hand, the developer has for years consistently in court (including most recently in Signal Landmark; Hearthside Homes, Inc. v. California Coastal Commission and County of Orange, Superior Court of California, County of San Diego, Case No. GIC 764965), in public, and before this Commission repeated its intention to build on the entire Mesa, the Land Trust, the public and the Commission are left to wonder -- what exactly is the project here?

Lucy Dunn, executive vice president of Hearthside Homes, the project developer, was quoted in a *Los Angeles Times* discussion of Brightwater on August 14, 2001 stating: "We're not conceding the lower [tier]... This is a way to move forward with part of the project".

The developer advertises in its Petition in the above-referenced action that the entirety of the Mesa "is the ideal place for new development." (Petition p. 10 – emphasis in original)

The developer asserts many reasons why development on the entire mesa is so "ideal." Here excerpted are just two:

it is ideal because:

- the mesa is physically suitable, being comprised of two relatively flat plateaus which will require little grading...
 - Access is outstanding: the mesa fronts on a major arterial highway (Warner avenue) which intersects with pacific coast highway"
- (Petition at p. 10-11)

Further, Orange County in its active support of the developer's claims in the above-referenced action states:

The County remains committed to that program [the development for the Mesa reflected in its rejected LCP] and is ready to proceed with it." (Response of Real Party County of Orange to Demurrer, Nov. 26, 2001, p. 3)

Maintaining the development as planned [meaning, as set forth in its rejected LCP] is important to the County. (Response of Real Party County of Orange to Demurrer, Nov. 26, 2001, p. 5)

Elsewhere, the County reiterates its knowledge that the developer wants to do more on the Mesa than build "Brightwater" and reiterates that it too wants more than the analyzed project to be built on the Mesa:

The Commission wants severe restrictions on the use of the Mesa. The County wants homes there. (Response of Real Party County of Orange to Demurrer, Nov. 26, 2001, p. 6)

Thus, both the applicant and Orange County, which is the local planning agency, have verbalized a clear intention to develop homes on both the upper and lower benches of the Bolsa Chica Mesa.

As additional evidence of the true extent of the actual project, the developer sought and obtained, over the objection of the City of Huntington Beach and the Land Trust, Public Utilities Commission approval to extend a nearly seven mile long water and wastewater pipeline weaving through several jurisdictions (Seal Beach, Westminster and Huntington Beach) to serve over one thousand proposed homes on 183 acres; meaning, the entire mesa. (PUC Decision 01-02-043) Key to the PUC's decision to permit such a radical step (when the City of Huntington Beach literally has an available pipeline right across the street from the Mesa) was that

[a]lthough the Coastal Commission's approval of the Bolsa Chica LCP significantly reduced the allowable acreage for the development, the number of residential units approved remained the same. Thus, the pipeline extension project continues to be appropriate to meet the public need for water.¹

The current application apparently contemplates a reduced reservoir, from about 4 million gallons designed to serve over one thousand homes, to about 2 million – designed to serve 387 homes? This “reduction” is further evidence that the application as submitted constitutes only “part of the project”, just as Lucy Dunn concedes.

Finally, the CDP application maps and makes reference to Areas 3A, 3B, 4B, 7-1 to 7-4 and 8. What of Areas 1, 2, 5, and 6? Aren't they “part of the project”? What of plans for these areas? Are they located on the lower bench?

As if in answer this last question, SEIR 551 asserts (P.2-11) that “No development is proposed on the lower bench or in the Bolsa Chica Lowlands.” While this statement may be explained away as applicable only to the immediate time frame, other materials submitted by the applicant imply the precise opposite--that the developer intends to preserve the lower bench as open space.

For example, the May 1, 2003 Translocation Plan for Southern Tarplant, Brightwater Development Project, prepared by LSA Associates, Inc. (Brightwater CDP Attachment 23) states that:

...this plan provides for the translocation of the southern tarplant from within the limits of the proposed development area to an identified open space area to be *permanently preserved on the lower portion of the Bolsa Chica Mesa*. [emphasis added]

¹ Indeed, if it does not so clarify that point, at a minimum, the assumptions underlying the PUC's approval of the pipeline are moot, and a new PUC proceeding is required.

How can it be asserted that open space for tarplant translocation will be “permanently preserved on the lower portion of the Bolsa Chica Mesa” when the lower portion of the mesa is not even included in this application? Does the applicant intend to commit to preservation of the lower bench as a part of this application? If that were indeed the case, the developer—and the Brightwater project application-- would certainly have the support of the Bolsa Chica Land Trust.

In the meantime, however, unless and until the developer definitively clarifies its intent as to the lower bench, the Commission cannot approve the proposed permit for the simple reason that it does not know what it is approving: A stand alone project that preserves the lower bench and brings final repose to Bolsa Chica planning or just the first phase of a broader mesa development that will raise the exact same issues as the prior LCPs?

The LSA Associates, Inc. Analyses of Potential Effects of Development of the Upper Terrace of Bolsa Chica Mesa on Avian Predation on Nesting Waterbirds in the Bolsa Chica Wetlands (Brightwater CDP Attachment 20) repeatedly refers to “a slight loss of habitat on the upper mesa” for raptors that “probably would be inconsequential” in its effects on predation of nesting waterbirds at Bolsa Chica. The study concludes that:

Residential development of the upper terrace of Bolsa Chica Mesa would result in lost habitat for some of the predatory species and enhanced habitat for others... the proposed development on the Bolsa Chica Mesa is not expected to have a significant effect on nesting waterbirds in the wetlands.

This flies in the face of conclusions reached by the several raptor authorities reporting to the Coastal Commission in November 2000, as discussed below. The only way such a statement makes any sense at all, when considered in the light of the recognized authorities, is if the stated “residential development of the upper terrace” constituted the whole of any development ever contemplated for the entire Bolsa Chica Mesa. Is that what the applicant’s biologist was given to understand?

The tract map itself appears to anticipate no future development of the lower bench. As currently proposed, the Brightwater project would provide no connection to the lower bench. No streets within the Brightwater project appear designed to extend to the lower bench. Thus, access would ostensibly be limited to Warner Avenue.

As stated in the attached October 4, 2001 letter from Howard Zelefsky, Huntington Beach Director of Planning:

The City has always maintained the position that only one vehicular access point from any development in the Bolsa Chica area to Warner Ave. would be acceptable. This reduces the points of ingress and egress along Warner Ave. minimizing impacts to traffic flow on this major arterial. As proposed, development on the upper mesa would have one connection to Warner Ave. and

any future development on the lower mesa would have another connection. This is unacceptable...

In fact, public safety considerations require multiple access points for any residential development consisting of more than a very few homes. Thus, it is likely that residential development of the lower bench would require *more* than one additional connection to Warner Avenue. This would be difficult due to the location of Warner Pond adjacent to the road along a substantial portion of the lower bench. This is further complicated by the grade and the curve of the road.

On the other hand, could the applicant be anticipating provision of access to the lower bench via Bolsa Chica Road? Will the areas now designated for public parking, buffers for environmentally sensitive habitat areas and even the sensitive habitat areas themselves eventually be sacrificed to provide access to the lower bench? Will the proposed "multi-use trail" now planned for pedestrian and bicycle use be widened to serve as an access road for development on the lower bench?

Such a scenario is particularly jarring when one considers the following statements in SEIR 551 regarding a perimeter road which would, to a large extent, follow the same general alignment as any accessway from Bolsa Chica Road to the lower bench.

In its recommendations on a Bolsa Chica LCP in November, 2002, the Coastal Commission proposed a similar [perimeter] road for the purpose of maximizing public access to the perimeter trail, to separate private residential land use from public areas, to preserve scenic views of the lowland and the ocean, and to allow for public safety and emergency vehicle access to the public areas, with parallel parking permitted along the road.

Implementation of the perimeter access road will introduce a public road adjacent to the Eucalyptus ESHA and the pocket lowlands, resulting in greater noise and light intrusion impacts, and leaving less area for trails and pedestrian staging. Unfettered public access to the perimeter open space areas will also adversely impact the native plant revegetation that will take place on the perimeter of the project... Additionally, the size and use of the constructed wetlands would likely increase because of more runoff from a larger impervious surface area along the transition area... The impacts associated with the perimeter access road are more significant than the preferred circulation system for the proposed project, and the proposed project's circulation system will better meet the objectives identified by the County (and conceivably by the Coastal Commission). Therefore this project alternative will not be further analyzed.

One is left to wonder how, then, the applicant imagines access to any future development of the lower bench will be accomplished. This points up the folly of considering what is essentially one project in such a piecemeal fashion.

Balancing of Resource Needs

Planning for the Bolsa Chica Mesa as one entity--instead of using the present piecemeal approach-- would allow for greater balancing of environmental impacts and benefits. This could result in improved protection of coastal resources. As stated in Section 30007.5 of the Coastal Act:

The Legislature further finds and recognizes that conflicts may occur between one or more policies of the division. The Legislature therefore declares that in carrying out the provisions of this division such conflicts be resolved in a manner which on balance is the most protective of significant coastal resources. In this context, the Legislature declares that broader policies which, for example, serve to concentrate development in close proximity to urban and employment centers may be more protective, overall, than specific wildlife habitat and other similar resource policies.

The Commission cited this policy in their November 2000 Coastal Commission staff report for the Bolsa Chica Local Coastal Program Land Use Plan Amendment No. 1-95/Implementing Actions. This policy created the framework for the Commission's decision to concentrate development on the upper bench of the Bolsa Chica Mesa. The negative effects on resources on the upper bench were balanced by the benefits to be gained by preserving the large intact area of the lower bench. For example:

Concentrating residential development on the upper bench will have some adverse biological impacts... However... concentrating development on the upper bench of the mesa in close proximity to existing developed areas and conserving the lower bench of the mesa is more protective overall of significant coastal resources than protecting each specific habitat area in conjunction with development of the entire mesa.

And, as an explanation for requiring only minimal buffers:

The 100 foot buffer and the fifty foot buffers are appropriate in this case for the following reasons... The Commission finds that residential development must be concentrated on the upper bench of the Bolsa Chica Mesa. Limiting residential development to the upper bench preserves the lower bench as a component of the overall Bolsa Chica wetland/upland ecosystem. The preservation of the lower bench as natural open space is vital to the functioning of the existing ESHA resources which are principally found on the lower bench. Though buffers on the upper bench will not totally eliminate the adverse impacts of the residential development, they will still minimize the disturbance that would be created...

This same balancing of resource impacts and opportunities was cited by Chuck Damm, Senior Deputy Director of the Coastal Commission, in his review of planning efforts for the Bolsa Chica speaking before the Commission on November 16, 2000:

Back in early 1996... The situation then was staff was recommending that 900 acres of lowlands be dedicated. We were recommending that the residential development be clustered on the entire mesa, upper bench, and lower bench, but we were doing so because we were recommending that there be 900 acres of lowlands dedicated...

It should not be interpreted that meant staff did not feel that there was no environmental issue associated with the Bolsa Chica Mesa. In fact, the record will support that there was much testimony... as to the importance of the upland habitat on the Bolsa Chica Mesa... The staff simply felt, at that time, it was not reasonable to require further clustering of the development when we were already asking that the residential development in the lowlands be clustered on the mesa.

This LCP also required the major property owner... to spend approximately \$50 million on the actual wetland restoration for the lowlands.

Subsequently, the lowlands were purchased by the State of California. In addition, the principal property owner, now Hearthside Homes, successor to the Koll Company which was then the applicant, was relieved of the financial obligation for wetland restoration.

Thus, under conditions as they exist today, any balancing of resource values must be limited to that property the applicant or its predecessor, Koll, has not already sold. This would include the entire Bolsa Chica Mesa. However, the applicant has attempted to bisect consideration of the habitat units comprising the Bolsa Chica Mesa obviating the opportunity for balancing of resource values and resulting in a decidedly inferior development proposal.

Biological Resources and Coastal Act Requirements

Section 30240 of the Coastal Act requires:

- (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

- (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas

As noted by Steve Rynas, Coastal Commission Orange County Area Supervisor, in a January 17, 2002 letter to Grace Fong of Orange County Environmental and Project Planning Services Division:

The fundamental problem with the preferred alternative of the DSEIR [Brightwater] is that it is inconsistent with Section 30240 of the Coastal Act, which protects environmentally sensitive habitat areas (ESHA)....

Comments submitted to the Commission from the scientific community during the Bolsa Chica LCP process document that the Bolsa Chica Mesa and the adjacent lowlands constitute one integrated ecosystem. Consequently specific areas can not simply be protected based on one defined biological issue such as preservation of the Eucalyptus grove for the benefit of raptors. Therefore, to maintain the functionality of the Bolsa Chica Mesa as an integrated ecosystem (large enough to provide a wide range of habitat values) a sufficient area must be protected as natural open space. Furthermore, current research dictates that the area to be preserved for conservation must be connected to larger areas of habitat (such as the lowlands), that it should not be fragmented, and that it should be concentrated to minimize the perimeter to area ratio.

It is worth noting, based on this scientific evidence, that the Commission concluded, in its November 2000 decision on the Bolsa Chica LCP, that residential development must be concentrated on the upper bench of the Bolsa Chica Mesa in order to preserve the lower bench as conservation open space.

Commission staff strongly recommends that the FSEIR incorporate the Commission's decision on the Bolsa Chica LCP in its alternatives analysis. We note that it is an alternative that could be found consistent with the Coastal Act specifically, this new alternative requires concentration of residential development on the upper bench, with the lower bench preserved as open space within one comprehensive development plan. Moreover, this alternative must include provisions that no development can occur on the Mesa in the absence of a conservation plan for the entire Mesa. The Commission's environmental review process has been certified by the Secretary of Resources as functionally equivalent to the EIR process. Consequently, based on Section 21080.5(d)(2)(A) of the California Public Resources Code, the Commission cannot approve or adopt a proposed activity if there are feasible alternatives or feasible mitigation measures which would substantially lessen any significant adverse effect the activity may have on the environment. Based on the policies of the Coastal Act, concentrating residential development on the upper bench in order to preserve the lower bench as conservation constitutes a feasible alternative to the currently proposed project, containing mitigation that would substantially lessen any significant adverse effects on the environment.

Habitat Buffers

The proposed project provides fragmented habitat, habitat that generally maximizes the perimeter to area ratio due to its elongated configuration, minimal buffers and buffers of questionable value due to the placement of recreational uses in the buffer areas. The importance of adequate buffers has been repeatedly reiterated and cannot be reiterated too often.

As stated by Peter Bloom in his October 20, 2000 letter to Susan Hansch, Costal Commission Chief Deputy Director:

The rigors of migration are hard on birds and in the case of predatory birds, being disturbed prematurely several times before capturing prey after hunting for several hours, can in the long term be terminal if it happens frequently enough ...If a hiking trail were placed within 50", paralleling the eucalyptus ESHA, I would predict that even the Red-shouldered Hawk, normally a very tolerant raptor would also stop nesting...

And Brian Walton in his October 20, 2000 letter to Susan Hansch, Costal Commission Chief Deputy Director:

If raptor use is desired, then the original plan with passive recreation is unacceptable. The modified plan with no trails but with enhancement would still be subject to much fight/flight distance pressure and only the final modified plan [preservation of the lower bench] seems to offer hope of continued use of the area for breeding.

The applicant proposes to establish a supposed "Upland Habitat Park" adjacent to the eucalyptus and wetland ESHAs located along the bluffs on the upper bench. As discussed below, vegetation in the habitat park will be modified from its natural condition both as to species included and density of growth. Permitted activities within the "Upland Habitat Park" include hiking, bicycle riding, parking, and access for emergency and maintenance vehicles. At one location, the proposed multi-use trail/access road is mapped immediately adjacent to the eucalyptus ESHA, with no buffer at all.

The paltry nature of the proposed buffers is illustrated by the proposed fuel modification plans which designate areas near homes where fuel modification would be pursued to protect the proposed homes from brush fires. The fuel modification areas, as mapped in the applicant's CDP submittals, extend well into the proposed buffers, and even into the habitat itself.

Even worse, the buffer for the wetland near Los Patos Avenue is quite small and includes a boardwalk and gazebo barely fifteen feet from the wetlands. Picnicking areas are delineated approximately thirty feet from the wetland, a tot lot and wading pool are mapped within ninety feet, and a recreation building is to be provided at about one hundred feet from the resource. Not only does this fail to buffer the habitat consistent with the provision of Coastal Act Section 30240(b), but the provision of such minimal buffers also conflicts with Section 30231 which calls for natural buffers to reduce impacts on water quality and wetlands.

This is unacceptable and illegal. Buffers for all ESHAs must be a minimum of one hundred meters as previously recommended by the California Department of Fish and Game (Environmentally Sensitive Habitat Areas at Bolsa Chica, June 3, 1982) and the U.S. Fish and Wildlife Service (U.S. Fish and Wildlife Service Special Report, Bolsa Chica Area, May 1979). Further, no recreational uses or fuel modification at all should be permitted in the fifty meters

closest to the resource, with any human activity within buffer areas to be avoided to the extent feasible.

Even a one hundred meter buffer may be considered ineffective by some standards. Professor Scott Findlay of the University of Ottawa has recommended that buffers of at least 150 meters be provided at Bolsa Chica, with the statement that a buffer of one hundred meters is not likely to be adequate. Findlay has also stated that research indicates that wetlands may be affected by development as far distant as a kilometer. This occurs due to water quality impacts and invasion by non-native species.

As noted in the attached report by Noss, Case, and Fisher, buffer zones of 275 meters, 100 to 500 meters and 164 meters have been recommended by various studies. The report stated:

Given the increasing evidence that very wide upland buffers are often required to maintain the ecological integrity of wetlands and other aquatic ecosystems, we believe that the narrow (on the order of 100 m) buffer zones proposed by some people for Bolsa Chica are unlikely to be sufficient. Therefore, we recommend that the presently undeveloped mesa upslope from the wetlands be protected *in its entirety* [emphasis added] and restored to natural vegetation.

Although in its November 2000 action the Coastal Commission assented to lesser buffers in some locations, this was in recognition of the preservation of consolidated habitat on the lower bench. The proposed project contains no such guarantees and should not be permitted to piggy-back the reduced buffering onto the new project if it includes only a portion of the mesa.

Raptor Forage Areas

A primary concern has been the provision of adequate upland forage for raptor species, in order to minimize predation on sensitive wetland species. All three raptor biologists retained by the Coastal Commission in 2000, Brian Walton of the UC Santa Cruz Predatory Bird Research Group, Ron Jurek of the California Department of Fish and Game and Peter Bloom of the Western Foundation for Vertebrate Biology (reports attached), concluded on an independent basis that retention of a large, consolidated habitat at Bolsa Chica Mesa would best address problems with raptor predation and maintenance of high interest species. This led to the decision to move all development to the upper bench.

Even if the eucalyptus ESHA were removed from the Brightwater property, this would still be an issue, because, as noted by Ron Jurek in his October 20, 2000 letter to the Commission, certain raptors such as kestrels have been noted to prey on chicks over a mile from the kestrel nesting site. Thus, elimination of the eucalyptus ESHA would not only leave the problem of predation in the wetlands unsolved it would eliminate habitat for sensitive species as well. Predation by crows and ravens has also been noted to be a problem.

In recognition of this impact, SEIR 551 recommended, and the Orange County Board of Supervisors adopted, the following measure:

Prior to issuance of grading permits, the applicant shall establish a trust fund in an amount to be determined in consultation with CDFG, to assist in the ongoing management of raptor predation upon nesting sensitive target species of other sensitive species after the implementation of residential development on the Bolsa Chica Mesa. This fund will be available to CDFG and USFWS if it can be demonstrated by DEFG and USFWS, to the satisfaction of the County Environmental and Project Planning Division, that the residential development results in an increase in raptor predation. If no such effect is demonstrated within five years of completion of project construction, the trust fund shall revert to the Applicant.

It should be noted that Department of Fish and Game personnel requested that the fund be maintained for seven years, longer than the five years specified in the SEIR.

Now, two years later, the applicant has submitted a study prepared by LSA Associates which indicates that the primary avian predators on wetland species at Bolsa Chica are kestrels, crows, and ravens. The study concludes that although development of the mesa could have some effect on certain predators, with continued trapping by the California Department of Fish and Game the problem can be controlled.

This information is used to justify non-implementation of the above condition. The applicant claims, in its Response to Requests from Commission Staff to Hearthside Homes in a Letter dated December 5, 2002, that:

Mitigation Measure 9.1 was originally included in EIR 551 for the Bolsa Chica LCP. Certified in 1996, EIR 551 ... concluded that "the loss of raptor foraging habitat in the uplands may cause some raptors to prey on nesting birds in the wetlands." In order to maintain consistency between the two environmental documents, Mitigation Measure 9.1 was included in SEIR 551 for the 388-units Brightwater project. Since the certification of SEIR 551, additional research has been conducted... As a result of this additional research, Hearthside Homes believes that Condition # 35 [Mitigation Measure 9.1] is no longer necessary.

It should be noted that SEIR 551 was prepared at the direction of the applicant, was submitted on behalf of the applicant and subject to additional review by the applicant during the public review period. Now, long after SEIR 551 was certified, new information is presented to release the applicant from responsibility for implementing an adopted condition. The applicant suggests that no mitigation will be necessary on the applicant's part as long as the California Department of Fish and Game continues to trap at the public's expense.

The applicant claims that the mitigation measure was a "carryover" from the original EIR 551. They claim they were more concerned with maintaining consistency with an old, out-dated EIR than with accurately presenting and analyzing the environmental impact of their proposed Brightwater project—in the EIR they themselves commissioned. Has the applicant then knowingly presented information they believe to be inaccurate in other portions of SEIR 551 as well? In other documents as well?

In any case, other impacts and mitigation measures contained in EIR 551 were not carried over. These deal with factors as diverse as provision of utilities to oil spill cleanup. This "carryover" would certainly not be ascribed to an artifact of word processing inasmuch as the two documents were prepared by different consultants. Even stranger, a review of the old Revised EIR 551 for the Bolsa Chica LCP reveals that, while the potential for raptor foraging in the wetlands was acknowledged, mitigation was to be as follows:

If raptors begin to prey upon nesting sensitive target species or other sensitive species, the Applicant shall consult with CDFG and USFWS and prepare a relocation program for these raptors.

Bolsa Chica Land Trust urges that, if the Commission were to vote to approve the Brightwater project, that adequate open space be maintained to provide for raptor foraging in order to minimize predation of in the wetlands, optimally through preservation of the lower bench, and that Mitigation Measure 9.1 above be adopted with the trust fund to be maintained for seven years as requested by Fish and Game.

Upland Values

The proposed project appears to dismiss the value of upland habitat. However, as noted in the November 2, 2000 Coastal Commission staff report:

The Bolsa Chica Mesa is considered ecologically valuable. According to both the California Department of Fish & Game and the US Wildlife Service, the Bolsa Chica Mesa and the lowland wetlands are biologically interdependent. These biological interdependencies are vital to maintaining biological productivity and diversity. Residential development on the Mesa will impair biological productivity of the Mesa itself and the adjacent lowland wetlands.

And:

The maintenance of ecological links between uplands and wetlands is thought to be of extreme conservation importance...studies...have demonstrated that uplands and wetlands should be considered integrated parts of a larger ecosystem...The importance of upland pollinators for plants like saltmarsh bird's beak and saltmarsh goldfields has also become widely recognized. As more is learned about the biology of native solitary bees, more examples will no doubt be discovered. The presence of the wetland-upland complex is also critical for many species of insects...without the appropriate mix of habitats adjacent to one another, such species will disappear from coastal ecosystems. Therefore, significant blocks of upland habitat should be maintained adjacent to coastal wetlands...

Thus, apart from any intrinsic value in the uplands themselves, which value does indeed exist, preservation of uplands is necessary to fulfill the purposes of Section 30240 of the Coastal Act

which requires that habitat values be preserved and that development in areas adjacent to environmentally sensitive habitat areas be sited and designed to prevent impacts which would significantly degrade those areas and be compatible with the continuance of those habitat and recreation areas.

Coastal Sage Scrub

The uplands themselves provide useful habitat on their own. The upper bench contains 1.36 acres of coastal sage scrub habitat, which is widely recognized to be the fastest disappearing habitat in southern California, due to ongoing development pressures. In fact the U.S. Fish and Wildlife Service has characterized the Coastal Sage Scrub community as "the most threatened upland vegetation type in southern California".

Although definitions of the various plant communities vary, it is generally agreed that dominant shrub species in coastal sage scrub are California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), coastal prickly-pear (*Opuntia littoralis*), toyon (*Heteromeles arbutifolia*), laurel sumac (*Malosma laurina*), lemonadeberry (*Rhus integrifolia*), sugarbush (*R. ovata*), and fuchsia-flowered gooseberry (*Ribes speciosum*). (Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California; Munz, P.A. 1974. A flora of southern California). Coastal sage scrub supports a diverse fauna, including many species that are in decline. Among these are the California gnatcatcher (*Polioptila californica*) and coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*). On the Brightwater site, the coastal sage scrub community is dominated by salt bush (*Atriplex* spp.), prickly pear and Encelia.

While most of the coastal sage scrub on-site is said to be "preserved", a review of grading plans reveals that coastal sage scrub on-site is located in an area slated for grading. Thus, it will be removed and replanted. If the project were to move forward, any removal and replanting should be conducted at typical re-planting ratios required for this habitat.

The applicant proposes to establish an open space area known as an "Upland Habitat Park" which will include 1.50 acres of coastal sage scrub and 12.36 acres of coastal bluff scrub. Coastal bluff scrub habitat is similar to the coastal sage scrub but subject to slightly more marine influence. The "Upland Habitat Park" will also include ESHA buffer areas, a multi-use trail and water treatment ponds.

A significant portion of the "Upland Habitat Park" is in the fuel modification zone, and thus certain species will be prohibited under the terms of Fuel Modification Plan submitted by the applicant as Attachment 34 to the CDP application. Although an unlabelled attachment to the CDP titled "Answers to CDFG Questions" indicates that with proper management and use of fire resistant construction techniques more flexibility may be appropriate, the Fuel Modification Plan included with the CDP application lists prohibited species to include California sagebrush, buckwheat, and black sage. These same species are prohibited under the proposed Covenants, Conditions and Restrictions for the Brightwater project. Although an *Opuntia* species is proposed for use, the species proposed is not the prickly pear already on the site, but Coast

Cholla. Further, the areas will be subject to periodic thinning of vegetation and occasional irrigation.

The impact of this change in species composition and growth habit on habitat values is not known. This is of particular interest as it affects prey species. Unfortunately, the fuel modification plan was not studied or included in the public review for SEIR 551, despite requests from the Bolsa Chica Land Trust and others that it be provided. Thus, the "Upland Habitat Park" may be of value or it may not. It is suggested that, where sage scrub communities lie within buffer areas, the vegetation be allowed to remain undisturbed and that sage scrub species already existing in the area be allowed to remain. If adequate buffers and open space were provided, the overlap of fuel modification into buffer areas would not be a problem.

Grasslands

The bulk of the Brightwater site is in annual grassland or ruderal. Even this habitat is of value, a primary factor being forage areas for raptors. As stated by Senior Deputy Damm at the November 16, 2000 Commission hearing:

The California Department of Fish and Game emphasized the importance of non-native grasslands to raptor habitat in their recent comments on the Hellman properties in Seal Beach. In that letter, they recommended a mitigation ratio of .5 to 1 for non-native grasslands that were going to be lost in that project.

The bulk of this habitat on the project site will be lost to residential development. Mitigation should be provided consistent with that required at Hellman Ranch.

Normally, even suburban residential areas would be expected to support populations of rodents and other small prey. However, the AMEC Earth & Environmental, Inc. report attached as Attachment 10.2 to the CDP Application includes the following as a critical, ongoing element in addressing soil issues on the site:

Any burrowing rodents on the lots should be exterminated and their burrows should be filled and sealed at the ground surface with clayey soil...

Not only would this reduce available prey species, depending on how rodents were exterminated, additional impacts could result. Chemical poisons could move up the food chain to predator species. The proposed Covenants, Conditions and Restrictions for the Brightwater project prohibit large-scale use of pesticides by unlicensed applicators, but they are not prohibited altogether. Control measures for burrowing rodents should be reconsidered as a strategy, and use of poisons must be prohibited, especially in light of the proximity of the development to ecologically sensitive areas.

Introduced Flora

The applicant has submitted a list of invasive species that will be prohibited from the Brightwater project. However, the Covenants, Conditions and Restrictions for the Brightwater

project require landscape limitations only in front yards and common areas. Many of the invasive species listed broadcast their seeds over fences quite easily. Thus, the project C,C&Rs, absent a prohibition invasive exotics in all parts of the Brightwater development, do not provide adequate means to prevent planting of invasive species within the proposed residential development, and the project does not provide protection for invasions of such species in nearby ESHAs, whether on or off the subject property. The program also lacks an effective means of enforcement.

Predation by Pets

The Brightwater C,C&Rs require that dogs be leashed and that cats be kept inside. A detailed trapping program for feral cats is included. However, the C,C&Rs then go on to recommend that cat owners provide their pets with collars and tags to avoid being included with the trapped feral cats. This presents an inherent contradiction, since if the cats were inside as required, they wouldn't get trapped. This also points up the difficulty of enforcement. Reasonable enforcement responsibilities must be identified.

Lighting

Night lighting can disrupt sensitive species. Although project documents indicate that lighting will be controlled and will be directed away from sensitive areas, the Brightwater C,C&Rs contain no limitation on lighting by the individual homeowners. Such limitations should always be required for any development in such a sensitive area.

Additional Study

To verify the presence or absence of this sensitive invertebrate species, the project site must be re-surveyed for two rainy seasons or one wet and one dry season to investigate this possibility as well as to further delineate on site wetlands. U.S. Fish and Wildlife Service protocol assumes the presence of endangered and threatened vernal pool species where appropriate vernal pool, or "seasonal pond" habitat is found. Further, ponding has been observed in areas not designated as wetlands in project mapping. The two surveys must verify the presence or absence of wetlands in additional areas.

Water Quality

Section 30231 of the Coastal Act states that:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

A small portion of site runoff will be directed to Huntington Harbor. Huntington Harbor has been designated an impaired water body and as such is not to receive any additional pollutants at all. The applicant proposes that catch basin inserts be used to treat drainage to Huntington Harbor.

According to information contained in the Water Quality Management Plan (attachment 11.3 to the CDP submittal), such inserts would remove 69 to 90 percent of oil and grease, leaving 10 to 31 percent behind. The inserts trap a lesser proportion of suspended solids and heavy metals. Thus, even though some pollutants would be removed, others would make their way into the already impaired waters of Huntington Harbor. This is unacceptable.

The applicant proposes to direct the bulk of urban runoff from the project to a series of detention basins/constructed freshwater wetlands and then into the Bolsa Chica lowlands. The detention basins would be designed to capture low flows and first flush runoff. In larger storms, water would be diverted away from the treatment wetlands to the existing pocket wetland and a detention basin. The water would eventually be discharged into the isolated lowland area planned for restoration with as yet unknown affects.

Information contained in the Water Quality Management Plan indicates that this type of wetland detention and treatment system could be expected to remove 87 percent of petroleum residues, but only 67 percent of suspended solids, 49 percent of phosphorus and a mere 28 percent of nitrogen. Thus, a considerable proportion of pollutants will still remain.

Unfortunately, the Water Quality Management Plan does not provide information on total loading. Thus, one doesn't know whether almost clean water would be rendered nearly pristine or whether absolutely filthy water would be cleaned to the point where it's just fairly polluted.

Although the Brightwater C,C&Rs ban large-scale use of pesticides, fertilizers and other chemicals by unlicensed individuals, nothing prevents such use on a small scale by many individuals working in their own yards. Thus, it is probable that at least some pesticides and fertilizers will enter the drainage system along with at least some animal waste and other pollutants.

As discussed above, even under a best case scenario, the water will not be fully cleaned. This is of greatest concerns for the water which would be most polluted, typically low flows and first storm flush of the season. Directing low flows to the Orange County Sanitation District treatment plant would be consistent with the action of the Coastal Commission in November 2000. This would also cause drainage to more closely approximate natural conditions under which little or no moisture would enter the wetlands involved during the dry months. At no time should any project drainage be permitted to enter Warner Pond.

The applicant has indicated that the drainage improvements discussed above will be maintained by the homeowners' association and the City of Huntington Beach. Inasmuch as the project is located in an unincorporated Orange County, it appears that this may be an error.

In any case, some oversight of onsite drainage and water quality treatment facilities will be required to ensure compliance by the homeowners' association. It is suggested that the homeowners' water quality monitoring and maintenance of the wetlands and catch basin inserts be supervised by Orange County, with annual reports to be provided to the Coastal Commission for review if the Commission approves the proposed development.

Section 30231 does not limit issues involving water discharge to direct surface flows. Drainage reaching the pocket area adjacent to the Mesa eventually reaches Outer Bolsa Bay generally through subsurface or muted tidal action. Under certain restoration options, tidal flows would be extended to the pocket area, increasing direct effects of runoff on Outer Bolsa Bay. Thus, some very sensitive resources under the jurisdiction of the Coastal Commission could be involved. If the proposed development is approved, the Coastal Commission must reserve the right to review maintenance of water quality draining from the site and impose additional pollution control measures at any time.

In addition, the applicant should participate in funding for additional water quality studies as well as ongoing sampling efforts for affected resources, including studies of total maximum daily loads (TMDLs) for the Bolsa Chica Bay prior to any development at Bolsa Chica. These TMDLs are long overdue and are an essential component of determining the scope and impact of proposed development on the surrounding and adjacent protected coastal resources. These numeric criteria will certainly be impacted by any new development on the Mesa; and vice versa, the Project itself may be constrained by statutory requirements that do not permit increased loading into an already water quality limited Area. The U.S. Environmental Protection Agency (USEPA) has established regulations (40 CFR 122) requiring that National Pollutant Discharge Elimination System (NPDES) permits be revised to be consistent with any approved TMDL. Federal regulations, effective October 2001, require that implementation plans be developed along with the TMDLs.

The applicant has indicated that the project will be covered under the general permit to discharge storm water associated with construction activity, and has submitted a copy of a receipt of a notice of intent from the State Water Resources Control Board dated December 8, 1998, over five years ago. This was well before the project was designed and well before even the November 2000 hearing on the now-defunct Local Coastal Program. The notice of intent should be resubmitted if construction ever proceeds on the Bolsa Chica Mesa.

As stated in the attached January 21, 2000 letter from Gerald Thibeault, Executive Officer of the California Regional Water Quality Control Board, Santa Ana Region:

The Regional Board at all times retains the right to issue waste discharge requirements where it is necessary to do so to protect water quality and beneficial uses. Board staff will consider the propriety of issuing individual requirements to Hearthside Homes when the project is finally defined and approved.

Thus, the December 8, 1998 document should not be considered to be a carte blanche for any development that may ensue on the Bolsa Chica Mesa.

The applicant has submitted an erosion control plan for the project. However, as submitted, the plan is inadequate. The plan consists solely of a map indicating where sandbags will be placed on the site once mass grading has been completed and building pads and street beds have been established. There is no information as to how erosion will be controlled during grading. This is inadequate, and project processing should not be permitted to move forward until such time as additional erosion control measures have been developed. It is especially critical that all erosions be controlled due to the sensitive resources in the surrounding area and the former use of the site for hunting and military purposes, leading to the potential deposit of lead from ammunition on the site.

The Water Quality Management Plan includes a potpourri of attachments including articles and flyers regarding water quality issues. It is not clear what, if any, measures mentioned in these attachments will actually be taken. This must be clarified.

As currently proposed, the Brightwater project fails to fulfill the purposes of the Coastal Act regarding water quality.

Cultural Resources

Section 30244 of the Coastal Act provides that:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

The Bolsa Chica Mesa includes a number of highly significant archaeological sites, including ORA-83 and ORA-85. Ora-83 is almost certainly the last major coastal habitation site remaining between Los Angeles and San Diego. The site has been nominated to the Register of Historic Places, and qualifies based on the value of the site, but cannot be listed due to the owner's refusal to agree to listing.

In the light of statements from recognized experts urging "complete avoidance", declaring that we must "do everything in our power to preserve", and mourning the potential loss of ORA-83 as a "tragedy" (attached), site avoidance must be viewed as the only reasonable mitigation measure for ORA-83.

Although some materials from ORA-83 will be recovered under test programs, the remainder of the site must be preserved in perpetuity for future generations. Following data recovery, the site must be capped to reduce the potential for looting of potentially significant resources.

Even if only data recovery were necessary as mitigation, the currently proposed research design is not adequate. As noted in the attached comments by Patricia Martz:

Part 2: Research Implementation is very general and superficial and lacks sufficient detail regarding the research questions and data requirements to address the themes and models discussed in Part 1. The majority of the questions that are

presented are about data requirements and not formulated to advance knowledge regarding past human behavior.

Thus, further refinement of the proposed archaeological research design is necessary.

Visual Resources

Section 30251 of the Coastal Act provides that:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

The proposed project will entail alteration of existing landforms and construction of hundreds of homes on a previously vacant site. As noted SEIR 551:

Residential development will permanently alter the undeveloped appearance of the Bolsa Chica Mesa within the public viewsheds as seen from Pacific Coast Highway near Warner Avenue and Pacific Coast Highway at the State Ecological Reserve Overlook, adjacent to Inner Bolsa Bay and along Los Patos Avenue at Bolsa Chica Street.

This finding was also adopted by the Orange County Board of Supervisors as part of their Statement of Facts and Findings when they approved the Brightwater project.

However, the applicant has chosen to deny this finding of fact, instead averring that the statement in SEIR 551 was another "holdover" from the previous EIR 551. As noted above, SEIR 551 was prepared at the direction of the applicant, was submitted on behalf of the applicant and was subject to additional review by the applicant during the public review period. Further, the County's Findings of Fact were adopted as a separate document, which the applicant also had the opportunity to review.

In fact, this impact has increased somewhat from the time SEIR was certified. Under current plans, grading will be balanced, with no export of soil off-site. This will result in one to six foot increases in building pad elevations, increasing the visual intrusion of homes on the raised pads.

If it is the desire of the Commission to approve the proposed project, additional open space should be required for visual buffering. This is important not only along the edge of the project adjacent to the lowlands, but along the bluff separating the lower bench and the upper bench.

The bluff must be fully delineated and preserved consistent with the provision of Section 30253 of the Coastal Act which states, in part:

New Development shall assure stability and structural integrity and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

In addition, restrictions on night lighting must be adopted as a condition of approval and incorporated into the Brightwater C,C & Rs. Reflective materials should be prohibited. Both of these measures would also benefit wildlife.

Homes on the project site are projected to exceed thirty feet in height, equivalent to a three story structure. This can result in an imposing appearance for structures that rise straight up, but can and should be softened by a lower limitation on the heights of structures along the perimeter of the site.

Housing

Section 65590(d) of the Government Code imposes on local agencies, in this case the County of Orange, the duty to ensure that:

“new housing developments constructed within the coastal zone shall, where feasible, provide housing units for persons and families of low or moderate income...Where it is not feasible to provide these housing units in a proposed new housing development, the local government shall require the developer to provide such housing, if feasible to do so, at another location within the same city or county, either within the coastal zone or within three miles thereof”.

The local agency is also required to offer incentives for the provision of low and moderate income housing.

Section 65590 acts in concert with, but independent of, the previous sections (65580 through 65589.8) of the Government Code governing local housing elements, which by State mandate must address housing issues in all areas subject to County jurisdiction, including the Coastal Zone. Thus, the affordable housing provisions of Section 65590 must be implemented whether or not they are included within the local agency's adopted housing element or other locally adopted program.

As described by staff of the California Department of Housing and Community Development (HCD), local agencies are charged with implementation of Section 65590, for the legitimate government purposes established by the California State Legislature in Section 65580, specifically:

“(a) The availability of housing is of vital statewide importance, and the early attainment of decent and a suitable living environment for every California family is a priority of the highest order...

(d) Local and state governments have a responsibility to use the powers vested in them to facilitate the improvement and development of housing to make adequate provision for the housing needs of all economic segments of the community.”

Under Section 65590, low or moderate income housing must be provided in new residential development in the Coastal Zone where feasible. As defined under Section 65590(g)(3):

“‘Feasible’ means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technical factors.”

Staff of the California Department of Housing and Community Development (HCD) has indicated that they believe an assumption of feasibility must be made barring evidence to the contrary. This position has been upheld by the courts.

Thus, County government is responsible for ensuring that affordable housing is included in new developments such as the proposed Brightwater. Inasmuch as a ten percent exclusionary requirement is imposed by the City of Huntington Beach immediately adjacent to the project site, which is in the City’s adopted sphere of influence, it is reasonable to conclude that it would be feasible to provide ten percent of *all* units in the project, i.e. thirty eight units, as affordable units. These units must be provided as part of the proposed project. The applicant and the County have yet to take steps to implement this requirement or address the feasibility of doing so.

Proposition 50

Proposition 50, passed in November 2002 added Section 79572 to the Water Code appropriating \$750,000,000 to the Wildlife Conservation Board. Money appropriated is to be used for the acquisition, protection, and restoration of lands in or adjacent to urban areas. Eligible projects are limited to:

- Acquisition, protection, and restoration of coastal wetlands identified in the Southern California Coastal Wetlands Inventory as of January 1, 2001, published by the State Coastal Conservancy, located within the coastal zone, and other wetlands connected and proximate to such coastal wetlands, and upland areas adjacent and proximate to such coastal wetlands, or coastal wetlands identified for acquisition, protection, and restoration in the San Francisco Baylands Ecosystem Habitat Goals Report, and upland areas adjacent to the identified wet lands.
- Acquisition, protection, and restoration of coastal watershed and adjacent lands located in Los Angeles, Ventura, and Santa Barbara Counties.
- Not less than three hundred million dollars (\$300,000,000) for projects within Los Angeles and Ventura Counties.

- Of the remaining funds available *the Wildlife Conservation Board shall give priority to the acquisition of not less than 100 acres consisting of upland mesa areas, including wetlands therein, adjacent to the state ecological reserve in the Bolsa Chica wetlands in Orange County.*

The proposed project must be examined in the light of Proposition 50 and Section 30604(e) of the Coastal Act which states:

No coastal development permit may be denied under this division on the grounds that a public agency is planning or contemplating to acquire the property on, or property adjacent to the property on, which the proposed development is to be located, unless the public agency has been specifically authorized to acquire the property and there are funds available, or funds that could reasonably be expected to be made available within one year, for the acquisition. If a permit has been denied for that reason and the property has not been acquired by a public agency within a reasonable period of time, a permit may not be denied for the development on grounds that the property, or adjacent property, is to be acquired by a public agency when the application for such a development is resubmitted.

If appropriate in accordance with these provisions, the Commission should consider denial of the Brightwater project at this time with the proviso that it may return in one year, without prejudice.

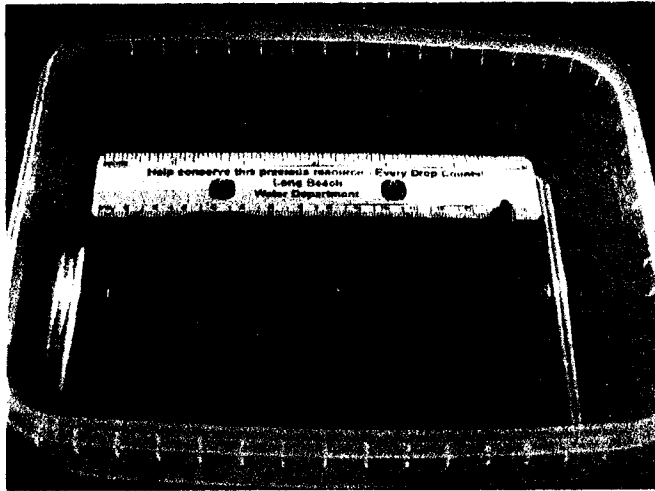
Yours Truly,



Sandra L. Genis
Bolsa Chica Land Trust Board Member

Attachments

SILVERY LEGLESS LIZARD PHOTOGRAPHS
Location: Bolsa Chica Mesa, January 9, 2001
Courtesy of Kelly Keller





CALIFORNIA NATIVE PLANT SOCIETY

Orange County Chapter

P.O. Box 54891

Irvine, CA 92619-4891

RECEIVED
South Coast Region

JAN 27 2004

CALIFORNIA
COASTAL COMMISSION

Mike Reilly, Chair
California Coastal Commission
c/o Teresa Henry, Coastal Program Analyst
200 Oceangate, 10th Floor
Long Beach CA 90802-4416

24 January 2004

RE: Southern Tarplant (*Centromadia parryi* ssp. *australis*) Translocation Plan for the Brightwater Development Project, Bolsa Chica Mesa, Orange County, California

Dear Mr. Reilly:

The California Native Plant Society (CNPS) is a non-profit volunteer organization that acts to preserve California's native flora. The Orange County Chapter of CNPS (OC CNPS) works to increase public awareness of the significance of native plants, and to preserve the remaining areas of native vegetation in Orange County.

We have been asked by the Bolsa Chica Land Trust to review the southern tarplant translocation plan prepared by LSA Associates for the Brightwater Development Project on the Bolsa Chica Mesa, Orange County. Southern tarplant (*Centromadia* [formally *Hemizonia*] *parryi* ssp. *australis*) is a mildly scented, prickly-stemmed, yellow-flowered annual. Southern tarplant favors alkaline soils and is found most frequently in association in areas that receive irregular shallow flooding such as depressions, seasonal ponds and vernal pools, shallow arroyos, or the margins of coastal estuaries, or brackish seeps and mesic grassland habitats. It also favors successional or disturbed habitats and will persist in areas that have been shallowly disced. Southern tarplant is restricted to southwestern California and northwestern Baja California, Mexico. In the United States, this plant has been reported from 47 locations from Eagle Canyon Bluffs west of Goleta in Santa Barbara County, south through the Los Angeles Basin and coastal Orange County to the vicinity of Ramona and San Dieguito Lagoon in western San Diego County. There are only four widely scattered records for this species have been reported in Mexico.

Of the United States locations, over 35 percent have been extirpated. About 40 percent of the remaining populations have quantifiable threats. Only about 20 percent of the remaining populations are within lands designated as preserves. Of the known 31 reported populations in southern Los Angeles and western Orange County, over 40 percent have been eliminated. Of the remaining populations, nearly half are at risk from quantifiable threats. This level of decline and threat is comparable to several species that are protected under the State and Federal Endangered Species Act. Therefore, we believe that addressing the conservation of southern tarplant within the coastal zone should be a major concern to the California Coastal Commission. This level of concern has been demonstrated by previous California Coastal Commission actions at Bolsa Chica. As a result, development on the mesa north of the marsh has been limited to the upper mesa as indicated in the reviewed document.

Overall, the translocation plan proposed by LSA Associates is reasonable as it addresses the annual nature of the plant (seed collection vs. actual moving of individuals), top soil collection, and identifying a nearby receiver site. We also believe that it is helpful to have the three years worth of survey data used here to better understand

the plant's distribution on the site. It is evident from this data that the distribution of southern tarplant does have significant population dynamics and suggests that multiple year surveys should always be conducted prior to any translocation plan implementation to better understand the distribution and population status of a population on site.

Our comments are few but important. The California Native Plant Society strongly opposes translocation in general for rare plants and believes avoidance is the method that should most frequently be adopted. However, we acknowledge that southern tarplant and its cousins present a somewhat different situation. Because these species thrive on minor disturbance and successional situations, translocation has a significantly higher chance of success. We agree with the Department of Fish and Game (letter from William Tippetts to Ed Mountford, 245 Apr 2003) request that the performance standards not apply to the first two years of monitoring. Because of the nature of seeding or transplanting, the first year or two can yield a false positive. The viability of freshly moved bulbs or seed can be high but is not very meaningful if the plants do not reproduce well. Therefore, several years are required to really measure success. This appears to have been incorporated into the Plan we have reviewed. Five years is a reasonable period for active monitoring of annual populations. However, we suggest that one additional monitoring season be implemented in the seventh year. This will measure the success of the population's establishment without human oversight. One major problem with other translocation programs we have reviewed is too short a monitoring period. The plants do fairly well when first established, particularly with oversight and management. However, once left to their own devices, the population suffers from exotic competition and other factors that can rapidly eliminate, or significantly reduce, the vigor of translocated populations.

We are encouraged that the plan requires the population at the receiving site to achieve 100 percent of the the origin site. Because of the annual nature of the plant populations, as demonstrated by LSA Associates data, these can vary significantly from year to year. Therefore 100 percent level should be attained at least twice during the monitoring period. Despite three years worth of surveys, the 1,800 individuals may still only represent a fraction of a still larger potential. While the document states that the receiving site will be permanently preserved, it does not indicate who will manage this property nor does it indicate how large the "permanent" preserve will be. One might assume that the whole lower mesa will be protected but is that the case? The upper and lower mesa populations of tarplant are clearly linked by proximity and habitat. We believe that as part of this specific project the entire lower mesa should be set aside under a conservation easement or dedicated to a conservation entity prior to grading the upper mesa. This is in part because the land and existing populations surrounding the receiving site will play an important and necessary roll in future population dynamics, pollination, and overall health of the receiver site. Additionally, the populations of the lower mesa are extremely significant on regional scale and should be protected in perpetuity.

If you have any questions regarding this, I can be reached at 760-439-6244.

Respectfully

Fred M. Roberts, Jr.

Fred Roberts, Jr.
Conservation Co-Chair

cc:

Karen Merickel, Bolsa Chica Land Trust
Ceilia Kutcher, Orange County CNPS

SANDRA GENIS, PLANNING RESOURCES

1586 MYRTLEWOOD

COSTA MESA, CA. 92626

PHONE/FAX (714) 754-0814

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South Coast Region

JAN 27 2004

CALIFORNIA
COASTAL COMMISSION

To: Teresa Henry
California Coastal Commission
Fax (562) 590-5084

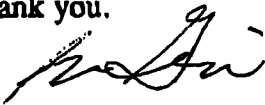
From: Sandra Genis, Bolsa Chica Land Trust

Date: January 27, 2004

Subject: Brightwater Development (CDP Application No. 5-02-375)

Unfortunately, there were a few critical typos in the memo submitted yesterday from Ed Howard regarding nexus requirements as they apply to the proposed Brightwater development at the Bolsa Chica Mesa in Orange County California. Attached is a corrected version. We would appreciate it is you would please discard the previous memo and place this one in the record instead.

Thank you.



JAN 27 2004

CALIFORNIA
COASTAL COMMISSION

MEMORANDUM

Date: January 23, 2004

To: Coastal Commission Planning and Legal Staff

From: Ed Howard, Counsel for the Bolsa Chica Land Trust

Re: **Issues of "Nexus:" Why The Commission By Law Must Either Reject The Proposed Brightwater Permit Outright Or, Alternatively, Reach The Question Of Whether The Lower Bench (Or Some Other Similarly Sized Contiguous Portion Of The Mesa) Must Be Preserved To Prevent Harm To Bolsa Chica ESHAs, And Why Neither Of These Statute-Mandated Outcomes Is A Taking.**

The Bolsa Chica Land Trust ("Land Trust") has asked me to comment on whether the proposed Brightwater project requires the Commission, once more, to address whether it must by law preserve some large and fully contiguous portion of the Mesa to compensate for the harm residential development will cause to nearby Environmentally Sensitive Habitat Areas ("ESHAs").

The Land Trust as well has asked me to address whether there is a sufficient "nexus" under Nollan v. California Coastal Commission, 438 U.S. 825 (1987) ("Nollan") between the proposed Brightwater permit and the need to preserve the lower bench, or some other equally large, fully contiguous portion of the Mesa, such that addressing the preservation issue in the context of evaluating this permit would not constitute a taking under Nollan.

To summarize my conclusions:

- As already decided by the Bolsa Chica Land Trust v. California Coastal Commission (1999) 71 Cal.App.4th 493, decision ("Bolsa Chica"), and as required by Public Resource Code ("PRC") §30240, the Commission may not lawfully approve any development that evidence shows will harm an ESHA. Period. There are no qualifications or exceptions.
- Evidence in this record presented by independent experts demonstrates that significant residential development on the Mesa such as the proposed Brightwater development will inevitably and illegally cause a reduction in the number and kind of raptors living in the Eucalyptus Grove ESHA.
- Evidence in this record presented by independent experts demonstrates that significant residential development on the Mesa such as the proposed Brightwater development will, by redirecting raptor predation to the lowland wetlands, inevitably

and illegally cause harm to the ESHA's bird population, even while the state has committed to a massive \$100 million state-funded lowlands restoration effort.

- Therefore, either the Commission must abide by statute and reject the Brightwater proposed permit outright or it must, at the barest minimum, address how much of the Mesa must be preserved to ensure that the forecast harmful impacts of Brightwater to these two ESHAs do not occur.
- That is not to say that §30240 forbids all kinds of or all levels of development on the Mesa. It is as wholly yet untested whether other kinds of development (i.e., non-residential or even different residential, such as assisted living) or smaller levels of development (i.e., significantly fewer homes) or development located in different locations (e.g., entirely clustered along Warner Avenue) would be as clearly in violation of §30240 as this proposed development.
- And the Nollan nexus requirement is easily met here. In Nollan, the Supreme Court held that requiring a property owner to dedicate an easement for the public to pass to the ocean had an insufficient nexus to the asserted legitimate interest at risk; namely, protecting public views of the ocean.
- The independent experts in this record opine that all of the Mesa must be preserved to prevent illegally harming the Eucalyptus Grove and lowland wetland ESHAs. Because the loss of any open space on the Mesa will harm the ESHAs, it is at best unclear whether any significant development on the Mesa may be legally permitted. Two things are clear, however: (1) if the whole Mesa is not preserved, at the barest minimum the evidence establishes that a very large, fully contiguous portion of the Mesa must be preserved if approval of Brightwater is to be lawful; and (2) requiring Hearthside to dedicate some large balance of its property beyond the Brightwater footprint to minimize the project's harm to the ESHAs has the tightest possible Nollan nexus to the legitimate state interest of protecting ESHAs embodied by §30240. This is because the permit condition -- preservation of open space -- seeks to remedy exactly the cause of the unlawful harm that would require the rejection of the Brightwater permit -- the loss of that very same open space. Or, in the words of the Nollan court: "[T]he permit condition serves the same governmental purpose as the development ban[.]" Id. at 837.

DISCUSSION

I. A Step-By-Step Analysis And Application Of The "Nexus" Requirement Of Nollan

Let us apply Nollan in a step-by-step manner.

A. Identifying the contours of the Nollan "nexus" requirement.

The Court first acknowledges that a takings analysis requires a two part review:

"We have long recognized that land-use regulation does not effect a taking if it 'substantially advance[s] legitimate state interests' and does not 'den[y] an owner economically viable use of his land[.]'"

Id. at 834.

Let us address the first prong first -- the "legitimate state interest" requirement. The Court next discusses it:

"Our cases have not elaborated on the standards for determining what constitutes a 'legitimate state interest' or what type of connection between the regulation and the state interest satisfies the requirement that the former 'substantially advance' the latter. 3 They have made clear, however, that a [483 U.S. 825, 835] broad range of governmental purposes and regulations satisfies these requirements. See Agins v. Tiburon, supra, at 260-262 (scenic zoning); Penn Central Transportation Co. v. New York City, supra (landmark preservation); Euclid v. Ambler Realty Co., 272 U.S. 365 (1926) (residential zoning); Laitos & Westfall, Government Interference with Private Interests in Public Resources, 11 Harv. Envtl. L. Rev. 1, 66 (1987)."

Id. at 834-35

Let us now review the Court's analysis of the "nexus" in Nollan:

"The Commission argues that among these permissible purposes are protecting the public's ability to see the beach, assisting the public in overcoming the 'psychological barrier' to using the beach created by a developed shorefront, and preventing congestion on the public beaches. We assume, without deciding, that this is so - in which case the Commission unquestionably would be able to deny the Nollans their permit outright if their new house (alone, or by reason of the cumulative impact produced in conjunction with other construction) would substantially impede these purposes, [483 U.S. 825, 836] unless the denial would interfere so drastically with the Nollans' use of their property as to constitute a taking."

Id. at 835

We know from this passage two things: (1) that the asserted government interest in Nollan was protecting scenic views of the beach, beach access, and congestion; and (2) that, assuming denial of the Nollan's proposed permit still would have left the door open to other kinds of future improvements, the Commission could have lawfully denied the permit outright without inversely condemning their property (more on this later, but the same is true with the proposed Brightwater permit).

The Court then considered the Commission's "greater includes the lesser" theory. The Commission argued that if it had the right to deny the permit outright because it unlawfully obstructed views and the like, then it also had a right to impose permit conditions that also sought to advance the same values. The Court agreed, but -- in essence -- found that the permit condition requiring public access to the beach had no nexus to asserted state interest; namely, protecting ocean views, overcoming psychological barriers to access, and the like:

"The Commission argues that a permit condition that serves the same legitimate police-power purpose as a refusal to issue the permit should not be found to be a taking if the refusal to issue the permit would not constitute a taking. We agree. Thus, if the Commission attached to the permit some condition that would have protected the public's ability to see the beach notwithstanding construction of the new house - for example, a height limitation, a width restriction, or a ban on fences - so long as the Commission could have exercised its police power (as we have assumed it could) to forbid construction of the house altogether, imposition of the condition would also be constitutional."

Id. at 836

Importantly for the proposed permit here, the Court acknowledges that imposing a permit condition that would require the Nollans (or Hearthside) to dedicate some of their actual property would be constitutional -- *if* the dedication actually promoted the asserted state interest in promoting scenic views:

"Moreover (and here we come closer to the facts of the present case), the condition would be constitutional even if it consisted of the requirement that the Nollans provide a viewing spot on their property for passersby with whose sighting of the ocean their new house would interfere. Although such a requirement, constituting a permanent grant of continuous access to the property, would have to be considered a taking if it were not attached to a development permit, the Commission's assumed power to forbid construction of the house in order to protect the public's view of the beach must surely include the power to condition construction upon some concession by the owner, even a concession of property rights, that serves the same end. If a prohibition designed to accomplish that purpose would be a legitimate exercise of the police power rather than a taking, it would be strange to conclude that providing the owner an alternative to that prohibition which accomplishes the same purpose is not."¹

Id. at 836-37

¹ There is thus under Nollan nothing per se unconstitutional about requiring the dedication of land as a condition of granting a permit, so long as the dedication satisfies the nexus requirement and leaves the property owner with economically viable use of the rest of his land.

The Court goes on to identify and find lacking the nexus between a permit condition requiring public access to the beach itself and the asserted interest in protecting public views of the beach:

"The evident constitutional propriety disappears, however, if the condition substituted for the prohibition utterly fails to further the end advanced as the justification for the prohibition. ... In short, unless the permit condition serves the same governmental purpose as the development ban, the building restriction is not a valid regulation of land use but 'an out-and-out plan of extortion.'"

Id. at 837

The Court elsewhere with equal candor summarizes its view of the asserted nexus between the permit condition and the asserted public interest:

"It is also impossible to understand how [the permit condition] lowers any 'psychological barrier' to using the public beaches, or how it helps to remedy any additional congestion on them caused by construction of the Nollans' new house. We therefore find that the Commission's imposition of the permit condition cannot be treated as an exercise of its land-use power for any of these purposes."

Id. at 838-39.

B. What Is The Nexus Between The Brightwater Proposal And Preservation Of Some Large, Fully Contiguous Portion Of The Mesa?

Here, the governmental interest is at least as compelling as the "scenic zoning" and "landmark preservation" purposes singled out as "legitimate" in Nollan. The asserted state interest is embodied in PRC §30240, which provides:

"(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas." (Emphasis added)

So, where Nollan "nexus" issues are concerned, a proposed permit condition attached to a Brightwater approval will be judged simply on whether it "serves the same governmental purpose as" would a "development ban;" that is, an outright rejection of the Brightwater permit altogether.

If the Brightwater housing tract permit must lawfully be denied because it would "significantly degrade" or "significantly disrupt" the ESHAs or be "incompatible" with

their "continuance," then conditions may constitutionally be imposed on granting the permit -- but only if the conditions serve the same purpose as the denial; namely, ensuring that development is "compatible" with the "continuance" of the ESHAs.

Therefore, if the evidence in this record shows that a large, fully contiguous portion of the Mesa must be preserved to ensure that Brightwater is "compatible" with the "continuance" of the raptor habitat and lowland wetlands ESHAs (and the evidence of this is vast and uncontradicted by independent experts; see below), then the Commission may under Nollan require that such open space be preserved as a condition of granting the Brightwater permit.

Such a requirement would even more transparently meet the "rough proportionality" test of Dolan v. City Tigard, 512 U.S. 687 (1994) because the required dedication would evince "some sort of individualized determination that the required dedication is related both in nature and extent to the impact of the proposed development." Id.

C. The Substantial Evidence In This Record Demonstrating That Any Significant Development On The Mesa Is "Incompatible" With The "Continuance" Of The Raptor ESHA And, Hence, The Lowland Wetlands ESHA.

(1) Evidence that any significant residential development will harm the Eucalyptus Grove raptor habitat ESHA.

It must be recalled that while Brightwater's proposed 379 residences are less than the truly vast "mini-cities" previously sought by the developer, that does not mean it is not a very significant proposed development, especially given that there are literally ESHAs and wetlands all around it. If another developer at another location in the zone had come to the Commission with such a proposal, it would be recognized as a massive proposal. Just as "[r]ejection of exceedingly grandiose development plans does not logically imply that less ambitious plans will receive similarly unfavorable reviews" (MacDonald, Sommer & Frates v. Yolo County, 477 U.S. 340, 353, fn. 9 (1986)), neither should Hearthside's prior pursuit of gigantic and illegal development lessen the Commission's will to address the still harmful impacts of less titanic -- but still significant -- proposals like Brightwater.

All independent raptor experts in this record agree that any significant development on the Mesa will significantly harm the raptor habitat Eucalyptus Grove ESHA.

Mr. Peter Bloom -- perhaps the nation's foremost raptor expert -- predicts that fully six different species of raptors would be driven off the Mesa and wetlands entirely "were any significant development [on the Mesa] allowed." (AR3 5572-5580, 5573) Self-evidently, this result would be an unlawful "significant disruption" or "degradation;"

development "incompatible" with the "continuance" of the ESHA, and violative of §30240.

Mr. Bloom adds that the entire Mesa should be an ESHA, so essential is it to support the numerous raptor species that live there:

"[T]he grasslands at Bolsa Chica are the principal reason for the abundance of raptors, and therefore could be considered an environmentally sensitive habitat area."

(AR3 5575)

Mr. Bloom's scientific conclusion that all open grasslands on the Mesa have to be preserved just to have the potential of maintaining the current diverse raptor population at Bolsa Chica is not novel. Mr. Bloom's 1982 report Raptor Inventory and Habitat Assessment for the Bolsa Chica Area AR3 1929-1975, echoes his more recent conclusions, and also scientifically supports the preservation of the entire Mesa as habitat area to maintain raptor diversity and densities:

"The mesas provide the most valuable nesting habitat and also support large populations of rodent prey species. . . Loss of either lowland or mesa habitat will result in lowered raptor densities in both."

(AR3 1969)

In his letter to Mr. John Dixon, Mr. Bloom observes:

"From a biological and ecological perspective, the estuary and grassland at Bolsa Chica **must remain intact in as large a contiguous parcel as feasible** . . . This would be an important step in ensuring at least some raptor use continues on the Mesa if development of the Upper Mesa is permitted, and that the number of birds using the marsh are not reduced any further."²

(AR3 5572-5580, 5573 – emphasis supplied)

Mr. Bloom forecasts significant reductions in uses by raptors even if the lower bench is entirely preserved .(AR3 5075) This includes losing fully one-third of the red tail hawks; again, even with the entire lower bench preserved as open space. (AR3 5077).

² Mr. Bloom's letter also, in detail, conclusively refutes any contention that buffers around the eucalyptus grove ESHA of less than 100 meters are scientifically supportable. As he explains, numerous Mesa raptor species flush if human activity occurs within 100 meters. See, e.g., Bloom discussion of the Osprey, Red Tailed Hawk, Rough Legged Hawk, White Tailed Kite, etc.

The other independent raptor experts agree. Any significant development like Brightwater on the Mesa will do significant harm both the Eucalyptus Grove raptor ESHA and the wetlands below. For example, Mr. Ronald Jurek with the California Department of Fish & Game opines, "[t]he loss of any of the current open-space raptor foraging habitat would result in a change in foraging behavior for all local predatory bird and mammal species, including the raptor species that hunt rodents, insects and other small animals in the open ground ... Since all predators on the mesa would increase their foraging on the remaining upland habitat, those prey resources would likely be depleted and the raptors forced into other suitable hunting areas, including the Bolsa Chica wetlands. This increased hunting pressure in the lowlands have ramifications for local endangered birds in the wetlands" (AR3 5069 --Ronald Jurek, DF&G expert)³

Mr. Brian Walton, Hearthside's former expert, echoes these conclusions: "Even without any development plan, the future use of the Bolsa Chica area by breeding raptors is in jeopardy." (AR3 5086) "The area of open space is so limited at this time, that most conservationists and raptor biologists would suggest preservation of all remaining open space in the coastal zone if maintenance of breeding territories for raptors is desired." (AR3 5085) In other words, to ensure the "continuance" (§30240) of the raptor ESHA for breeding, no development can be permitted on the Mesa. (See also AR3 5090 "negative effects" of all three plans).

Mr. Walton concludes that even preservation of the entire lower bench would have the same negative impacts as the other proposals, but just less severely. (AR3 5081) And Mr. Walton explains why any significant development like Brightwater will inevitably harm the ESHAs: "When development occurs, it is nearly a simple linear effect. The number of territories will decrease. Eventually, there will be no breeders... It is not speculative, but based on experiences seen in 30 years of raptor habitat loss and raptor declines." (AR3 5090)

Tierra Madre Consultants forcefully sums up the point that any significant development on the Mesa such as Brightwater is "incompatible" with the "continuance" of the Eucalyptus Grove raptor habitat ESHA: "The importance of raptor habitat on the Bolsa Chica Mesa may be considered at the local, regional, and state levels ... Bolsa Chica is important both locally and regionally for many species, and is of critical importance at the state level for the Peregrine Falcon and the Short-eared Owl. Raptor habitats in Southern California ... are being lost at an alarming rate ... It is the opinion of TMC that the entire Bolsa Chica Mesa is raptor habitat and meets the criteria for designation as an ESHA ... Loss of Eucalyptus grove or grassland habitat will impact

³ The record of the Signal Landmark v. Coastal Commission litigation (GIC 764965) has been made a part of the record of this permit proceeding by reference. The "AR" citations are to that record. Likewise, these citations can be used to look up pages of the Appendix accompanying the Land Trust's submission titled, "California's \$100 Million Restoration Investment In Peril, Setting The Record Straight: The Bolsa Chica Land Trust's Comments Establishing The Legal And Environmental Framework For Analysis Of The Proposed 'Brightwater' Permit") which has the same numbering as the record.

resident, migratory, and wintering raptors, including species considered sensitive by the state and federal resource agencies." (AR3 7281-82)

Mr. Roberts, opining about the needs of the rare Southern Tarplant, concludes:

"Isolated preserves of less than 10 acres in size frequently fail...forty acres is the preferred minimal size...[s]etting aside the entire lower Mesa and the eastern portion of the upper Mesa would preserve known populations...Alternatively, minimum preservation should include the entire lower Mesa...."

(AR3 9067)

In sum, the evidence is clear: any significant development such as Brightwater on the Mesa is "incompatible" with the "continuance" of the raptor ESHA and the Brightwater permit must be rejected as unlawfully in conflict with §30240. That is, it must be rejected unless there is some permit condition that could make Brightwater lawful under §30240 by reducing the harmful impacts to "insignificance" thereby making the project "compatible" with the "continuance" of the ESHAs.

(2) The evidence in this record and the Commission's own authorities show that any significant residential development harming the Eucalyptus Grove raptor habitat ESHA will harm the lowland wetlands.

Evidence. Each of the three independent raptor experts as well as Mr. Robert Hight opine that, to the extent there is less upland Mesa foraging space, the raptors will feed on the endangered birds in the wetlands. (AR3 5065-5094 -- included in the Appendix). As Mr. Bloom is quoted as saying: "With less habitat at Bolsa Chica the majority of the birds would be lost and some would start feeding in the wetland area." (AR3 6036)

Undisputed evidence in the record shows that if there is significant development on the Mesa, there will be fewer coyotes. This in turn will mean more house cats and red foxes preying on the endangered birds in the wetlands; this on top of the re-directed raptors.

Professor Emeritus of Environmental Studies, University of California Santa Cruz, Dr. Michael Soule, in his October 23, 2000 letter to the Commission, Dr. Soule emphasizes:

"If the mesa habitat is developed, the likelihood that coyotes will persist is decreased. The same would apply to raptors. If the uplands in the Bolsa Chica watershed are developed, the remaining natural areas are likely to enter a spiral of extinction during which the less resilient native species will disappear."

(AR3 9808-9808) Thus, he opines:

"Thus, my best guess about the fate of Bolsa Chica, absent the upland mesa habitat, is that it would slowly degrade as a viable ecological system."

(AR3 9809)

Wayne Ferren, Department of Ecology, Evolution, and Marine Biology, University of California, Santa Barbara, also wrote to the Commission,

"Another important link in the entire system is upland habitat that support and provide corridors to estuaries for upper level predators such as coyotes that prey on various animals that eat endangered ground nesting marsh birds... without the predator prey balance that exists when ecosystems are intact, mid level predators that focus on prey such as birds can reach large enough numbers to seriously threaten or even extirpate species from coastal wetlands."

(AR3 9879)

The California Department of Fish & Game in Natural Diversity Database for 1999 shows that a plant "species of concern" (likely to be listed by the federal government in the near future – rare, threatened, or endangered in California and elsewhere) and a California native Plant Society 1b species (rare, threatened or endangered in California and elsewhere - AR3 5557, 5561) exists in three colonies in the middle of the Mesa lower bench, covering an area of approximately 15 acres. AR3 5557, 5561. That species is known as the Southern Tarplant. AR3 7274 (Southern Tarplant exists in three colonies in the middle of the Bolsa Chica lower bench, covering an area of approximately 15 acres). The record states:

"[D]ue to the declining status of the Southern Tarplant... all populations are considered significant and impacts to these populations should be avoided. While small in terms of the reported individuals, the Bolsa Chica Mesa population may be crucial to the overall recovery of this species."

(AR3 9066 report on southern Tarplant beginning at AR3 9058 -- emphasis supplied).

As early as 1979, the US Fish & Wildlife Service recognized:

"protection and preservation of the entire Mesa area is also desirable for there exists a mutually beneficial ecological relationship between coastal wetlands and their associated upland habitats."

(AR3 5538-5543)

Authorities. The Commission's own authorities and the law require the Commission to evaluate Mesa development like Brightwater in light of its impacts on the wetlands as well as the Mesa's resources. In its 1981 Statewide Interpretive Guidelines for Wetlands and Other Environmentally Sensitive Habitat Areas, ("Guidelines"), the

Commission has published a detailed road-map for builders and the public discussing how it will evaluate development near wetlands. These Guidelines observe and require:

“Wetlands are not isolated, independently functioning systems. Rather, they depend upon and are highly influenced by their associated watersheds and upland transition areas. Therefore, when the Commission determines that any adjacent area is necessary to maintain the functional capacity of the wetland, the Commission will require that this area be protected against any significant disruption of habitat values consistent with Section 30240(a). These areas may be protected either by inclusion in a buffer area subject to land use restrictions or through provision of a buffer area around the ecological related adjacent area itself, or through other means.”

Guidelines, Section I(B), p. 33 -- emphasis added, AR3 11076.

Observe the mandatory “will” and “require.” The Commission “will require” “protection” of any “adjacent area” that is “necessary to maintain the functional capacity of the wetland[.]”

Likewise, observe the last sentence of this Guidelines excerpt. Not only must “adjacent areas” themselves “be protected,” so must a “buffer area around” the “related adjacent area” be preserved to ensure that the buffer can operate as a buffer.

Furthermore, the Guidelines recognize that “where a significant functional relationship exists, the land supporting this relationship should also be considered to be part of the [ESHA], and the buffer should be measured from the edge of these lands.” See, Guidelines, p. 50-52; AR3 11078. (This Guideline bolsters the independent experts’ opinion that the entire Mesa should be considered an ESHA.)

As the evidence above persuades, this means that some large portion of the Mesa beyond the Grove must itself be considered an ESHA not just for the raptor habitat to “continue” but for the wetland lowlands to “continue” as well.

As mentioned in the margin, similar to the Guidelines, the Commission has since 1995 published its Procedural Guidance For Evaluating Wetland Mitigation Projects In California’s Coastal Zone. That authority too amply alerted Hearthsides that land nearby wetlands may have to be preserved to ensure the survival of the wetland itself. For example, the Procedural Guidance states:

“All project designs should consider the movement of food and energy between habitats as well as the life cycles of organisms that feed or reproduce in the wetland but generally reside outside the wetland.”

Procedural Guidance, Chapter One, Section V, Paragraph 4 – emphasis added; AR3 11077.

Likewise, the Procedural Guidance (Chapter Two, Section V, B-3; AR3 11077) observes:

“Wetland connections should not be severed by development. These connections are vitally important as migration corridors and transition zones between wetlands and adjacent habitats.”

PRC § 30250(a) mandates:

“New residential...development...shall be located...where it will not have significant adverse effects, either individually or cumulatively, on coastal resources.”

(Emphasis added).

Finally, the Court of Appeal in the Bolsa Chica case also acknowledged that the ability of an ESHA (like a wetlands) to survive depends upon what happens nearby. The Court of Appeal admonished the Commission that § 30240 “protect[s] habitat values by placing strict limits on the uses which may occur in an ESHA and by carefully controlling the manner uses in the area around the ESHA are developed.” Bolsa Chica, supra, 71 Cal.App. 4th at 507.

As the record shows, it has been sadly demonstrated in practice that wetlands cannot be circumscribed by residential development; that there must be some significant distance between such development and wetlands:

“The largest remaining patch of natural wetland in Southern California is the 740 acre ecological preserve in Upper Newport Bay, which is bordered on all sides by development and fraught with environmental problems.”

(AR3 1295 – emphasis added)

Because only the “wet” part of the upper Newport Bay wetland was protected, and residential development permitted to line its borders, the reserve is rife with “environmental problems,” including storm water run-off carrying high filtration loads, toxins such as pesticides, and inorganic matters, such as chemical fertilizers. (AR3 1299) Pesticides accumulated to such record concentrations that, by the 1980s, mussels in the Bay contained levels of ddt up to 2.9 parts per million, three times the allowable limit set by the state Department of Health Services. (AR 1295-1302)

Foreshadowing how Brightwater could inflate the cost of the wetland's \$100 million restoration, the state was forced to spend nearly \$8 million to dredge and then re-dredge Newport Bay as a result of the immediately adjacent residential development. (AR3 1299)

Tierra Madre Consulting, in its 1999 report Raptor Habitat Assessment for the Bolsa Chica Mesa (AR3 2013) agrees:

"The Mesa is not a separate biological entity; impacts to the Mesa will affect the adjacent Bolsa Chica Ecological Reserve and the wetlands outside of the Reserve."

D. Nollan Summary: The Nexus Requirement Is Easily Fulfilled

- PRC §30240 prohibits development near ESHAs that are "incompatible" with the "continuance" of the ESHA or that "significantly degrade" or "disrupt" them.
- There is vast, substantial, and expert evidence in this record that any significant development on the Mesa -- such as fully 379 residences -- is unlawfully "incompatible" with the "continuance" of not one but two ESHAs, and will "significantly degrade" and "disrupt" both the Eucalyptus grove raptor habitat ESHA and the lowland wetland ESHA.
- The Commission under Nollan would be well within its constitutional rights to deny the Brightwater permit based upon all this substantial evidence alone.
- If the Commission would be within its rights to deny the permit, it would also be entitled under Nollan to approve the permit with conditions that seek to reduce the harmful degradations and disruptions to insignificance and make the approved development "compatible" with the "continuance" of the ESHAs.
- Vast, un rebutted, and expert evidence in this record persuades that one way to help ensure the "compatibility" of Brightwater with the "continuance" of the ESHAs is to preserve as large a contiguous portion of the Mesa as possible.
- Therefore, any condition imposed upon approval of the Brightwater project that does just that clearly satisfies the Nollan nexus test.
- But the evidence is equally clear: the preserved Mesa area must be as large as possible to have a hope of passing muster under §30240.

II. According To The Developer, The Commission May Not Lawfully Approve A Permit That The Evidence Shows Will Harm An ESHA, Even To Avoid A Taking.

If the Commission is contemplating approving the Brightwater project and thinking about avoiding the issue of how much of the Mesa must be preserved because the Commission is "litigation gun shy" or is worried about taking the developer's property, Hearthside has itself argued forcefully that this a train of thought the Commission may not lawfully board at this stage.

As the developer argues in its recent litigation:

"[T]he Commission lacks discretion to allow development which would degrade an ESHA -- even to avoid a taking." (Signal Landmark's and Hearthside Homes, Inc.'s Opposition to the Coastal Commission's Motion for Summary Judgment, GIC 764965, p. 14 (Nov. 5 2002) -- emphasis added)

The developer likewise argues:

"In Sierra Club v. California Coastal Com., 12 Cal.App.4th 602 (1993) the Coastal Commission argued that in deciding not to classify the Pygmy Forest as an ESHA, one of its concerns was to do so might constitute a taking. The Court found no statutory authority that would permit such an assessment by the Commission:

'We agree that there were no actual takings concerns for the Commission to have "balanced" at the ESHA-designation stage. The County relies on section 30010, which expresses a legislative intent that the Coastal Act not grant the Commission or any county "the power to grant or deny a permit in a manner which will take or damage private property, without the payment of just compensation therefor ..." *However, that does not support the anticipatory sort of takings balancing advocated by the County.* The section appears designed to foreclose any claim that the Coastal Act authorizes takings without compensation, a construction that would leave the Act open to a facial challenge.[Citations.] *It does not ask the Commission to balance takings concerns in ESHA decisions.*'"

Id., at p. 13 -- emphases supplied by Hearthside

Similarly, citing California v. Superior Court (Veta) (1974) 12 Cal.3d 237, Hearthside argues that "the Supreme Court held that an administrative agency is not a proper forum to address constitutional issues." (Id.) The developer with its customary vehemence argues:

"Determining constitutional issues is a matter for the courts, not for regulatory agencies. The case law prohibits the Commission from engaging in constitutional adjudication when carrying out its functions; that task is beyond the statutory authority given to the Commission, and beyond the experience and training of the Commissioners and their staff."

Id. at pp. 13-14

III. No Development May Be Allowed If It Will Violate Section 30240. There Is No Exception Or Leeway In This Rule.

PRC §30240 (governing ESHAs) provides:

“(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.”
(Emphases added)

Accord: Sierra Club v. California Coastal Commission (pygmy forest) (1993) 12 Cal. App. 4th 602, 611 (“development in ESHA areas themselves is limited to uses dependent on those resources, and development in adjacent areas must carefully safeguard their preservation”); Bolsa Chica, supra, 71 Cal.App. 4th at 507.

Observe the mandatory language used in the statute; diction leaving little room for Commission discretion. ESHAs *“shall be protected against any significant disruption of habitat values.”* “Development in areas adjacent to [ESHAs] *shall be sighted and designed to prevent impacts*” and *“shall be ... compatible with the continuance of those habitat ... areas.”*

For this reason, if, as here, there is evidence in the record that proposed development is “incompatible” with the “continuance” of an ESHA as it is now, or if it will “significantly degrade” or “significantly disrupt” an ESHA, the project must either be rejected or curative conditions for approval must be imposed.

IV. Based On This Record, The Commission Must By Law Either Reject The Brightwater Permit Entirely Or Consider How Much Of The Mesa Is Needed To Prevent -- At Least Mitigate -- Harm To The ESHAs.

The evidence summarized above demonstrates that any significant residential development on the Mesa will illegally harm the raptor ESHA and, thus, the lowland wetlands ESHA. The evidence thus impels the conclusion that no significant residential development such as Brightwater may be permitted at all on the Mesa.

Given these authorities showing inevitable harms to ESHAs if any significant residential development is approved, if the Commission approves Brightwater nevertheless, the Commission would at the barest minimum be smartly advised also to determine how much nearby land is required to mitigate the project's identified harmful impacts to ESHAs.

Phrased differently, it is illegal to approve development that harms ESHAs. It adds legal insult to that injury for the Commission not even to consider how to mitigate such harms to the maximum practical extent possible.

And to reiterate: in light of the authorities and evidence in this record demonstrating that any significant development like Brightwater will violate §30240, the

only curative permit condition that could hope to pass muster under §30240 is preserving the largest portion of the Mesa possible.

V. **The Fifth Amendment's Prohibition Against Uncompensated Takings Need Not Be Offended By Outright Rejection Of The Proposed Brightwater Permit. This Is Because, While The Applicant Has A Constitutional Right To Obtain Some Economically Viable Use From Its Property, It Has No -- Repeat, No -- Constitutional Right To Insist Upon This Exact Kind Of Or Level Of Residential Development.**

As the developer argues, takings issues are not at stake when denying the Brightwater permit. Even so, the second prong of the Nollan court's test is whether the regulation would "den[y] an owner economically viable use of his land." Nollan, supra, at 834, citing Agins v. Tiburon, 447 U.S. 255, 260 (1980).

But rejection of this development -- 379 units and residential in character -- does not mean or even imply that §30240 forbids all kinds of and levels of development on the Mesa.

What remains -- and what has yet to be tested by any of the developer's hyper-ambitious development proposals -- is whether there exists a level and kind of development that, while not so environmentally "significant" (to use Mr. Bloom's phrase) to be illegally harmful to the ESHAs, nevertheless still allows the developer "economically viable use of his land."

The Commission may lawfully reject the massive Brightwater proposed permit based upon a specific and tailored finding that the kind of and amount of residential development proposed for the Mesa is simply incompatible with the continuance of the ESHAs on the Mesa and the lowland wetlands.

The Commission can also find, as it should, that such a conclusion does not foreclose any and all other kinds or levels of development on the Mesa. The Commission would be well advised to find formally that there certainly exists some level and kind of development that will not harm the ESHAs, but that the developer has yet to put forward a proposal that comes close to achieving that balance.

Indisputably, Hearthside has a constitutional right to exploit its property. But, crucially, the developer does not have any more of a constitutional right to exploit its property through massive, 379-unit residential development than it has a constitution-based right to build, say, an amusement park, garbage dump, or paper manufacturing plant on the Mesa.

The United States Supreme Court's recent Palazzolo v. Rhode Island, ___ U.S. ___, 121 S.Ct. 2448 (2001) decision is instructive. In that case, the Court held that a takings claim became ripe when the regulating authority adopted policies that forbade literally any development on a developer's property. However, in concluding that there

was no taking, the Court found that even the ability to build but a single residence meant that the regulator had not deprived the owner of "economically viable use" of his property:

"[The lower court] held that all economically beneficial use was not deprived because the uplands portion of the property can still be improved. On this point, we agree with the court's decision. Petitioner accepts the Council's contention and the state trial court's finding that his parcel retains \$ 200,000 in development value under the State's wetlands regulations. He asserts, nonetheless, that he has suffered a total taking and contends the Council cannot sidestep the holding in Lucas 'by the simple expedient of leaving a landowner a few crumbs of value.' Assuming a taking is otherwise established, a State may not evade the duty to compensate on the premise that the landowner is left with a token interest. This is not the situation of the landowner in this case, however. A regulation permitting a landowner to build a substantial residence on an 18-acre parcel does not leave the property 'economically idle.'" Id.

It is therefore clear that a taking cannot be established by the rejection of the proposed Brightwater permit if the Commission (1) finds based on the ample evidence before it that the proposed 379 multi-family residential homes violate PRC §30240 but that (2) the Commission also finds that not all levels and kinds of development will be forbidden by the statute; that a smaller and/or less invasive kinds of development could very well be consistent with the §30240.

Respectfully submitted,



Edward Howard
Counsel for the Bolsa Chica Land Trust

Keane
Biological Consulting

January 27, 2004

RECEIVED
South Coast Region

JAN 27 2004

CALIFORNIA
COASTAL COMMISSION



Teresa Henry
Deputy Director
South Coast District Office
California Coastal Commission
200 Oceangate, 10th Floor
Long Beach, CA 90802-4416

SUBJECT: "Analysis of Potential Effects of Development of the Upper Terrace of Bolsa Chica Mesa on Avian Predation on Nesting Waterbirds in the Bolsa Chica Wetlands," Coastal Development Permit Application Number 5-02-375

Dear Ms Henry:

5546 Parkcrest Street
Long Beach, California
90808-2030

On November 14, 2000, I submitted a letter to the California Coastal Commission regarding a previously-proposed residential development project by Hearthside Homes on the Bolsa Chica Mesa. At that time, Hearthside Homes claimed that because their proposed project would remove important raptor foraging habitat, it would benefit the ecological function of Bolsa Chica Lowlands (lowlands) by reducing populations of raptors that potentially prey upon nesting birds in the lowlands. While it is encouraging that Hearthside Homes is now attempting to more fully address the effects of their currently proposed project on nesting birds in the lowlands, the conclusion drawn by their consultant, LSA Associates, in the above-referenced document (LSA document) — "Under current conditions, which include substantial trapping of avian predators in the lowlands, the proposed development on the Bolsa Chica Mesa is not expected to have a significant on nesting waterbirds in the wetlands" — is based upon false assumptions and is not supported by the data presented or by other available information.

The above-referenced statement is analogous to stating that because existing traffic signals manage traffic flow in the project vicinity, the proposed project would not have a significant effect on local traffic.

My comments on the LSA document are derived from over 20 years of experience as an ornithologist monitoring and managing nesting areas for the California Least Tern (Least Tern) at the Port of Los Angeles, Camp Pendleton, Batiquitos Lagoon, and other nesting sites and serving as statewide coordinator of Least Tern Monitoring for the California Department of Fish and Game three of those years. I also authored the bird section, including the impacts discussion, of the Bolsa Chica Lowlands Restoration Project EIR/EIS, which evaluated the status of nesting birds in the Bolsa Chica Lowlands. Thus, I am very familiar with species nesting in the lowlands as well as with the project area.

The LSA document is well-researched in its presentation of data on birds nesting at the Bolsa Chica lowlands and on avian predators removed from the lowlands in recent years. However, the document:

- assumes, without stating so, that the existing predator management program in the wetlands will continue in perpetuity, at similar levels every year. In reality, however, funding for predator management is provided by the California Department of Fish and Game (CDFG), and the availability of such funds varies from year to year. For example, CDFG will have restricted funds in 2004 due to the current state budget crisis (Lyann Comrack, CDFG, [pers. comm.]);
- assumes, without stating so, that existing predator management is always successful in minimizing predation on lowland nesting birds. In reality, however, data provided in reports cited by LSA clearly shows that ongoing predator management in the lowlands has not always ensured the nesting success of Least Terns, Snowy Plovers, and other non-listed species such as Elegant Terns and Caspian Terns nesting at Bolsa Chica. For example, during the four years from 1999 through 2002, Least Tern productivity in the lowlands was zero, even though 57 American Kestrels and 250 American Crows were removed from the lowlands during those years. Thus, predator management is not 100% successful in removing avian predators, and in fact may fail to remove the most offending individuals, as these individuals are the most difficult to trap (W.L. Ross, pers. comm.);
- ignores documented information that Least Tern nesting sites adjacent to residential development projects are susceptible to predation by birds supported by residential development such as American Crows, and by birds who have lost traditional foraging habitat to residential development. For example, following creation of five nesting sites for Least Terns and Western Snowy Plovers at Batiquitos Lagoon in 1996, and subsequent completion of several new residential development projects adjacent to the lagoon from 1997 through 2001, predation by American Crows, Common Ravens and Red-tailed Hawks increased. Predation was so intensive that even with an ambitious predator management program (daily visits by a predator manager dedicated solely to Batiquitos Lagoon), Snowy Plover nest numbers at the lagoon decreased from an maximum of 39 in 1996 to 8 in 2001, and productivity for Least Terns declined from an average of 0.97 fledglings per nest from 1994 through 1996 to 0.34 fledglings per nest from 1997 through 2001;
- presents data and cites reports by W.L. Ross, who has conducted predator management in the lowlands and four other Least Tern nesting areas for 12 years, but cites no personal interviews with Mr. Ross, Mr. Jack Fancher of the U.S. Fish and Wildlife Service, or individuals with U.S. Department of Agriculture Wildlife Services, all with many years of experience observing and managing predators on Least Terns and Snowy Plovers. These individuals could have provided additional citations, personal observations and objective opinions regarding the potential effect on predator populations of residential development projects adjacent to nesting sites;
- though it states that the existing predator management program will continue to be "the most important factor influencing the population" of potential predators in the lowlands, it fails to analyze the extent to which the proposed development may increase numbers of predators in the lowlands, simply stating, for example, that "a slight loss of habitat on the upper mesa would be inconsequential."

Thus, the conclusion that ongoing predator management will render inconsequential the contribution of the Brightwater Project to predation in the lowlands is erroneous.

I further discuss below the LSA document's discussion of two species that have had a major influence on Least Tern productivity during the past decade.

American Kestrel

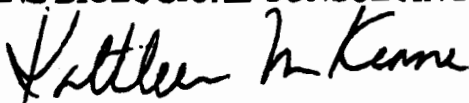
The LSA document states, "Given the perennial reduction in kestrel numbers resulting from trapping, development of the upper mesa is not expected to have any significant effect on kestrels, either in terms of numbers present or the location of their activities. As long as trapping continues, empty kestrel habitat is expected at Bolsa Chica." However, American Kestrels are known to nest in palm trees, included in most coastal residential projects and likely to be included in landscaping for the Brightwater project; thus, the project has a potential to increase the number of kestrels in the project area. Even if the Brightwater Project will refrain from using palm trees in its landscaping, kestrels are known to prey on insects, small mammals and reptiles, and potential foraging habitat and roosting perches for kestrels will be removed by the proposed project, which will likely lead to increases of kestrel perching and foraging in the lowlands, including foraging on Least Tern and Snowy Plover chicks. In recent years, American kestrels have been one of the primary predators on Least Terns and Snowy Plovers chicks and fledglings; e.g., "Chick losses to American kestrels were higher than for other reported predators." (Keane 2000); "highest chick/fledgling losses were to American kestrels, coyotes and peregrine falcons" (Keane 2001).

American Crow

For Least Terns, the greatest egg losses in 1999 were attributed to coyotes, crows and ravens (Keane 2001), and the lack of any successful nesting attempts and nesting site abandonment at Venice Beach in 2002 was due to crows (Taylor 2002). In addition, as stated above, ample anecdotal evidence suggests that predation by American Crows on Least Terns increased following residential development at Batiquitos Lagoon.

Thank you for considering my comments on the LSA document. Please feel free to contact me if you would like additional information or clarification on any of the information provided in this letter.

Sincerely,
KEANE BIOLOGICAL CONSULTING



Kathleen (Kathy) Keane
cc: John Dixon, biologist, California Coastal Commission

References Cited

Keane, K.M. 2000. California least tern breeding survey, 1998 season. Calif. Dep. Fish and Game, Habitat Conservation and Planning Branch Report 2000-01, Sacramento, CA. 43 pp.

Keane, K.M. 2001. California least tern breeding survey, 1999 season. Calif. Dep. Fish and Game, Habitat Conservation and Planning Branch Report, Species Conservation and Recovery Program Report 2001-01, Sacramento, CA. 16 pp. + app.

Taylor, M. 2003. Breeding biology of the California least tern at Venice Beach, 2002 breeding season. Prepared for the California Department of Fish and Game, Lands Management Office, San Diego, CA. January 29, 2003.

SANDRA GENIS, PLANNING RESOURCES
1586 MYRTLEWOOD COSTA MESA, CA. 92626

PHONE/FAX (714) 754-0814

To: Teresa Henry
California Coastal Commission
Fax (562) 590-5084

From: Sandra Genis, Bolsa Chica Land Trust
(714) 754-0814

Date: February 18, 2004

Subject: Brightwater Development (CDP Application No. 5-02-375)

Attached are statements from Juan Mueller regarding the photo of a burrowing owl previously submitted to the Coastal Commission; a summary of resources observed by biologist Robert Hamilton, including a burrowing owl on the mesa; and a statement from Marinka Horack and Marge Allen regarding a pair of white-tailed kites observed at Bolsa Chica. They have also supplied a photo, although this is not the photo of white-tailed kites previously submitted. That photo was taken by Clair de Bouvoier, who will be submitting separate documentation. He indicated by telephone that he has observed a pair of kites nesting near the heron nest on the mesa.

The faxed materials are also being submitted by mail. Hope this helps the Commission in the review of existing resources at Bolsa Chica.



RECEIVED
South Coast Region
FEB 18 2004
CALIFORNIA
COASTAL COMMISSION

FROM : SANDY'S_PLANNING
FROM : DonJuanaMueller

PHONE NO. :
FAX NO. : 7149603354

Feb. 18 2004 02:59PM P2
Feb. 12 2004 02:59PM
RECEIVED
South Coast Region

FEB 18 2004

CALIFORNIA
COASTAL COMMISSION

DOCUMENTATION

Burrowing Owl in Bolsa Chica Ecological Reserve Sunday, October 8, 2000 Between 11:00 AM & 2 PM

Witnesses:

- Aishah Al-Sehaim - 8th grade student at Lake Center Middle School, Santa Fe Springs
- Rebecca Vallejo-Palagyi - parent of Aishah, Teacher at La Mirada Hi School, phone (H) 714-377-0586
- Mark Vallejo-Palagyi - parent
- Marinka Horack, birder
- Lois Vackar, birder
- Steven Mueller, photographer
- Juana Mueller, chronicler - *Juana R Mueller*

About 11:00 AM Aishah and her mother set off on a walk following a path in back of the Interpretive Center at the Bolsa Chica Ecological Reserve on Warner and PCH. Just before they came to a sign indicating the trail was going off limits they were startled by a bird flying out right by them. Aishah was able to discern that it was a little owl although neither she nor her mother knew what kind. They were interested that an owl would be out and about in broad daylight.

They turned back and took the mesa trail along the wetlands and ended up in the PCH Reserve parking lot where they were to be picked up by Mr. Vallejo-Palagyi. There they encountered Marinka Horack and the Land Trust educational table. They recounted their sighting of the little owl to Marinka who became excited that it might be a Burrowing Owl. At one time Burrowing Owls had been found on Bolsa Chica Mesa but had not been seen near the Mesa in at least a decade, even though it's perfect habitat for them. Marinka took out her bird book and they tried to identify the owl. Marinka also got on her cell phone and phoned several knowledgeable people to see if they could come have a look.

Lois Vackar came and brought her birding scope, Steven Mueller came with his photographic equipment, and Juana came to document the siting.

The Burrowing Owl was hiding in the depression outside a burrow and eyeing all of us with great interest. Lois had the owl in her scope for a perfect view of its movements. It moved out of the depression and up on a little mound of dirt. Finally it flew off about 25 -30 feet. In a few minutes it returned to the burrow and stood outside it watching us. There was no mistaking it was a Burrowing Owl. It seemed to be using the burrow as "home" during the time we were observing.

The location was about 10 - 15 feet off PCH & maybe 25 - 30 feet in front of the "off limits" sign behind the Interpretive Center. Steve was able to get a complete set of photos of this siting.

PHOTO OF TWO WHITE-TAILED KITES

DATE: February 5, 1999

TIME: Mid-day

PLACE: Upper Bolsa Chica Mesa, a little south of the D.E. Goodell property, but inside the chain-link fence on Hearthside land.

WHAT WE OBSERVED: Two White-tailed Kites were flying together and actually linked up in the air. The photo was taken when they flew down to perch on some dead tree branches.

WITNESSED BY:

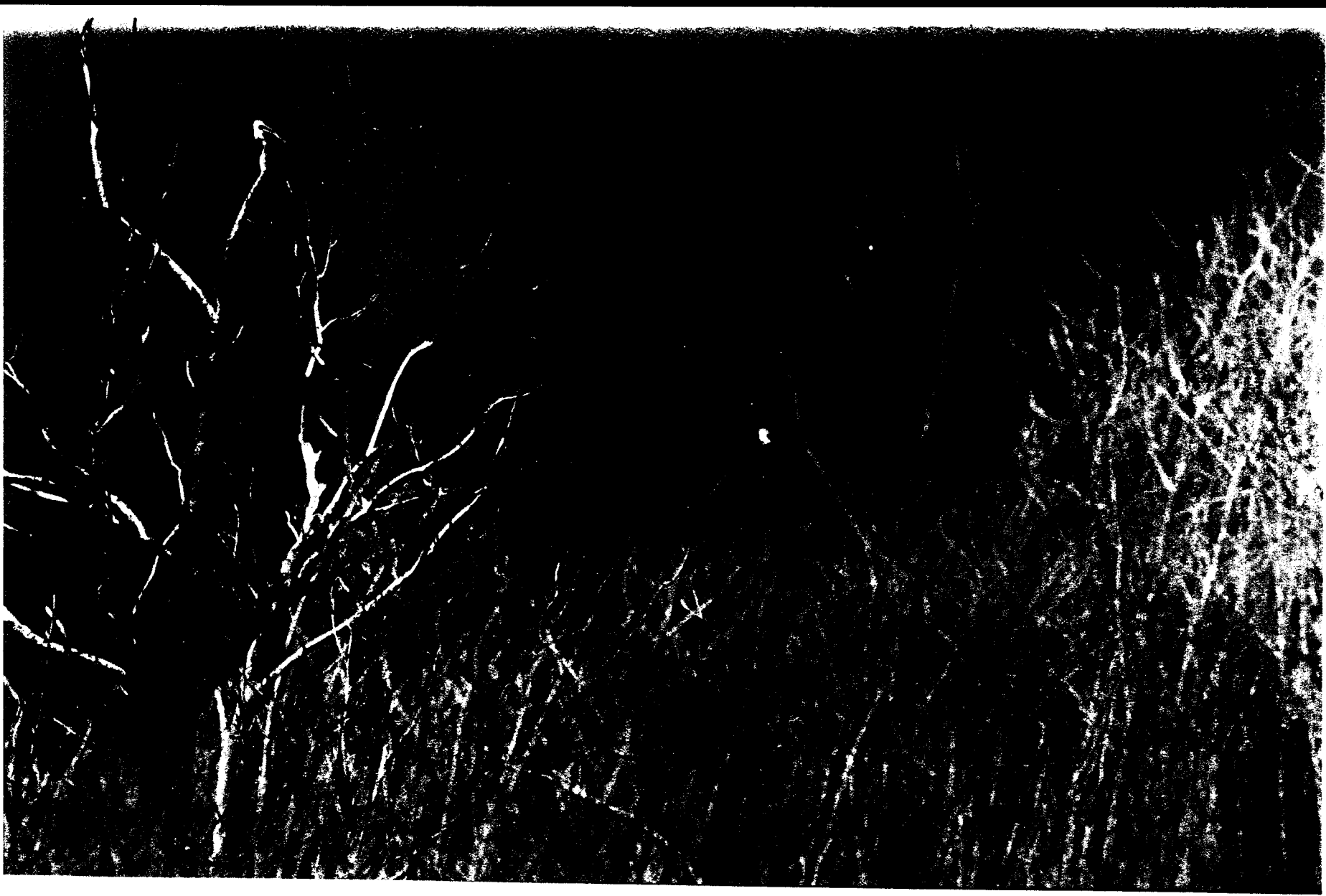
Marinka Horack
[took the photo]

Marge Allen

(Marjorie Allen)

Marinka Horack

Marjorie Allen

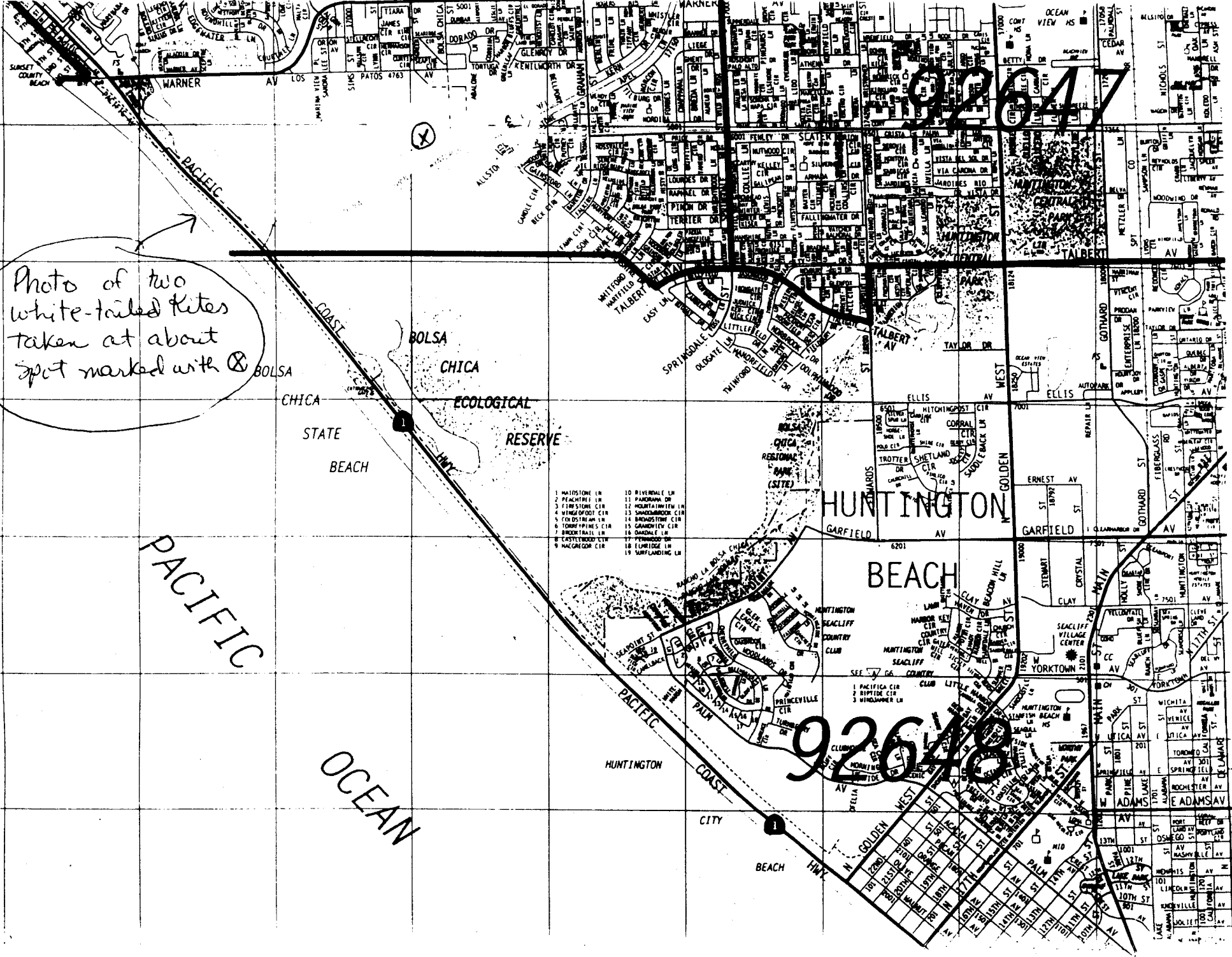


A PAIR OF WHITE-TAILED KITES
AT BOLSA CHICA MESA
(A species of concern)
February 5, 1999

Photo of two white-tailed kites taken at about spot marked with ⊗

92647

92648



- 1 MADSTONE LN
- 2 PEACHTREE LN
- 3 FISHSTONE CIR
- 4 WINDYFOOT CIR
- 5 FOX OSTRICH LN
- 6 TORREY PINES CIR
- 7 BROADTRAIL LN
- 8 EASTWOOD CIR
- 9 MACGREGOR CIR
- 10 RIVERDALE LN
- 11 PADDOCK DR
- 12 MOUNTAINVIEW LN
- 13 SHADOWNOR CIR
- 14 BRADSTONE CIR
- 15 GRANDVIEW CIR
- 16 GRANDALE LN
- 17 PENNINGTON DR
- 18 LUMBER LN
- 19 SUNLANDING LN



Robert A. Hamilton

January 26, 1998

Nancy Donovan
Bolsa Chica Land Trust
4831 Los Patos
Huntington Beach, CA 92649

RECEIVED
FEB 24 2004
CALIFORNIA
COASTAL COMMISSION

Subject: Animal Species Observed at Bolsa Chica Mesa

Dear Nancy,

This letter report describes the methods and provides the results of two biological surveys that I conducted at Bolsa Chica Mesa in coastal Orange County, California. Species considered sensitive by state and/or federal resource agencies are denoted as such in the Appendix A species list.

Methods

I walked the upper mesa with you and Jan Vandersloot from on 16 January 1998, and walked the entire Bolsa Chica mesa and associated upland slopes on 21 January. During each survey, I searched for primarily for birds and other wildlife; during the second survey, I searched for the Coastal California Gnatcatcher (*Polioptila californica californica*) in areas of coastal bluff scrub, dried Black Mustard (*Brassica nigra*) and Sweet Fennel (*Foeniculum vulgare*). I also inspected two ponded areas covering approximately 0.1 to 0.2 acre located on the upper mesa near the intersection of Los Patos and Lynn roads, and smaller wet areas in this general area.

Table A - Survey Summary

Survey Date	Time	Start Conditions	End Conditions
16 January 1998	1300-1530	wind 1-3 mph; clear; ~75°F	wind 1-3 mph; clear; ~75°F
21 January 1998	0900-1130	wind 1-3 mph; clear; ~75°F	wind 1-3 mph; clear; ~75°F

Results

I detected three butterfly species, one reptile species, 38 bird species, and four mammal species (please refer to the species list in Appendix A); I also observed fairy shrimp of undetermined species in tire tracks located on the upper mesa, near the small ponded areas referred to previously.

During the 16 January survey, I observed one Burrowing Owl on the upper mesa. This raptor has declined dramatically in Orange County and elsewhere in coastal southern California, and now primarily occurs in Orange County as a fall and winter visitor. However, raptor biologist Peter H. Bloom (pers. comm.) suggests that Bolsa Chica mesa may be near enough to the county's last substantial resident population, at the Seal Beach National Wildlife Refuge, for dispersing birds to establish residence at Bolsa Chica mesa. Directed spring surveys would be required to ascertain whether the Burrowing Owl presently occurs at Bolsa Chica mesa as a fall and winter visitor or a breeding resident.

During each surveys, a pair of White-tailed Kites were observed in apparent courtship behavior in eucalyptus trees at the southeast margin of the mesa, suggesting that this pair may attempt to nest in these trees.

Discussion

The bird sightings reported here are essentially consistent with baseline information reported in the Setting section of Draft EIR No. 551 for the "Bolsa Chica Project," prepared by the County of Orange, dated 20 December 1993. It is not clear, however, that focused spring surveys for the Burrowing Owl have been completed in a manner consistent with California Department of Fish and Game policy.

In addition, discovery of seasonally ponded areas and unidentified fairy shrimp appears to represent new biological information that was not considered in the preparation of environmental documentation for the proposed project.

Conclusion

Please call me at (714) 459-2875 if you have any questions regarding this report, or wish to further discuss any issues.

Sincerely,



Robert A. Hamilton
Consulting Biologist

Attachments: Appendix A, List of Animal Species Observed

cc: Jan Vandersloot

APPENDIX A
ANIMAL SPECIES OBSERVED
BOLSA CHICA MESA

The following invertebrates, amphibians, reptiles, birds and mammals were noted during walks of the Bolsa Chica mesa on 21 January 1998. Each species was observed, rather than being detected by indirect means (tracks, scat, etc.). Numbers of each species observed during the 21 January survey are indicated in parentheses; Red-shouldered Hawk, Cooper's Hawk, Burrowing Owl, and Palm Warbler were observed only during the 16 January 1998 survey; numbers indicated for these species pertain to the earlier survey date.

In addition to species conclusively identified, I observed five fairy shrimp of unknown genus and species in water ponded in tire tracks on the upper mesa during the 21 January survey.

*Introduced species

LEPIDOPTERA

Nymphalidae

- Danaus plexippus*
- Vanessa atalanta rubria*
- Nymphalis antiopa antiopa*

REPTILIA

Iguanidae

- Sceloporus occidentalis*

AVES

Ardeidae

- Ardea herodias*
- Ardea albus*

Accipitridae

- Elanus leucurus*
- Circus cyaneus*
- Accipiter striatus*
- Accipiter cooperii*
- Buteo lineatus*
- Buteo jamaicensis*

Falconidae

- Falco sparverius*

Columbidae

- Zenaida macroura*

Strigidae

- Athene cunicularia*

Trochilidae

- Calypte anna*

Alcedinidae

- Ceryle alcyon*

BUTTERFLIES

Brush-footed Butterflies

- Monarch (2)
- Red Admiral (1)
- Mourning Cloak (1)

REPTILES

Iguanid Lizards

- Western Fence Lizard (3)

BIRDS

Hérons

- Great Blue Heron (3)
- Great Egret (5)

Hawks

- White-tailed Kite (2)
- Northern Harrier (2)
- Sharp-shinned hawk (1)
- Cooper's Hawk (1)
- Red-shouldered Hawk (1)
- Red-tailed Hawk (3)

Falcons

- American Kestrel (3)

Pigeons, Doves

- Mourning Dove (5)

Typical Owls

- Burrowing Owl (1)

Hummingbirds

- Anna's Hummingbird (12)

Kingfishers

- Belted Kingfisher (1)

Picidae

Picoides nuttallii
Picoides pubescens
Colaptes auratus

Tyrannidae

Sayornis nigricans
Sayornis saya

Laniidae

Lanius ludovicianus

Corvidae

Corvus brachyrhynchos

Monarchidae

Turdus migratorius

Aegithalidae

Psaltriparus minimus

Regulidae

Regulus calendula

Mimidae

Mimus polyglottos

Sturnidae

* *Sturnus vulgaris*

Motacillidae

Anthus rufescens

Parulidae

Vermivora celata
Dendroica coronata
Dendroica palmarum
Geothlypis trichas

Emberizidae

Pipilo crissalis
Passerculus sandwichensis
Melospiza melodia
Melospiza lincolni
Zonotrichia leucophrys
Zonotrichia atricapilla

Icteridae

Agelaius phoeniceus
Sturnella neglecta

Fringillidae

Carpodacus mexicanus

Woodpeckers

Nuttall's Woodpecker (1)
Downy Woodpecker (1)
Northern Flicker (3)

Tyrant Flycatchers

Black Phoebe (4)
Say's Phoebe (4)

Shrikes

Loggerhead Shrike (2)

Jays, Crows

American Crow (30)

Monarch Flycatchers

American Robin (1)

Bushtits

Bushtit (30)

Kinglets, Gnatcatchers, Thrushes, Babblers

Ruby-crowned Kinglet (1)

Thrashers

Northern Mockingbird (1)

Starlings

European Starling (40)

Pipits

American Pipit (30)

Wood Warblers

Orange-crowned Warbler (1)
Yellow-rumped Warbler (8)
Palm Warbler (1)
Common Yellowthroat (5)

Sparrows and Buntings

California Towhee (6)
Savannah Sparrow (25 [migratory])
Song Sparrow (4)
Lincoln's Sparrow (2)
White-crowned Sparrow (60)
Golden-crowned Sparrow (5)

Meadowlarks, Blackbirds and Orioles

Red-winged Blackbird (5)
Western Meadowlark (100)

Finches

House Finch (150)

MAMMALIA

Leporidae

Sylvilagus audubonii
Lepus californicus

Sciuridae

Spermophilus beecheyi

Canidae

Canis latrans

MAMMALS

Hares, Rabbits

Audubon Cottontail (2)
Black-tailed Jackrabbit (1)

Squirrels

California Ground Squirrel (20)

Wolves, Foxes

Coyote (1)

Taxonomy and nomenclature follow Mattoni (1990)¹, Stebbins (1966)², American Ornithologists' Union (1983)³ and supplements and Ingles (1965)⁴.

¹Mattoni, R. 1990. Butterflies of Greater Los Angeles. Identification poster published for the Los Angeles County Museum of Natural History by the Center for the Conservation of Biodiversity/Lepidoptera Research Foundation, Beverly Hills.

²Stebbins, R.C. 1966. A Field Guide to Western Reptiles and Amphibians. Houghton Mifflin, Boston.

³American Ornithologists' Union. 1983. Check-list of North American Birds, sixth edition. Washington, D.C. and supplements.

⁴Ingles, L.G. 1965. Mammals of the Pacific States. Stanford University Press.

SANDRA GENIS, PLANNING RESOURCES

1586 MYRTLEWOOD

COSTA MESA, CA. 92626

PHONE/FAX (714) 754-0814

To: Teresa Henry
District Manager, South Coast District Office
California Coastal Commission
200 OceanGate, 10th Floor
Long Beach, Ca. 90802-4416

From: Sandra Genis, Bolsa Chica Land Trust
(714) 754-0814

Date: February 18, 2004

Subject: Brightwater Development (CDP Application No. 5-02-375)

RECEIVED
South Coast Region

FEB 24 2004

CALIFORNIA
COASTAL COMMISSION

Enclosed are statements from Juan Mueller regarding the photo of a burrowing owl previously submitted to the Coastal Commission; a summary of resources observed by biologist Robert Hamilton, including a burrowing owl on the mesa; and a statement from Marinka Horack and Marge Allen regarding a pair of white-tailed kites observed at Bolsa Chica. They have also supplied a photo, although this is not the photo of white-tailed kites previously submitted. That photo was taken by Clair de Bouvoier, who will be submitting separate documentation. He indicated by telephone that he has observed a pair of kites nesting near the heron nest on the mesa.

Also enclosed is a copy of *Miracles of the Marsh: A Field Guide to Bolsa Chica*, which was prepared as part of the Bolsa Chica Land Trust Education Project. This includes general information on the resources of the Bolsa Chica.

I hope this is helpful. Please do not hesitate to contact me if you have any questions or need further information.



RECEIVED
State Coastal Services

DOCUMENTATION

FEB 24 2004

Burrowing Owl in Bolsa Chica Ecological Reserve
Sunday, October 8, 2000
Between 11:00 AM & 2 PM

COASTAL COMMISSION

Witnesses:

- Aishah Al-Sehaim - 8th grade student at Lake Center Middle School, Santa Fe Springs
- Rebecca Vallejo-Palagyi -parent of Aishah, Teacher at La Mirada Hi School, phone (H) 714-377-0586
- Mark Vallejo-Palagyi - parent
- Marinka Horack, birder
- Lois Vackar, birder
- Steven Mueller, photographer
- Juana Mueller, chronicler - *Juana R Mueller*

About 11:00 AM Aishah and her mother set off on a walk following a path in back of the Interpretive Center at the Bolsa Chica Ecological Reserve on Warner and PCH. Just before they came to a sign indicating the trail was going off limits they were startled by a bird flying out right by them. Aishah was able to discern that it was a little owl although neither she nor her mother knew what kind. They were interested that an owl would be out and about in broad daylight

They turned back and took the mesa trail along the wetlands and ended up in the PCH Reserve parking lot where they were to be picked up by Mr. Vallejo-Palagyi. There they encountered Marinka Horack and the Land Trust educational table. They recounted their sighting of the little owl to Marinka who became excited that it might be a Burrowing Owl. At one time Burrowing Owls had been found on Bolsa Chica Mesa but had not been seen near the Mesa in at least a decade, even though it's perfect habitat for them. Marinka took out her bird book and they tried to identify the owl. Marinka also got on her cell phone and phoned several knowledgeable people to see if they could come have a look.

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The location was about 10 - 15 feet off PCH & maybe 25 - 30 feet in front of the "off limits" sign behind the Interpretive Center. Steve was able to get a complete set of photos of this sighting.

PHOTO OF:
PUBLIC VIEW OF SAN GABRIEL MOUNTAINS
FROM BOLSA CHICA MESA & WETLANDS

This view would be obliterated if Brightwater project were to be built.

DATE: November 25, 2001

TIME: Morning

PLACE OF OBSERVATION: From Bolsa Chica trail
along bluff edge - area just west of the old gun club.
[see attached map]

Photo by Marinka Horack

Marinka Horack



BOLSA CHICA MESA & SAN GABRIEL MOUNTAINS
This public view would be obliterated by Hearthsides project.

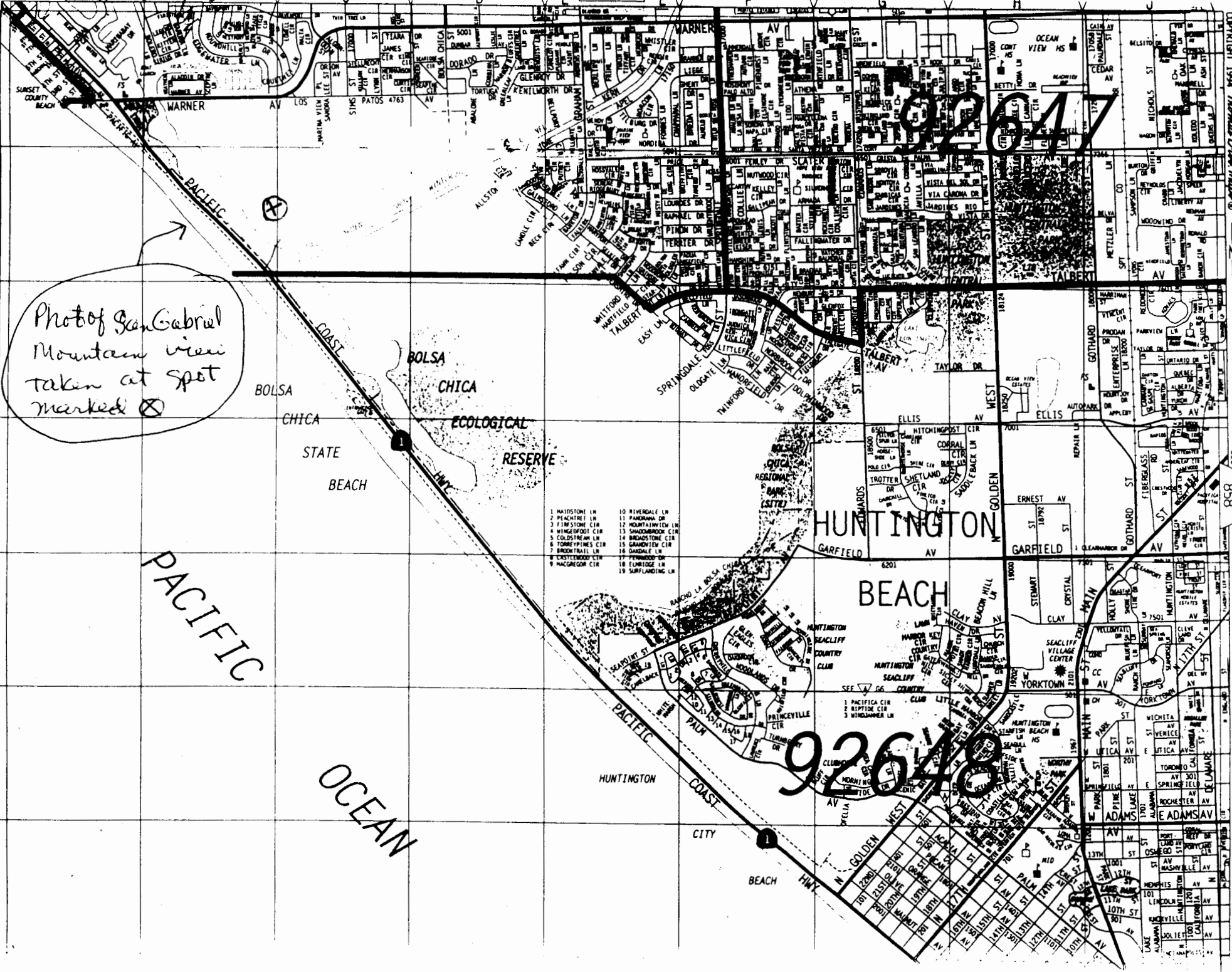


Photo of San Gabriel Mountain view taken at spot marked ⊗

92647

92648

- | | |
|--------------------|----------------------|
| 1 MAIDSTONE LN | 10 RIVERDALE LN |
| 2 PEACHTREE LN | 11 PANORAMA DR |
| 3 FIRESTONE CIR | 12 HEARTLAND VIEW LN |
| 4 WINGFOOT CIR | 13 SHADDOCK CIR |
| 5 COLDSWAIN LN | 14 BRADSTONE CIR |
| 6 TORREY PINES CIR | 15 SANDYVIEW LN |
| 7 BROOKTRAIL LN | 16 OAKDALE LN |
| 8 CRISTLEWOOD CTR | 17 PRINCETON DR |
| 9 MACGREGOR CIR | 18 LAMBROSE LN |
| | 19 SURFLANDING LN |

PACIFIC

OCEAN

HUNTINGTON BEACH

BEACH

HUNTINGTON CITY

BEACH

PHOTOS OF SOUTHERN TARPLANT (*Hemizonia australis*)
ON LOWER BOLSA CHICA MESA

DATE: August 2003

TIME: Afternoon

PLACE OF OBSERVATION: On lower Mesa [see attached map] by the old Bolsa Chica Gun Club site. The photos show the Hearthside fence, and one of the landmark Canary Island Palms in the background.

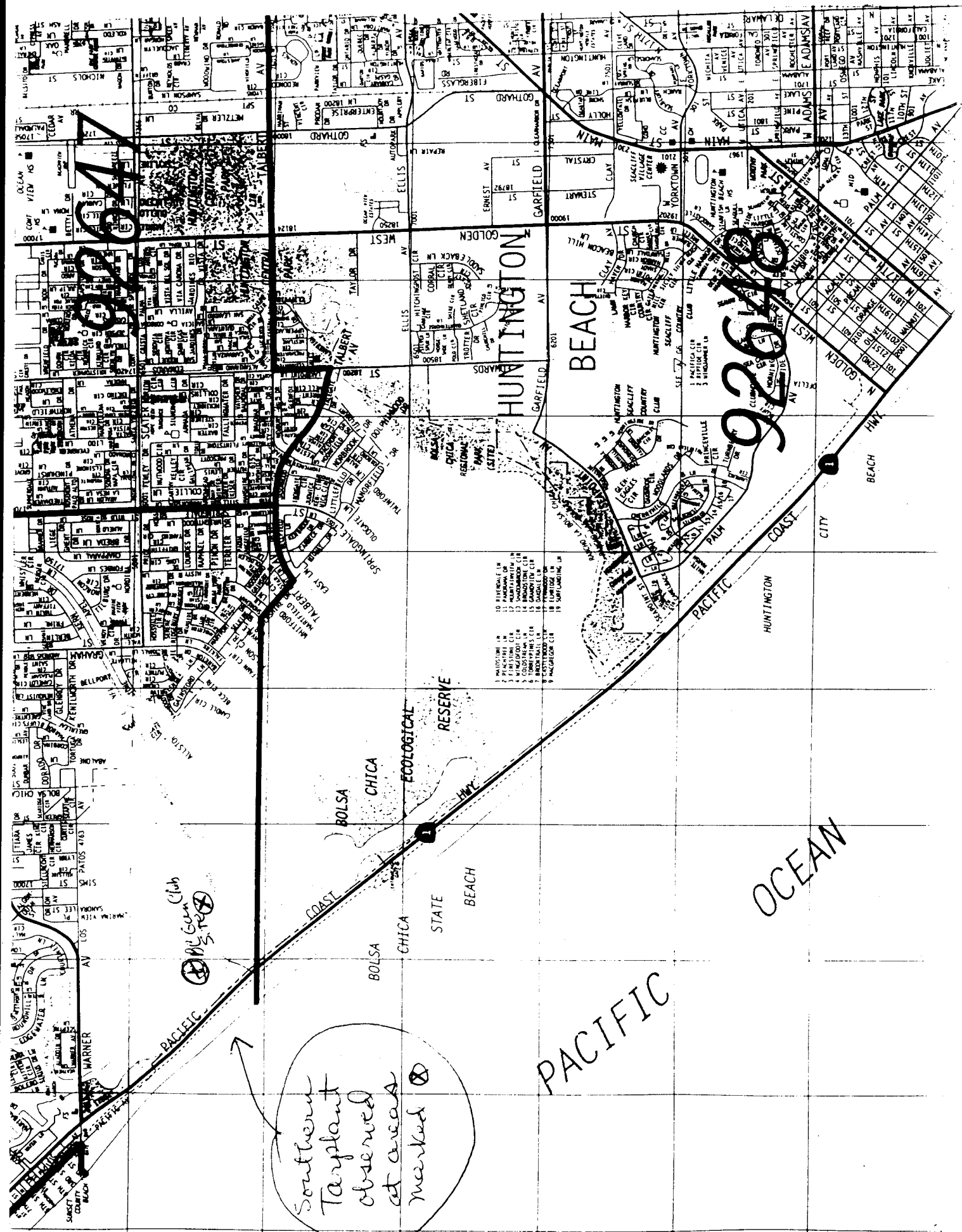
These photos document the fact that the rare Southern Tarplant grows on the Lower as well as the Upper Bolsa Chica Mesa.

The rare hemizonia plant is distinguished from the more common Tarplant by the prickly texture of the rare one.

Photo by Marinka Horack

Marinka Horack





Southern Tanager observed at areas marked with X

92640

- 1. HUNTINGTON BEACH
- 2. HUNTINGTON BEACH
- 3. HUNTINGTON BEACH
- 4. HUNTINGTON BEACH
- 5. HUNTINGTON BEACH
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- 19. HUNTINGTON BEACH

RECEIVED
South Coast Region

JUL 18 2004

Theresa Henry
California Coastal Commission
200 Ocean gate # 1000
Long Beach, CA 90802

CALIFORNIA
COASTAL COMMISSION

RECEIVED
South Coast Region

JUL 01 2004

CALIFORNIA
COASTAL COMMISSION

June 29, 2004

Dear Theresa:

I am enclosing a picture taken by Steve E. Smith. This Bald Eagle was photographed on Mar 26th, 2004. It was seen for three days on the Bolsa Chica and also seen many times again in April. As you can see it is a juvenile and tagged from Catalina Island. This is photographed proof that the Mesa must be saved as a resting place for these birds.

Any more information can be obtained from Mr. Smith whose cell phone is 562-822-1879 or email me at murphyeile@aol.com

Sincerely,

Eileen Murphy
Eileen Murphy

201 21st Street
HB CA 92648
714-536-4835



146 La Grande
Moss Beach, CA 94038

July 14, 2004

Mr. Peter Douglas
Executive Director
California Coastal Commission
200 Oceangate, Suite 1000
Long Beach, CA 90802

RECEIVED
South Coast Region

JUL 15 2004

CALIFORNIA
COASTAL COMMISSION

Re: Failure to Mitigate at CA-ORA-83 (Cogged Stone) Site

Dear Mr. Douglas:

As you are aware, I am very concerned about the California Coastal Commission's refusal to require the critical mitigation measures necessary to protect the unique archaeoastronomical resources at the CA-ORA-83 site on Bolsa Chica Mesa.

Signal Landmark's proposed development of the CA-ORA-83 site will destroy its archaeoastronomical resources and nationally significant informational values. California law requires mitigation for these resources and informational values commensurate with the site's profound historic significance.

Simply acknowledging the site's alignments or astronomical potential can in no way be construed as "reasonable" mitigation, especially given the chronological significance of the CA-ORA-83 site in terms of the history of astronomy. Logically, in light of the site's pivotal historical significance, the required mitigation efforts must *directly* address nationally relevant research questions via the collection, study and analysis of data relevant to those research questions before the destruction of this site's archaeoastronomical resources.

Contrary to the Commission's current position, archaeoastronomy constitutes a recognized and well established sub-field of archaeology, and under Californian law archaeoastronomical resources are clearly defined as archaeological resources; *see, e.g.*, the California Environmental Quality Act.

Along with several nationally distinguished scholars in the fields of Native American and Native Californian astronomy and archaeoastronomy, I again request that the Commission require historically relevant archaeoastronomical mitigation at the site, in accordance with the dilates of the California Coastal Act of 1976. The Commission should recommend the site be opened to highly respected scholars in the fields of Native American and Native Californian astronomy and

archaeoastronomy so that, working different archaeoastronomical aspects and problems at the site, a historically crucial baseline of archaeoastronomical information can be garnered.

1. CA-ORA-83's National Significance

The archaeological resources of the CA-ORA-83 site, a pentagonal-shaped area south of Los Patos Avenue and west of Bolsa Chica Street on the southern edge of the upper bench of the Bolsa Chica Mesa, have been previously identified by the State Historic Preservation Officer, who has twice determined that the site is eligible, under state-wide significance, for listing on the National Register of Historic Places. The CA-ORA-83 site has also been acknowledged as “possibly significant as a solstice observation site” in a permanent, public record and report regarding this site by the developer’s own archaeological and anthropological agents (Scientific Resources, Inc. 1997).

On the basis of relevant new data regarding the CA-ORA-83 site’s historic significance and informational values where the history of astronomy is concerned, its historically unparalleled archaeoastronomical resources are currently the subject of a National Register nomination which was submitted to the Office of Historic Preservation in May of 2004. As a result of comprehensive research and documentation on my part,¹ as well as input and review by experts in the fields of Native American and Native Californian astronomy and archaeoastronomy, the CA-ORA-83 site is currently nominated for inclusion on the National Register of Historic Places as a nationally significant property due to its still-functioning state, and its research potential, as one of the world’s earliest fixed astronomical observation points.²

¹ I am an agent and representative of the not-for-profit Native corporation, Maritime Shoshone, Inc., and a group of federally-recognized and culturally-affiliated California Indians of Luiseno and Island Shoshone descent. The member of a federally-recognized California Indian Band, I have an extensive background of education and research regarding indigenous southern Californians, and received an undergraduate degree in Anthropology from the University of Southern California, and a graduate degree in Anthropology from Stanford University, where I was a National Science Foundation Fellow.

² A copy of the nomination of this site to the National Register for national significance has been sent to Teresa Henry of your staff, but I wish to add that even before the final version of this nomination was submitted to the State, I sought to keep Steve Rynas of your staff informed regarding my nomination efforts and the CA-ORA-83 site’s national significance in the area of archaeoastronomy. As part of this effort, in November 2002, I sent a significant, preliminary portion of the current nomination to him. As a highly interested party, I also asked, in writing, to be kept informed regarding any permit or other activity involving the Bolsa Chica Mesa’s upper bench but received no information from your staff regarding the November 2002 application.

Although the site has been excavated for in-ground archaeological resources, the site continues to possess exceptional resources and informational values that, in conjunction with the important evidences and data already retrieved at it, may be expected to yield pivotally-important information concerning the antiquity of astronomy and calendrics in the Americas – one of the most important areas of American archaeoastronomical research and investigation today.

In relation to what appear to be historically-pivotal intellectual advances in the development of art (North America's earliest reliably-dated sculptural tradition, reflecting Native North America's technologic move to permanent, representational sculpture), science (North America's earliest reliably-dated type site for astronomical observation and calendric or calendric-type behavior), and religion (North America's earliest reliably-dated evidences of astronomically-based religious practices, expressions, and motifs) during a significant span of the North American Archaic, California's Millingstone Horizon, the CA-ORA-83 site is nominated for national significance in the areas of Science, Art, Religion and Archaeoastronomy.

The site qualifies as a nationally significant property in those areas because it still functions as a solstice observation site predating the earliest reliably-dated cases of such sites in Africa, Europe, the British Isles, Asia and North America, and it has probable historic association with strikingly analogous cogged stone sites in South America. As a result, it exceptionally represents and illuminates important and hitherto unrecognized aspects of the development, use, and intellectual interchange of American astronomies and calendrics during the site's markedly early period of significance, 6600 - 2000 B. C.

The coastal cogged stone sites of southern California appear to be the only astronomically-based sites in the United States providing evidences of intercontinental connection, interchange and influence with respect to the development of astronomy and calendrics in the Americas. The most outstanding representation of this type site in North America, the CA-ORA-83 site, is also the earliest reliably dated and last remaining case of this type site on the North American Pacific coast which has yet to be built on. The coastal cogged stone sites of southern California, of which the CA-ORA-83 site appears to be the rare survival, may also be the only astronomically-based sites in the United States providing evidence, where astronomical knowledge and observation are concerned, of cultural interchange and influence beyond the geographical boundaries of what are now the United States (see Williamson 1981: 75).

These associations – addressing intellectual exchange between the Americas and beyond the geographical boundaries of what are now the United States – have tremendous implications for gaining not only a “more complete,” but more complex, understanding of cultural developments in the Americas (cf. Meggers 1964: 522), including the peopling and colonization of Pacific coastlines of the Americas.

Despite the numerous archaeological programs that have been undertaken within the 7.4 acre nomination area (please refer to the maps contained in our nomination), the nomination area continues to retain the physical features and conditions – location, elevation, orientation, setting,

and visual attributes (the relevant horizon features outlying and surrounding it) – essential to conveying its historic associations, functions and characteristics as an anciently-enduring, Pacific-based solstice observation point.

Because the CA-ORA-83 site's relevant outlying features are intact and functional in terms of their astronomical potential and we now know enough about the nature of astronomy in Native California to interpret, in relation to other important data obtained at the site, observations made from the site as indicative of the site's astronomical base, the site appears to retain the as yet untapped capacity to greatly push back the confirmed antiquity of astronomy in North America, as well as among the non-food-producers of the ancient world. In light of this information potential it is arguably one of the most historically important sites in the United States. Currently there are no known sighting points documented to be as ancient as CA-ORA-83 (see Robbins 2000).

Observatory sites predating the megaliths of Africa and the British Isles have not been archaeologically substantiated in the Americas due to a lack of astronomically-oriented constructs at American sites predating the world's earliest known astronomically-oriented megaliths, *i.e.*, those of the 4,800 year old Nabta Playa site in Africa (*ibid.*: 51). However, beside its physical form, orientational significance, and visual functionality, the CA-ORA-83 site produced special-use ceremonial items, including classically-identifiable ritual paraphernalia and celestially-evocative art, in the Millingstone Horizon strata, which along with other material, physical, astronomical, and chronological evidence, reasonably indicate that the site constitutes North America's earliest reliably-dated observatory site, providing crucial historic resources and evidence regarding our knowledge of astronomy in prehistory.

Whereas most Millingstone Horizon sites articulate very little about the religious practices and belief systems of the people(s) who inhabited California's littoral zone during the Millingstone Horizon, the CA-ORA-83 site appears to be an extremely valuable exception in this regard. Its physical functionality for certain religious practices and symbolic expressions apparently exceeded that of other known coggled stone sites in southern California. In comparison, it appears to have produced the most prolific (and perhaps, in light of its numerous potential alignments, most interpretable) evidences of and surrounding the astronomically-based religious aspects of the lives of these early shellfish gatherers.

Considered together, the site's physical features, form, orientation, setting and location outstandingly represent what seems to be a very particular type site in the prehistory of the Americas: a Pacific-based, solstice observation point.

In both Americas, sites which appear to belong to this group share certain physical and visual characteristics. They are situated on elevated points or outlooks along Pacific coastlines, typically overlooking a beach and/or coastal estuary (Eberhart 1961: 364; Salls 1980: 57; Willey 1971: 208, 210), with unobstructed views of the Pacific ocean, the horizon, and surrounding features of the local and regional environment, including coastal configurations such as points, peninsulas and/or bay formations, and/or one or more offshore features, such as an island or

islands. Invariably, they evince astronomically-useful alignments relevant to the seasonal extremes (see also portions of our nomination not for public release). They may be pinpointed not only by the distinctive physical characteristics and patterns they embody and express, but by the astronomically-evocative ground-stone sculptures they produce (e.g., Iribarren 1962).

CA-ORA-83 is the last known cogged stone site of such antiquity to have survived development on the southern California coast. It also appears to be the last known case of this type site on the North American Pacific coast which has yet to be built on. The large number of cogged stones and other ceremonial items and materials which were collected at the site and the site's orientational significance make it a national treasure, both with respect to its numerous potential alignments and the symbolically-evocative environment of which it remains an integral part (see portions of our nomination not for public release).

If "archaeoastronomy has moved away from the study of building alignments toward trying to understand the role of astronomy in ancient cultures in general – in other words toward the history of astronomy," (Aveni 1997: 5), it is possible the field's practitioners will not find a more informative route for addressing the potentially earliest astronomies of the Americas – and apparently some of the earliest astronomies of the world – than by way of the North and South American "cogged" stone sites, the CA-ORA-83 site being a particularly extraordinary representative of the distinctive characteristics, patterns, and probable functions and values associated with and expressed by this strikingly analogous group of Pacific-based sites.

CA-ORA-83's informational potential, pertinent to a securely-dated antiquity for American astronomical skills and the roots and complexities of astronomy in prehistory (strategies employed to monitor and observe the seasonal extremes and other astronomical phenomena prior to the construction of megaliths or other large-scale edifices for the purposes of astronomical observation), is extremely rare. In relation to other astronomically-based sites in North America, CA-ORA-83 appears to offer a chronological baseline for the presence of astronomical skills, concepts, and belief systems in Native North America. Supporting what appears to be a previously unsubstantiated antiquity for astronomical observations and knowledge bases in Native North America, it uniquely addresses one of the most important areas of American archaeoastronomical research – "the time and place of origin of American astronomical and calendric skills" (Baity 1975: 380).

The site is also associated in an outstanding and unparalleled way with what appear to be some of the earliest celestial depictions in the world (referred to by archaeologists as "cogged" stones, perforated stones, discoidals, and spheres) as well as with what are evidently the earliest reliably-dated evidences, achievements and refinements of a sculptural tradition in Native North America (refer to our nomination). Since the CA-ORA-83 site can be associated with recurring celestial events, reexamining the poorly understood cogged stone artifact in the context of archaeoastronomy could result in the astronomically-based symbolism inherent in this art form becoming more accessible to those interested in its study (cf. Krupp 1988: vi).

2. The Legally Required Mitigation of CA-ORA-83's Nationally Significant Archaeoastronomical Resources

As you are well aware, the California Coastal Act provides that:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, [and] to minimize the alteration of natural land forms.

(Pub. Res. Code § 30251.)

The CA-ORA-83 site, demonstrably fit for both direct and indirect methods of solar observation, strongly embodies both aspects of this Section. It includes a naturally-formed, astronomical observation point with an unobstructed, elevated view of the horizon, the Pacific Ocean, certain coastal configurations (including an embayment and peninsula formation) and an offshore island. It is also oriented to provide inland astronomical alignments and sight lines.

The Act further gives the public a “right to fully participate in decisions affecting coastal planning, conservation and development,” (Pub. Res. Code § 30006), which requires the Commission to interact with members of the scientific and academic communities in order to receive technical advice and recommendations before making its decisions. (Pub. Res. Code § 30006.5.) The Act also provides that in any case where “development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, **reasonable mitigation measures shall be required.**” (Pub. Res. Code section 30244.)

In this case, the Commission’s position that sufficient mitigation has already occurred ignores all of the above scientific information about the site. The developer may argue that the site itself is a piece of private property, but the site’s historically-, scientifically- and culturally-crucial sight lines and views do not belong to the developer alone, but to all Californians, Native and non-Native alike. If the site is saved, Californians would have the unique opportunity to visit CA-ORA-83 and be educated about horizon astronomy and calendrics, the history of astronomy, Native American contributions to that history, and the early, celestially-evocative sculptures now referred to as Cogged Stones – potentially some of the earliest remaining celestial depictions in the world.

Despite historic impacts and prior archaeological programs, the CA-ORA-83 site remains uniquely and irreplaceably suited for scientific and/or educational purposes. Moreover, the religious values embodied and expressed by the CA-ORA-83 site, a regionally-precursive, time-sensitive ceremonial site and burial grounds, have spiritual resonance and significance for a great many indigenous southern Californians today. If the Commission votes in favor of the destruction of this site, it will effectively destroy 9,000 years of North American prehistory and history.

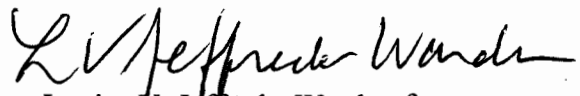
This was the sacred site of our ancestors, some of the first people to reach and colonize the Western Hemisphere, who ultimately contributed to the later-arriving cultures of the Chumash, Island/Adjacent Mainland Coast Shoshones (*Pofunngawichum*) and Luiseños (*Payomkawichum*). They are our foundation and our root in the region.

It is inconceivable that the Commission would permit the destruction of a Native Californian sacred site, with or without mitigation, and the Commission's refusal to require mitigation at CA-ORA-83 therefore also violates our rights to due process and equal protection under Article 1 of the California Constitution.

Please, on the grounds of fundamental human rights, do not permit the destruction of this 7.4 acre site, and recommend that, after archaeoastronomical mitigation, it be appropriately marked with a structure that includes interpretive text respecting its extremely noteworthy historic significance.

Similarly, if you provide my evidence to the developer respecting the CA-ORA-83 site's archaeoastronomical resources and significance in advance of the hearing date so that it may be allowed to answer the materials contained in this National Register nomination, please ensure that I am given a copy of the developer's arguments and provided the same length of time to respond, so that I and the archaeoastronomers writing in support of this site have equal access to the Commission.

Thank you for your attention to these important matters,



Louise V. Jeffredo-Warden for
Maritime Shoshone, Inc.

cc: Board, Maritime Shoshone, Inc.
Teresa Henry, staff, Coastal Commission
California Coastal Commissioners
Senator Dianne Feinstein
Senator Barbara Boxer
Senator John Burton
Alberto Saldamando, esq., International Indian Treaty Council
Lillian Sparks (Sacred Sites), National Congress of American Indians
Chris Peters, Seventh Generation
Dr. Alicia M. Gonzalez, Executive Director, Museum of the American West, Autry
National Center
Dr. Alan Gillespie, Professor, University of Washington; Dr. Tom Hoskinson; Dr. Robert
Schiffman, Professor, Bakersfield College; Dr. E. C. Krupp, Observatory Director,

Griffith Observatory; Dr. Ray A. Williamson, Space Policy Institute, George Washington University; Dr. Von Del Chamberlain; Dr. Lowell Bean (distinguished scholars in the fields of geology, anthropology, astronomy, ethnoastronomy and archaeoastronomy)
Dr. Timothy McKeown, Native American Graves Protection and Repatriation Act Program Leader, National Park Service
Steve Mikesell, Acting Historic Preservation Officer, Office of Historic Preservation
Mike Buhler, National Trust for Historic Preservation
Rob Wood, California Native American Heritage Commission
Claudia Nissley, National Preservation Institute
Paul Kleven, esq.
R. William Ferrante, esq.

Sources

Aveni, Anthony, *Stairway to the Stars: Skywatching in Three Great Ancient Cultures* (New York: John Wiley and Sons, Inc. 1997)

Baity, Elizabeth Chelsea, "Mesoamerican Archaeoastronomy So Far," in *Archaeoastronomy in Pre-Columbian America*, ed., Anthony F. Aveni (Austin: University of Texas Press, 1975)

Eberhart, Hal, "The Cogged Stones of Southern California," *American Antiquity* 26: 3 (1961): 361 - 370

Iribarren, Jorge, "Correlations Between Archaic Cultures of Southern California and Coquimbo, Chile," *American Antiquity* 27: 3(1962): 424 - 425

Meggers, Betty J., "North and South American Cultural Connections and Convergences," in *Prehistoric Man in the New World*, eds. Jesse D. Jennings and Edward Norbeck (Chicago: University of Chicago Press, 1964): 511 - 526

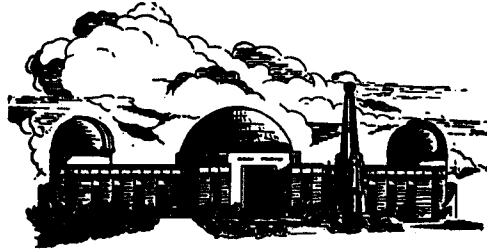
Robbins, Lawrence H., "Astronomy and Prehistory," in *Astronomy Across Cultures: The History of Non-Western Astronomy*, eds., Helaine Selin and Sun Xiaochun (Dordrecht: Kluwer Academic Publishers, 2000)

Salls, Roy, "The La Brea Cogged Stone," *The Masterkey* 54: 2 (1980): 53 - 59

Willey, Gordon R., *An Introduction to American Archaeology: Volume 2, South America* (New Jersey, Prentice Hall, Inc., 1971)

Williamson, Ray A., "North America, A Multiplicity of Astronomies," in *Archaeoastronomy in the Americas*, ed., Ray A. Williamson (Los Altos, California: Ballena Press, 1981): 61 - 80

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DEPARTMENT OF RECREATION AND PARKS
CITY OF LOS ANGELES

22 July 2004

Peter Douglas
Executive Director
California Coastal Commission
200 Oceangate
Suite 1000
Long Beach, California 90802

1-562-590-5084 fax

Dear Mr. Douglas:

As an astronomer, I have been actively engaged in the study of ancient, prehistoric, and traditional astronomy since 1973. Because my primary interest involves cross-cultural comparison, I have personally visited, examined, photographed, and in some cases studied and surveyed more than 1700 ancient and historic sites throughout the entire world. I have published numerous papers on California Indian astronomy, based upon original field research and original review of published and unpublished ethnographic archives. I have written about California Indian astronomical tradition in four of my five books on ancient and prehistoric astronomy.

With this background, I am writing in support of preservation of CA-ORA-83 Bolsa Chica Mesa. The archaeological significance of the site is well documented, and the site's unusual geographic location may reflect particularly archaic astro-cosmological symbolism and use. The full investigation described and recommended by Dr. Tom Hoskinson appears to be required by California law. I certainly support the full mitigation the law requires.

Sincerely,

Dr. E.C. Krupp
Director

cc: Teresa Henry, California Coastal Commission
Louise V. Jeffredo-Warden, Maritime Shoshone, Inc.

RECEIVED
South Coast Region

JUL 26 2004

CALIFORNIA
COASTAL COMMISSION



LAW OFFICES OF
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RECEIVED
South Coast Region

July 21, 2004

JUL 26 2004

VIA FACSIMILE AND FIRST CLASS MAIL

Bill Lockyer
Attorney General of the State of California
California Department of Justice
1300 I Street, # 1101
P.O. Box 944255
Sacramento, CA 94244-2550

CALIFORNIA
COASTAL COMMISSION

Re: California Coastal Commission's Failure to Provide Notice of Permit Application
and Failure to Require Mitigation at CA-ORA-83 (Cogged Stone) Site

Dear Mr. Lockyer:

Please be advised that I represent Louise Jeffredo-Warden, who is an agent and representative of the not-for-profit Native corporation, Maritime Shoshone, Inc., and a group of federally-recognized Californian Indians of Luiseno and Island Shoshone descent. Ms. Jeffredo-Warden, also the member of a federally recognized Band of Luiseno Mission Indians, has an extensive background of education and research regarding indigenous southern Californians, and received an undergraduate degree in Anthropology from the University of Southern California, and a graduate degree in Anthropology from Stanford University.

I am writing to advise you of two problems that have arisen regarding the CA-ORA-83 site, popularly known as the Cogged Stone site, a pentagonal-shaped area on the southern edge of the upper bench of the Bolsa Chica Mesa, near Huntington Beach. Although the site is sacred to Native Californians and North America's oldest known solstitial observation site, proposed development threatens to destroy the site, along with its unique archaeological resources.

A. FAILURE TO PROVIDE NOTICE OF PERMIT APPLICATION

For many years, Ms. Jeffredo-Warden has worked to preserve the CA-ORA-83 site, which has national significance in the areas of science, art, religion and archaeoastronomy. The State Historic Preservation Officer has recognized the importance of the site's archaeological resources in twice determining that the site is eligible, under state-wide significance, for listing on the National Register of Historic Places. Even the archaeological and anthropological agents for the developer, California Coastal Communities (Hearthside Homes), have acknowledged that

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the CA-ORA-83 site is “possibly significant as a solstice observation site” in a public report. (Scientific Resources, Inc. 1997.)

In May of 2001, Ms. Jeffredo-Warden had lengthy discussions with Steve Rynas of the California Coastal Commission staff regarding the national significance of the CA-ORA-83 site. Ms. Jeffredo-Warden informed him that she was involved in a National Register nomination process respecting the site, North America's earliest reliably dated observatory site. She further informed him that the site's orientational significance includes multiple alignments for both winter and summer solstices, and sent him documentation regarding the site's historical significance as the oldest known solstice observation site.¹

Ms. Jeffredo-Warden at the same time complained to Mr. Rynas of not receiving information from the staff relevant to development projects proposed for the upper and lower bench of the Bolsa Chica Mesa. At that time, Mr. Rynas asked her to send a simple postcard to him stating that she wanted to be informed of “any activity pertaining to the Bolsa Chica Mesa.” She followed his instructions exactly, though as a highly interested party she had already asked to be placed upon the mailing list.

In November of 2002, Ms. Jeffredo-Warden again contacted Mr. Rynas to keep him informed of her National Register nomination efforts. In that conversation, she reiterated that the CA-ORA-83 site is one of the world's earliest solstice observation points, and that the site qualifies as a nationally-significant property in other areas as well. By the very end of November (or the beginning of December), she forwarded to him a copy of a preliminary draft of the National Register nomination regarding the CA-ORA-83 site's critical historic significance and informational values. She did this to ensure that the information could become a part of the permanent record regarding this site, and so that the Coastal Commission staff could use this information to make better informed decisions regarding the site.

Although Ms. Jeffredo-Warden was not aware of it at the time, earlier in November of 2002, Hearthside Homes had submitted a permit application regarding the development of the Bolsa Chica Mesa's upper bench, on which the CA-ORA-83 site is located.

¹North America's earliest reliably dated sculpture was also recovered at the site, providing unparalleled evidence of an early sculptural tradition on this continent – hundreds of skillfully executed “cogged stones,” from which the site takes its popular name, as well as other celestially evocative groundstone ceremonial sculptures. The CA-ORA-83 site evidentially retains and conveys a probable historic association with remarkably analogous cogged stone sites on the northern coast of Chile, evidencing a theme of intercontinental connection, interchange and influence with respect to the development of astronomy and calendrics in the Americas.

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Ms. Jeffredo-Warden did not receive notification that the application had been filed, despite her multiple requests and her status as a highly interested party. Instead, she learned just recently from press reports that the Commission would be considering the site's destruction at its August 11-13, 2004 meeting.

This lack of timely notice has put Ms. Jeffredo-Warden and the groups she represents at a severe disadvantage in countering the developers' efforts, which will result in the destruction of the site. The damage caused by the lack of notice has been exacerbated because the California Coastal Commission, despite the clear mandates of law, is refusing to require reasonable mitigation on the site that are vital to preserving its archaeological resources.

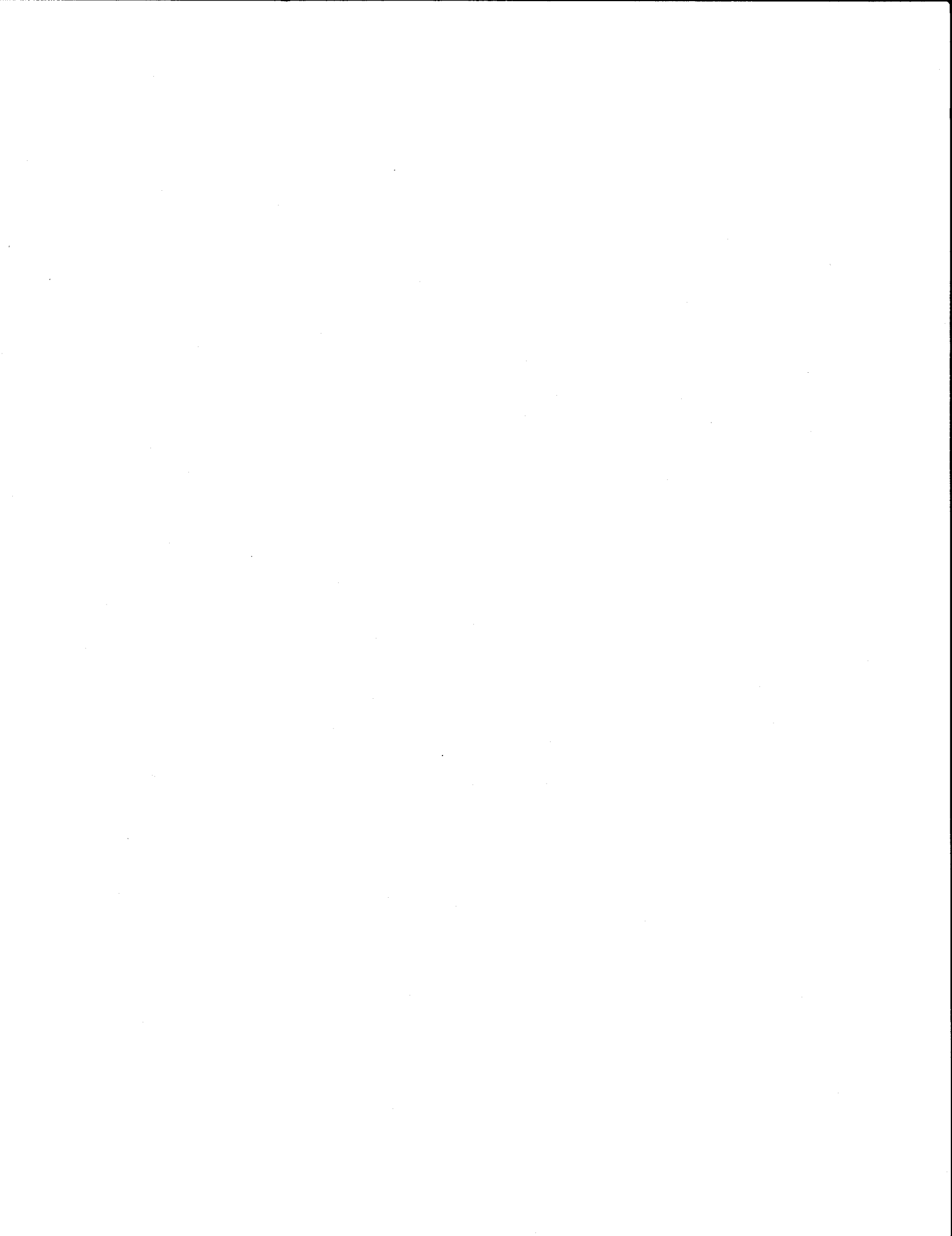
B. FAILURE TO REQUIRE MITIGATION

Ms. Jeffredo-Warden has been trying to convince the California Coastal Commission to require the critical mitigation measures necessary to protect the unique archaeoastronomical resources at the CA-ORA-83 site. Hearthside Homes' proposed development of the CA-ORA-83 site will destroy its archaeoastronomical resources and nationally-significant informational values. California law requires mitigation for these resources and informational values commensurate with the site's profound historic significance.

Despite the Commission's claims, simply acknowledging the site's alignments or astronomical potential cannot be construed as "reasonable" mitigation, especially given the chronological significance of the CA-ORA-83 site in terms of the history of astronomy. Logically, in light of the site's pivotal historical significance, the required mitigation efforts must *directly* address nationally-relevant research questions via the collection, study and analysis of data relevant to those research questions before the destruction of this site's archaeoastronomical resources.

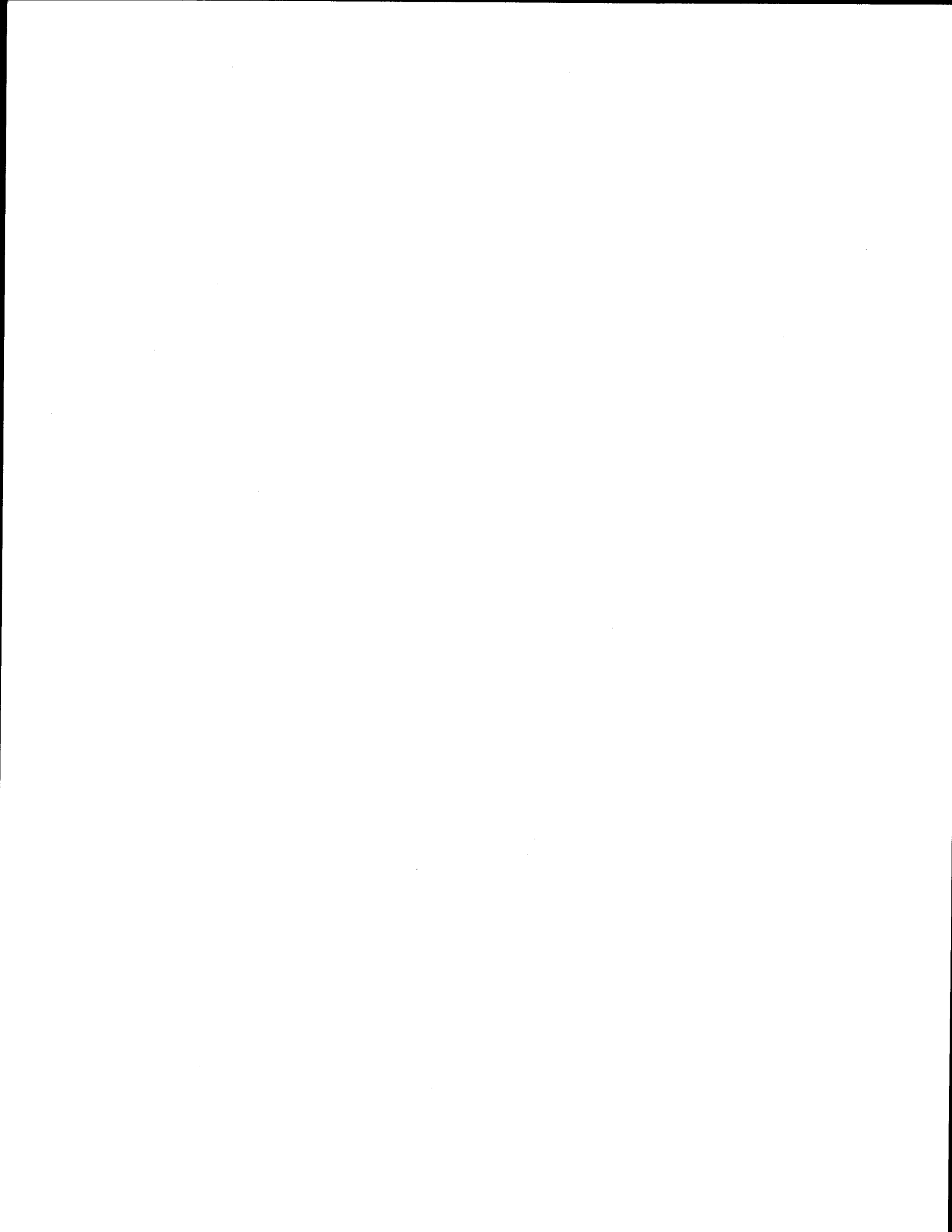
Contrary to the Commission's current position, archaeoastronomy constitutes a recognized and well-established sub-field of archaeology, and under Californian law archaeoastronomical resources are clearly defined as archaeological resources; *see, e.g.*, the California Environmental Quality Act.

Along with several nationally distinguished scholars in the fields of Native American and Native Californian astronomy and archaeoastronomy, Ms. Jeffredo-Warden has again requested that the Commission require historically-relevant archaeoastronomical mitigation at the site, in accordance with the dilates of the California Coastal Act of 1976. The Commission should recommend the site be opened to highly respected scholars in the fields of Native American and Native Californian astronomy and archaeoastronomy so that, working different









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archaeoastronomical aspects and problems at the site, a historically-crucial baseline of archaeoastronomical information can be garnered.

Ms. Jeffredo-Warden ultimately submitted a National Register nomination regarding the CA-ORA-83 site's historic significance to the Office of Historic Preservation in May of 2004. The Nomination was the result of comprehensive research and documentation on Ms. Jeffredo-Warden's part, as well as input and review by experts in the fields of Native American and Native Californian astronomy and archaeoastronomy. The site is nominated as a nationally-significant property due to its still-functioning state and its historically crucial research potential as one of the world's earliest fixed astronomical observation points.

Ms. Jeffredo-Warden forwarded a copy of the Nomination to Commission staff member Teresa Henry upon learning of the permit application.

Although the site has been excavated for in-ground archaeological resources, the site continues to possess exceptional resources and informational values that, in conjunction with the important evidences and data already retrieved at it, may be expected to yield pivotally-important information concerning the antiquity of astronomy and calendrics in the Americas – one of the most important areas of American archaeoastronomical research and investigation today. In relation to other astronomically-based sites in North America, CA-ORA-83 appears to offer a chronological baseline for the presence of astronomical skills, concepts, and belief systems in Native North America.

As you are well aware, the California Coastal Act provides that:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, [and] to minimize the alteration of natural land forms.

(Pub. Res. Code § 30251.)

The CA-ORA-83 site, demonstrably fit for both direct and indirect methods of solar observation, strongly embodies both aspects of this Section. It includes a naturally-formed, astronomical observation point with an unobstructed, elevated view of the horizon, the Pacific Ocean, certain coastal configurations (including an embayment and peninsula formation) and an offshore island. It is also oriented to provide inland astronomical alignments and sight lines.

The Act further give the public a "right to fully participate in decisions affecting coastal planning, conservation and development," (Pub. Res. Code § 30006), which requires the

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page 5

Commission to interact with members of the scientific and academic communities in order to receive technical advice and recommendations before making its decisions. (Pub. Res. Code § 30006.5.) The Act also provides that in any case where “development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, **reasonable mitigation measures shall be required.**” (Pub. Res. Code section 30244.)

In this case, the Commission’s position that sufficient mitigation has already occurred ignores all of the above scientific information about the site. The developer may argue that the site itself is a piece of private property, but the site’s historically-, scientifically- and culturally-crucial sight lines and views do not belong to the developer alone, but to all Californians, Native and non-Native alike. If the site is saved, Californians would have the unique opportunity to visit CA-ORA-83 and be educated about horizon astronomy and calendrics, the history of astronomy, Native American contributions to that history, and the early, celestially-evocative sculptures now referred to as Cogged Stones – potentially some of the earliest remaining celestial depictions in the world.

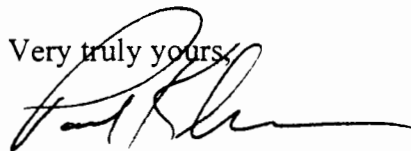
Despite historic impacts and prior archaeological programs, the CA-ORA-83 site remains uniquely and irreplaceably suited for scientific and/or educational purposes. Moreover, the religious values embodied and expressed by the CA-ORA-83 site, a regionally-precursive, time-sensitive ceremonial site and burial grounds, have spiritual resonance and significance for a great many indigenous southern Californians today. If the Commission votes in favor of the destruction of this site, it will effectively destroy 9,000 years of North American prehistory and history.

This was the sacred site of Ms. Jeffredo-Warden’s ancestors, some of the first people to reach and colonize the Western Hemisphere, who ultimately contributed to the later-arriving cultures of the Chumash, Island/Adjacent Mainland Coast Shoshones (*Poʔunngawichum*) and Luisenos (*Payomkawichum*).

It is inconceivable that the Commission would permit the destruction of a site that was sacred to a non-Native group, with or without mitigation, and the Commission’s refusal to require mitigation at CA-ORA-83 therefore also violates indigenous Californians’ rights to due process and equal protection under Article 1 of the California Constitution.

Thank you for your attention to these important matters.

Very truly yours,



PAUL KLEVEN

Bill Lockyer
July 21, 2004
page 6

cc: Teresa Henry
Peter Douglas, Executive Director, California Coastal Commission
California Coastal Commissioners
Board, Maritime Shoshone, Inc.
Alberto Saldamando, esq., International Indian Treaty Council
Rob Wood, California Native American Heritage Commission
Steve Mikesell, Acting State Historic Preservation Officer
R. William Ferrante

ANTHONY F. AVENI

Russell B. Colgate Professor of Astronomy and Anthropology

COLGATE UNIVERSITY • 13 OAK DRIVE • HAMILTON, NY 13346-1398

Phone: (315) 228-7214 • Fax: (315) 228-7187 • E-Mail: AAveni@Mail.Colgate.Edu

RECEIVED
South Coast Region

JUL 26 2004

CALIFORNIA
COASTAL COMMISSION

July 15, 2004

Peter Douglas
Executive Director
California Coastal Commission
200 Oceangate, Suite 1000
Long Beach, CA 90802

Dear Mr. Douglas,

I write in support of L.V Jeffredo's attempts for archaeoastronomical mitigation for the site CA-ORA-83. I have reviewed numerous photos & maps of this site and I believe there may be very important information therein pertaining to the native history of California. I hope that you will do all that you can to help preserve the potential record there, at least until it can be studied by qualified professionals in my field. I thank you for your consideration.

Sincerely,



Anthony F. Aveni
Russell B. Colgate Professor of Astronomy,
Anthropology and Native American Studies

faxed in at 562-590-5084
cc: Teresa Henry



LETTERS OF SUPPORT



February 12, 2004

RECEIVED
South Coast Regional

FEB 19 2004

CALIFORNIA
COASTAL COMMISSION

The Honorable Arnold Schwarzenegger
State Capitol Building
Sacramento, CA 95814

SUBJECT: BOLSA CHICA MESA PROJECT

Dear Governor Schwarzenegger,

I would like to bring to your attention a project that has been dragged out for over 30 years and has cost the taxpayers millions upon millions of dollars. The project I am referring to is the proposed development on the Bolsa Chica mesa, which is located off Pacific Coast Highway in Huntington Beach. It is time to stop wasting time and money and time to start building much-needed houses and creating jobs.

This project is a wonderful way to both improve the housing shortage, that you have addressed many times, and help the economy by creating jobs at all wage levels.

This project also will create new wetlands and relieve the residents of Huntington Beach of a headache that has been perpetuated by environmental extremists and the California Coastal Commission who has consistently made poor decisions for the people of California.

I ask you to please support this proposal and help California to heal.

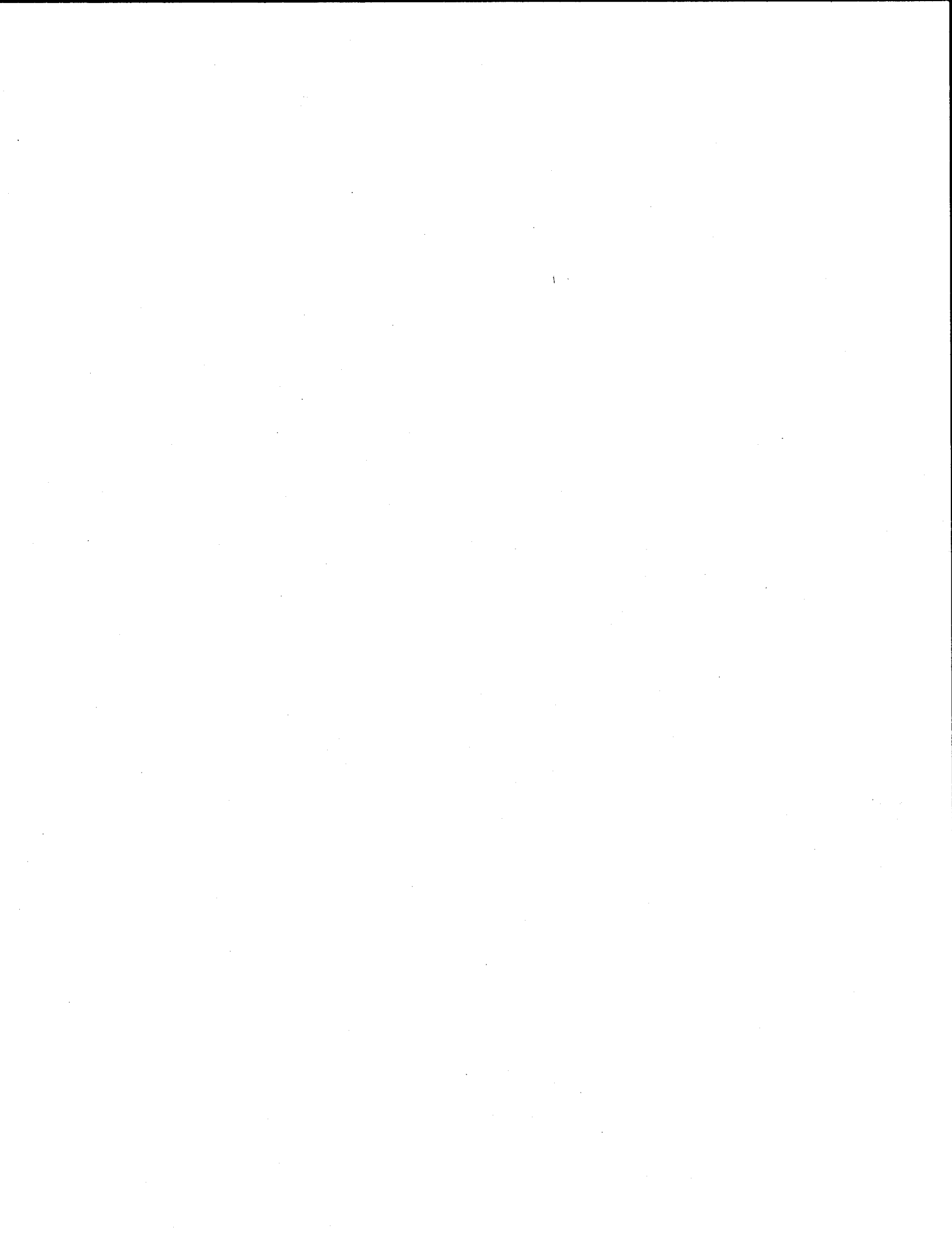
Sincerely, *Brian Bartlett*

BRIAN BARTLETT

23974 ALISO CREEK RD

*224 LAGUNA NIGUEL CA 92677

cc: Senator John Burton
Rep. Herb Wesson
California Coastal Commission - Long Beach



MAR 1 1 2004

SAVE THE BOLSA CHICA!!

The Bolsa Chica wetlands and mesa exist in one of the major biological hotspots of the nation and the world. The Bolsa Chica wetlands and mesa contain unique ecological values and offer scientific and educational opportunities that are not present elsewhere in southern California. Bolsa Chica is one of the last remaining areas in coastal southern California with a reasonably intact upland-wetland gradient, which is of high ecological importance and generally lacking in representation in reserves in the region.

CALIFORNIA
COASTAL COMMISSION

Recognizing the importance of this resource, the State of California has invested in land acquisition and restoration of wetlands at Bolsa Chica. However, *the State's \$100 million investment is at risk.*

Hearthside Homes wants to develop 378 homes on the upper portion of the Bolsa Chica Mesa. They also want to reserve the right to develop the lower portion of the Bolsa Chica Mesa as a separate project some time in the future.

It is essential that planning for the Bolsa Chica address the mesa as a whole, not on a piecemeal basis. It is essential that uplands at Bolsa Chica be preserved because:

- Adequate upland habitat is necessary for continued functioning of wetland habitat. This is because some wetland species also require upland habitat, because wetland species need refuges from unusual high water events and because raptors that now forage in upland areas may be driven to forage on wetland species.
- *Any* reduction of upland habitat at the Bolsa Chica Mesa will have some adverse impact on the Bolsa Chica wetlands.
- Any loss of habitat on the upper bench of the Bolsa Chica Mesa, including loss of forage; replanting of southern tarplant, a sensitive species; and relocation of burrowing owls must be mitigated on the lower bench, which contains sensitive resources itself.
- Habitat is more valuable if it is consolidated, minimizing the ratio of perimeter to area.
- The *only* alternative that leaves any chance of continued viability of existing environmentally sensitive habitat areas is preservation of the *entire lower bench* of the Bolsa Chica Mesa.

Development **cannot** be permitted on the upper bench of the Bolsa Chica Mesa without a guarantee that the entire lower bench will be preserved.

At its April meeting (April 14-16, 2004, exact date not yet known) in Santa Barbara, the California Coastal Commission will consider Hearthside's proposal. Please write to:

Chairman Mike Reilly and Members of the California Coastal Commission
South Coast District Office
200 Oceangate, 10th Floor
Long Beach, CA 90802-4416

Please attend the Coastal Commission hearing! The Bolsa Chica Land Trust is renting buses to go as a group.

Call us at (714) 846-1001, e-mail us at bclt@bolsachicalandtrust.org or visit our website at <http://www.bolsachicalandtrust.org/home-1.html>

February 12, 2004

RECEIVED
February 12, 2004

The Honorable Arnold Schwarzenegger
State Capitol Building
Sacramento, CA 95814

SUBJECT: BOLSA CHICA MESA PROJECT

Dear Governor Schwarzenegger,

I would like to bring to your attention a project that has been dragged out for over 30 years and has cost the taxpayers millions upon millions of dollars. The project I am referring to is the Brightwater development which is located off Pacific Coast Highway in Huntington Beach. It is time to stop wasting time and money and time to start building much needed houses and creating jobs.

This project is a wonderful way to increase both the housing shortage, that I am sure you are aware of, and help the economy by creating jobs at all wage levels.

This project also will create new wetlands and relieve the residents of Huntington Beach of a headache that has been perpetuated by environmental extremists and the California Coastal Commission who allows these groups to bully them into poor decisions.

I ask you to please support this proposal and help California to heal.

Sincerely,

Leslie Webb
186 Tropello
Aliso Viejo, CA
92652

cc: Senator John Burton
Rep. Herb Wesson
California Coastal Commission - Long Beach

February 10, 2004

The Honorable Arnold Schwarzenegger
State Capitol Building
Sacramento, CA 95814

Dear Governor,

As a taxpayer, I am increasingly frustrated by the state's unending practice of buying private property for millions upon millions of taxpayer dollars, simply to prevent any development – whether it be homes, retail, hotels or highways – from occurring in selected areas.

We are experiencing a severe housing shortage all over the state, and unfortunately, this is most evident in the coastal areas. It seems that most people prefer to live as close to the ocean breezes as possible, while the Coastal Commission – most of whom enjoy coastal living – would prefer the rest of us move to remote inland areas and commute three hours or more to work each day.

The Coastal Commission must be made to recognize and approve projects that benefit the people of our state, while respecting the natural environment in which these projects are built.

One such project is called BRIGHTWATER and will be heard before the commission in April.

**PLEASE LET THE COASTAL COMMISSION KNOW THAT YOU SUPPORT
THE BRIGHTWATER PROJECT!**

Sincerely,

Marjorie Maupensperger

1005 E. Grove Ave

Orange, CA 92865

cc: Senator John Burton
Assemblyman Herb Wesson
Teresa Henry, California Coastal Commission ✓

March 3, 2004

RECEIVED
South Coast Region

MAY 13 2004

CALIFORNIA
COASTAL COMMISSION

The Honorable Arnold Schwarzenegger
State Capitol Building
Sacramento, CA 95814

Dear Governor Schwarzenegger,

Thank you for promising to address the housing shortage in our state.

I would like to ask you to add your voice to a project that will be heard before the California Coastal Commission very soon.


Called, "**Brightwater**," this housing development will be located on the Bolsa Chica Mesa (where development has existed for 30 years) and incorporates state-of-the-art environmental safeguards and smart planning.

The County of Orange has approved this project and it must now go before the California Coastal Commission.

AVAILABILITY OF HOUSING CREATES AFFORDABILITY IN HOUSING!

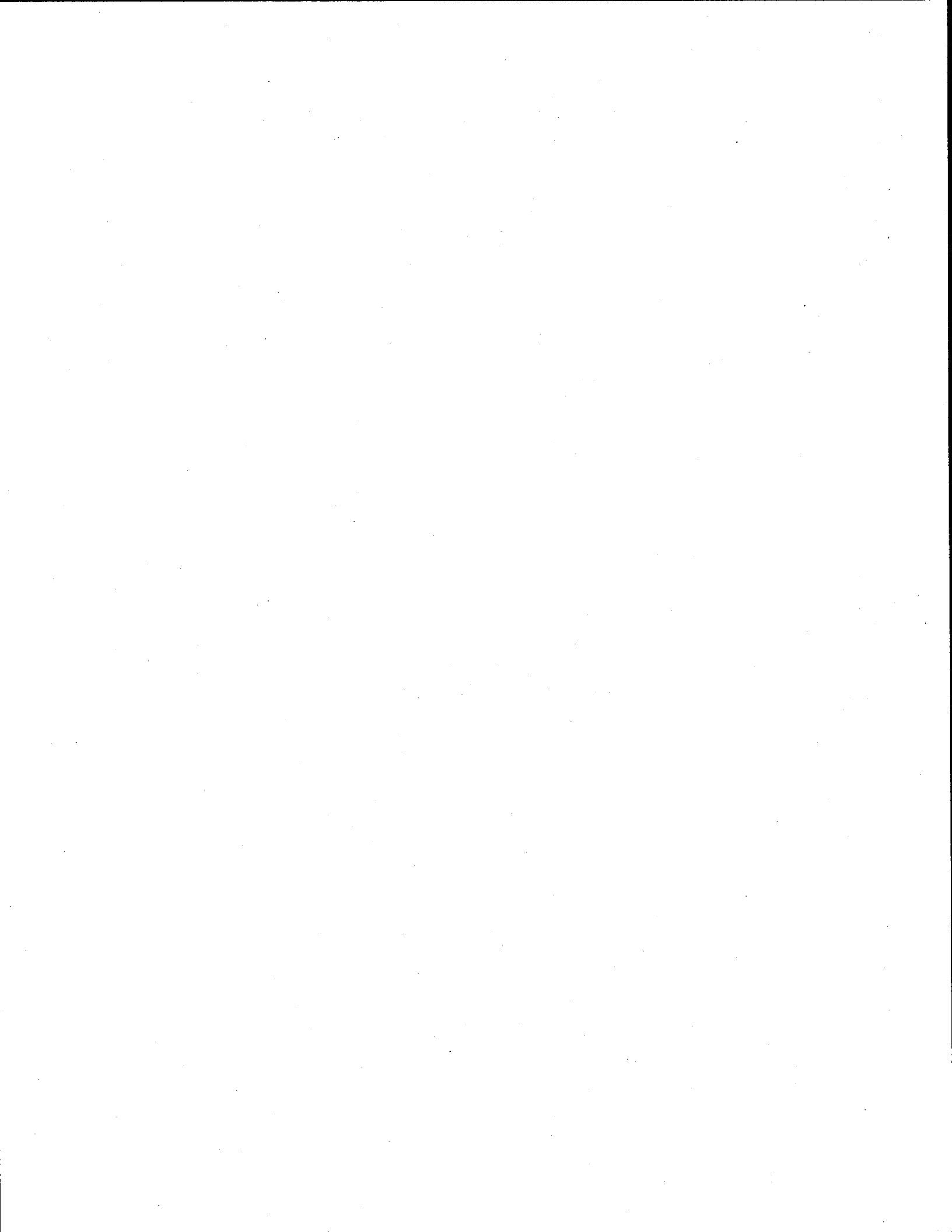
Sincerely,

STUDENTS FOR CALIFORNIA'S FUTURE

Aguc Chu 
Westminster CA 92683

cc: Senator John Burton
Assemblyman Fabian Nunez
Teresa Henry, California Coastal Commission

Letters of Opposition



Dear District Manager Henry;
Re: Brightwater development
for Bolsa Chica Mesa.

I oppose and urge you to
oppose development on the
upper beach unless the
lower beach is protected!

Thanks.
Suneli Meylor

George Wesley Bellows (American, 1882-1925)
Steaming Streets, 1908
Oil on canvas, 97.5 x 76.8 cm
Gift of Mrs. Sterling Morton for the Preston Morton Collection
© 1987 Santa Barbara Museum of Art



FEB 9 - 2004

CALIFORNIA
COASTAL COMMISSION
Cathy Rose
Travis Henry, District Manager
200 Ocean Gate, 10th floor
Long Beach, CA 90802
4416

Dear Commission:

Please restrict the Brightwater development at Bolsa Chica Mesa ONLY to the upper beach. If the lower beach is not protected, no development should be permitted. Protect the lower beach, please. Thank you.
Sincerely yours,

Cathy Rose

Cathy Rose
1642 Loma St.
Santa Barbara, CA 93103

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South Coast Region

MAR 23 2004

CALIFORNIA
COASTAL COMMISSION

3/14/04

California Coastal Commission
200 OceanGate - 10th Floor
Long Beach, CA 90802-4416
Attn: Ms. Teresa Ferris
District Mgr.

Dear Ms. Ferris:

It is hoped that you and your Commission will do all in your power to save the Balsa de Mesa from further development. We and future generations need open space for peace of mind and preventing of increased crime (see studies show). Chemicals from lawns would wash down to our bay with life and catch would eat them. Please give this serious consideration. Thank you. Sincerely,

(P.S.) J.R. Robinson

1082 Warner Ave. B-204

Long Beach, CA 92644

re: Bolsa Chica (Westminster, Ca 92683) 7/04

As our parks, forests, and wild-life areas in California become increasingly depleted and destroyed, it is unthinkable to encroach upon our B. C. wetland preserve. We residents of so. Calif. are already inundated w/ unmanageable traffic, excessive building and construction everywhere, and a noise level that threatens our sanity. We do not need to be deprived of this beautiful haven of refuge let alone jeopardize the balance in nature of the many varied specie of birds, fish, and wild-life that find their home in Bolsa Chica. Leave it alone! Don't sell out!

Sincerely,

Mary Greenwood
(Tel). (714) 892-6944



RECEIVED
South Coast Region

MAR 11 2004

OFFICE OF THE
SOUTHWESTERN COMMISSION

The area is...
invested in...
it is...

Head...

The City of...

The land...
as a whole & not

The all...
the preservation of this

...
Lived beach...
8232 Muirsh...

Hunt-664-1 CH 92646

6 February 2004

Dear Ms. Henry:

I am a student writing to express my concerns about the planned Hearthside Homes Brightwater development of Bolsa Chica wetlands. As an Orange County citizen (I live in Westminster), I realize that the decision to be made on this matter will influence me, my family and friends, and everyone else that lives nearby. I have visited or driven by the wetlands many times, and am quite familiar with the area.

I think the wetlands should be left in their natural state, and action should be taken so that they are protected from all development. This "empty" land should not be seen merely as an opportunity for building more houses – it is not a blank slate waiting to be written on! Rather, it is a vital part of our ecosystem. Migrating birds stop at Bolsa Chica to rest. Many species of plants and animals live in the wetlands.

Well, so what? Who cares about a bunch of birds and pond algae? We should all care – our planet only remains habitable when the delicate balance of plants, animals and environmental conditions is maintained. Therefore, if we upset this balance by overdeveloping or by living in a way that is not sustainable (which our modern society does), we are not just forcing a couple of ducks out of their native dwelling place – we are destroying our *own* home.

Looking at the whole urban "sprawl" that stretches from L.A. all the way to San Diego, it is plain that we have little enough undeveloped land left in Southern California as it is. So why would we allow any of this remaining precious resource to be lost to "progress"? Sure, the new houses would look nice, and the developing project would provide new homes to people. But this new neighborhood would be going "downhill" as soon as it's built – the destruction of natural resources would be a loss to the whole area. It would diminish the quality of life for the potential new residents, as well as for those of us who already live here. And that's not to mention the added strain of increasing Orange County's population. Look how crowded our county already is – we don't need to provide homes for *more* people!

On the positive side, why don't we as a community work for a way to protect all of Bolsa Chica? Think of the benefits – we will not have to worry about water quality in the area being jeopardized by drainage issues. We can preserve "ORA-83", one of the few remaining Native American habitation sites, and learn from it as it is studied by archeologists. Families and young children can still enjoy visiting the wetlands and learning about the diversity of life and nature. And the surrounding residents can "breathe easier", knowing that their neighborhood is not going to get any more crowded.

I realize that this decision involves many factors besides environmental concerns – politics, bureaucracy and money, among others. Yet I think we should make ecological implications a primary consideration. We are only harming ourselves if we don't. If we fail to take care of our planet, where are we going to live?

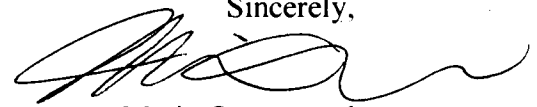
Thank you for your consideration.

SCS
South Coast Region

FEB 9 - 2004

SCS
COMMUNICATIONS

Sincerely,



Maria Greenwood

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South Coast Region

FEB 11 2004

CALIFORNIA
COASTAL COMMISSION
Phone: (714) 377-9491

DATE 2/10/04TO: Teresa Henry, District ManagerFAX #: (562) 590-5084FROM: Ellen Riley4682 Warner Ave., C-202Huntington Beach, CA 92649SUBJECT: BRIGHTWATER DEVELOPMENT

Dear Ms. Henry:

Please help all Californians in protecting our precious and vanishing open coast and wetlands for man, animals, and plants before they are all lost to developers and concrete!

Man, flora and fauna need the Bolsa Chica wetlands and supporting mesa which protects it. The Bolsa Chica is one of the few open spaces in Huntington Beach and surrounding communities. Plants and animals need these spaces to survive and mankind needs it for the health of our spirit.

We have this opportunity to make a difference for our children and those generations who come after us. We implore the Coastal Commission to take this into consideration as you determine the future of us all, not the very wealthy few.

Hearthside Homes does not care about our collective future: it is their goal and role to reap extensive profits by building million dollar homes on our vanishing open land.

Sincerely,



February 1, 2004

California Coastal Commission
Teresa Henry, District Manager
200 OceanGate, 10th Floor Long Beach, CA 90802-4416

For years we have been involved in the efforts to save the Bolsa Chica wetlands. We were very happy when the wetlands themselves were saved, as they are a valuable environmental asset. However, as you probably know, the wetlands ecosystem could be easily destroyed if the mesa is developed. Now we are very concerned that the lower bench is not technically protected; Hearthiside Homes believes that it will be able to build on the lower bench in the future. If that should happen, sensitive resources would be adversely affected by runoff, glare from streetlights and homes, domestic animals, and other human activities. Wildlife feeding and resting areas would be eliminated. For all these reasons, no development should be allowed on the upper bench unless the lower bench is permanently protected.

Thank you.

Mr. & Mrs. James L. Denison
6931 E 11th St
Long Beach, CA 90815

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South Coast Region

FEB 5 - 2004

CALIFORNIA
COASTAL COMMISSION

Donna Clouten
6801 Oxford Drive
Huntington Beach, CA 92647
714-903-2479

RECEIVED
South Coast Region

JAN 30 2004

CALIFORNIA
COASTAL COMMISSION

January 28, 2004

Ms. Teresa Henry, District Manager
California Coastal Commission
200 Oceangate, 10th floor
Long Beach, CA 90802-4416

Dear Ms. Henry:

I am writing to express my concern over the development of Bolsa Chica by Hearthside Homes Brightwater Development. In November 2000, the Commission approved a plan that permitted development of homes on the upper bench of the mesa, with the stipulation that the lower bench remained open and undeveloped. While I would prefer that the entire mesa, both upper and lower be preserved I can live with this compromise. My concern is that the developer's plans split the Mesa into two portions, the upper and lower benches. I am concerned that the plans for the upper bench will be passed without regard to the lower bench. The plans should not be approved unless there is a stipulation that the lower bench will remain unprotected.

I appreciate your hearing my views and hope you will work to protect the lower bench of Bolsa Chica.

Sincerely,



Donna M. Clouten

Jan 22, 2004

RECEIVED
South Coast Region

JAN 27 2004

CALIFORNIA
COASTAL COMMISSION

Chairman Rielly and Coastal Commissioners:

I am writing to ask you to please vote against piecemealing the Bolsa Chica development. The upper and lower benches are one development and should not be allowed to develop in phases. The Bolsa Chica land Trust has submitted our views on the subject but I would like to point out a few inconsistencies which our expert Pat Martz has found in the Draft report Landscape and People of Bolsa Bay Vol.1. January 1998- revised to May 2003

1. Pg 106 of report -"subsurface excavations completed in 1994 added over 5800 artifacts to the previously recorded 2000 items". My question is where are the results of any report of these items?

2. Page 14-"CAORA 83 stands out as a complex Village Center based on the large number of material culture traits and activity categories."

My question is: How can you allow this sacred site to be built on when the admitted 26 bodies found there make it eligible to be saved as a cemetery.: Six bodies make a cemetery and many of these are over 8000 years old?

3. Page 238-"human remains"

My question is: How this analysis will be conducted when the developer has already reburied the remains

Please save this Bolsa Chica from development

Sincerely,


Eileen Murphy
201 21st Street
H.B. CA 92648

February 2, 2004

RECEIVED
South Coast Region

FEB 5 - 2004

CALIFORNIA
COASTAL COMMISSION

Ms. Teresa Henry, District Manager
California Coastal Commission
200 OceanGate, 10th Floor
Long Beach, CA 90802-4416

Dear Ms. Henry:

We are writing regarding the Hearthside Homes Brightwater Development Permit Hearing scheduled for February 18-20, on the development of homes on the Bolsa Chica Mesa in Huntington Beach.

We understand that you, the Coastal Commission, in November of 2000, unanimously approved a plan that permitted development of homes on the upper bench of the mesa with the stipulation that the lower bench remain open and undeveloped. We are now told Hearthside Homes plans are only addressing the upper bench and they believe that they will be able to build on the lower bench in the future. Our concern is that no development should be allowed on the upper bench unless the lower bench is protected. **OUR WISH WOULD BE THAT NO DEVELOPMENT WOULD EVER BE ALLOWED ON THE BOLSA CHICA WETLANDS.**

California has already lost 90% of its coastal wetlands. Existing open space which provides opportunities for wildlife feeding and resting will be eliminated. When you lose wildlife habitat, there's no turning back.

PLEASE DO NOT ALLOW THE UPPER BENCH TO BE DEVELOPED UNLESS THE LOWER BENCH IS PROTECTED.

Sincerely,



W. A. Sosnowski
Lucille Sosnowski
17198 Courtney Lane
Huntington Beach, CA 92649

California Coastal Commission
Teresa Henry, District Manager
200 Ocean Gate, 10th fl.
Long Beach, Ca. 90802-4416

RECEIVED
South Coast Region
FEB 2 - 2004
CALIFORNIA
COASTAL COMMISSION

Vance Grosser
19328 Surfwave Dr.
Huntington Beach, Ca. 92648

30 January 2004

Dear Ms. Henry:

I want to express my support, in conjunction with Bolsa Chica Land Trust, for the protection and prevention of further development to the upper and lower benches, without adequate care for the lower bench.

These resources need our utmost attention and protection, and should not be compromised to accommodate the interests of Developers.

Sincerely,



Vance Grosser

Cc Bosa Chica Land Trust

To: FAX 562-590-5084

To: California Coastal Commission
Teresa Henry, District Manager
200 Ocean Gate, 10th Floor,
Long Beach, CA 90802-4416

January 28, 2004

I am concerned about the Hearthside Homes
Brightwater Development. I believe the
lower bench of the mesa should stay open and
undeveloped, as the Commission approved in November,
2000. The Native American cogged stone site, runoff
affecting biological resources, and less open space for
wildlife are also concerns. My understanding
is that the lower mesa is not technically
protected from development. I hope that the
lower mesa will remain open; as little land
remains open around here.

Jo Ann Blair
Jo Ann Blair
15732 Dawson Lane
Huntington Beach, CA 92647
FAX 714 379-0441

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South Coast

FEB 6 2004

Janeen H. Cunningham, M.A., M.F.T.

2/15/04

CALIFORNIA
COASTAL COMMISSION

California Coastal Commission
Long Beach, California

Attention: Teresa Henry
Re: Hearing on the Brightwater Development,
Bolsa Chica Mesa, Feb 18-20

Dear Ms Henry,

As a resident of Seal Beach
for 20 years I am deeply concerned
that the lower bench of Bolsa Chica
be preserved for wildlife feeding and
resting. So little open space is left
for wildlife, clean air and land
in this very developed beach community.
I am opposed to any development
on the upper bench unless the lower
bench is protected. Thank you,

Janeen Cunningham

2212 DuPont Dr., Suite 1 Irvine, CA 92612 (949) 476-0795

1641 Ocean Ave. Seal Beach, CA 90994

Dear Chairman Mike Reilly,

As a child, I would visit the Bolsa Chica Wetlands. If you take away the wetlands not only are you taking away animal's homes, but also taking away the experience for younger children to experiences and learning. They will not be able to go there and watch the animals in their habit. Children will be deprived of this opportunity. I myself enjoyed going there with my binoculars in my hands not knowing what to expect or see. They will not be able to see the homes of birds, fish & creatures. The wetlands is only about 1,200 acres of land & everyone enjoys going there. Just leave it be. How would you feel if someone threatened to take your own home away from you? If you do get rid of the wetlands, you probably will just build houses which will lead to more over population. I really do believe that the wetlands would be better off staying where they are. I can't ~~bare to~~ think what my childhood would have been like if I had not been there. It's an open door of opportunities for children to enjoy all the different animals that live there. Children who are also interested in animals may even ~~be~~ go ~~to~~ home and research about the birds they saw that day. ~~What~~ This would broaden their knowledge of what exists in the world. If you get rid of the wetlands no child will ever get the opportunity to figure out whether or not they are interested in ~~wild~~ wild life. Leave the wetlands be.

RECEIVED
South Coast Region

MAR 11 2004

CALIFORNIA
COASTAL COMMISSION

Sincerely,

Jessica Sidman

03/06/04

Dear Chairman Mike Reilly,

Please protect Bolsa Chica
from development by the
Hearthside Homes company,

Habitat preservation of this
unique area is of prime concern
to me as an active voter.

The entire lower beach needs
to be left undeveloped.

People and plants need to
enjoy Bolsa Chica now and forever.

Marie Connors

16851 Bayview Drive
Sunset Beach, CA 90742-0198
July 4, 2004

RECEIVED

JUL 08 2004

CALIFORNIA
COASTAL COMMISSION

California Coastal Commission
45 Fremont Street
San Francisco, CA 94105-2219

Attn: Peter Douglas, Executive Director

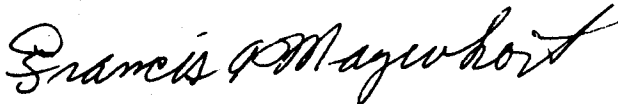
Re: Bolsa Chica

Ladies and Gentlemen:

At the Coastal Commission Meeting at which the Brightwater development project will be decided, please require that any approval be contingent on maintaining the Lower Bench as open space.

Retaining the Lower Bench will protect wildlife and provide a needed buffer between new housing and the delicate wetlands.

Thank you,



Francis Maywhort



Phyllis Maywhort

(562) 592-1606

Ginger T. Osborne
31651 Santa Rosa Dr.
Laguna Beach, CA 92651
949.499.4809

RECEIVED

JUL 10 2004

CALIFORNIA
COASTAL COMMISSION

RECEIVED
South Coast Region

JUL 14 2004

CALIFORNIA
COASTAL COMMISSION

July 8, 2004

Peter Douglas, Executive Director
California Coastal Commission
45 Fremont Street
San Francisco, CA 94105-2219

Dear Mr. Douglas:

Soon before the Commission is the issue of whether or not to approve the plans for the Upper Bench Brightwater Development Project. Should the Coastal Commission decide to approve this project, I would urge it to make the approval contingent upon maintaining the lower bench as open space. Thank you for your careful consideration of this and other matters before the Coastal Commission.

Sincerely,

Ginger T. Osborne

Ginger T. Osborne

July 5, 2004

California Coastal Commission
45 Fremont St.
San Francisco, CA 94105-2219

RECEIVED

JUL 08 2004

**CALIFORNIA
COASTAL COMMISSION**

Attention: Peter Douglas, Executive Director

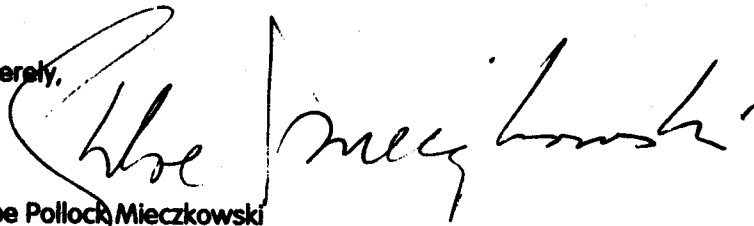
Dear Mr. Douglas:

If the Commission is to approve the Upper Bench Brightwater development project, then you must follow the Coastal Act and make this contingent on maintaining the Lower Bench as open space.

We have worked long and hard to accomplish this and now strongly request you do so.

Thank you.

Sincerely,



Chloe Pollock Mieczkowski
19556 Grandview Circle
Huntington Beach, CA 92648-5571

RECEIVED
South Coast Region

Jeanne Sprague
17085 Edgewater Lane
Huntington Beach, CA 92649

JUL 9 2004

CALIFORNIA
COASTAL COMMISSION

DEAR MR. DOUGLAS -

ON AUG. 9-13 THE COMMISSION IS
BEING ASKED TO APPROVE THE
UPPER BENCH BRIGHTWATER DEVELOP-
MENT PROJECT. THAT VOTE MUST
BE CONTINGENT ON MAINTAINING
THE LOWER BENCH AS OPEN SPACE
THE BOUSA CHICA HAS TO BE
PROTECTED FROM POLLUTION.

I AM 79 YRS YOUNG AND HAVE
SEEN FISH AND BIRD STOCKS
DIMINISHED - WHERE I LIVE
THE WATER IS SO POLLUTED NO
INTELLIGENT PERSON WOULD VEN-
TURE IN - SO MUCH FOR COASTA
HEALTH!!

SINCERELY -

Jeanne Sprague

Dear Chairman Riley &
Commissioners -

RECEIVED
South Coast Region

MAR 11 2004

CALIFORNIA
COASTAL COMMISSION

I hope you will do
everything in your power
to save all of Bolsa
Chica for generations to
come

It's been a long fight
Lts settle it now &
for all.

Save the present for
the future.

Sincerely,

Eileen Murphy

201-21st

H. B. C. A. 92645

Chairman Mike Reilly and members
California Coastal Commission
South Coast District office
200 Oceangate, 10th floor
Long Beach, CA 90802-4416

5-05-d

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South Coast Region

MAR 11 2004

CALIFORNIA
COASTAL COMMISSION

Dear Persons,

Bolsa Chica cannot be allowed to become smaller in size. To do so would ruin part of the ecosystem. Heathside Homes cannot be allowed to build on the Bolsa Chica mesa and ruin the integrity of the ecosystem as a whole.

Please preserve the entire lower beach of the mesa.

Thank you,

Charles Reid

208 15th St.

Huntington Beach CA 92648

P.O. Box 198
Sunset Beach, CA 90742
March 6, 2004

Chairman Mike Reilly + Members of
the California Coastal Commission
South Coast District Office
200 Oceanside, 10th Floor
Long Beach, CA 90802-4416

Dear Chairman Reilly,

Please vote against allowing any further
development of the Bolsa Chica. Both the
upper lower beach must be preserved to
protect the integrity of the Bolsa Chica.

Vote "no" on Hearthisides Homes application
that is coming before the Commission in
April.

Thank you,

Phyllis Mayewhorst
(562) 592-1606

RECEIVED
South Coast Region

MAR 11 2004

CALIFORNIA
COASTAL COMMISSION

Dear Chairman Kelly,

I don't know much about what is happening with the Bolsa Chica wetlands, but I do know that animals and preserving the natural habitat is more important than a few homes on the coast. You can build houses anywhere, why do you have to destroy unique ecological places? Have you ever actually been to the wetlands? Because I have and it was an experience I will always remember and cherish. And I will always care and appreciate their importance; so because you don't I am guessing you have never been. If you had you obviously didn't pay attention because you don't show any concern whatsoever. And for that I feel sorry for you; have fun being an old heartless man who nobody cares about because you never cared. Have a heart a care for things that matter for once. Thank you for your time. I hope I didn't waste mine.

From

Stephanie Schultz

Fountain Valley High School

RECEIVED
South Coast Region

MAR 11 2004

CALIFORNIA
COASTAL COMMISSION

March 06, 2004

Chairman Mike Reilly & Members of the CA Coastal Commission
Dear ~~Governor Schwarzenegger~~,

I think that it's a must to preserve the only wetland left in Southern California. If some company build a condo or parking lot over it, there wouldn't be any wetlands left. We wouldn't want to be the ~~sta~~ state that destroy the only wetland left in its state. It's very important that the wetland in Bolsa Chica be preserve b/c it provides life for the wild life of California. And by destroying it, it's destruction could effect the balance of nature. The destruction of the Bolsa Chica Wetland could have a major side affect to the wildlife.

In conclusion, please don't destroy it!

Sincerely,

Tamara
Nguyen

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South Coast Region
MAR 11 2004
CALIFORNIA
COASTAL COMMISSION

Marilyn Vassos
79 Seton Road
Irvine, CA 92612-2115
949-786-7546
email: mvassos@cox.net
3-4-04

RECEIVED
South Coast Region

MAR 11 2004

CALIFORNIA
COASTAL COMMISSION

Dear Chairman Peilly and Members of The California
Coastal Commission,

As a native California who grew up
spending my summers at Huntington Beach
it horrifies me to think of what will happen to
Bolsa Chica if Hearthside Homes is allowed
to develop the 378 homes on the upper portion
of Bolsa Chica. Then to think that they
want to reserve the right to develop the
lower portion is outrageous!!

The planning of Bolsa Chica's future
must be addressed as a whole!

You are well aware of the variety
of reasons this wetland habitat is so
~~so~~ crucial. Once it is developed that's
all there is AND THAT IS WRONG!!

Sincerely,
Marilyn Vassos

16851 Bayview Drive
Sunset Beach, CA 90742-0198
July 4, 2004

RECEIVED

JUL 08 2004

CALIFORNIA
COASTAL COMMISSION

California Coastal Commission
45 Fremont Street
San Francisco, CA 94105-2219

Attn: Peter Douglas, Executive Director

Re: Bolsa Chica

Ladies and Gentlemen:

At the Coastal Commission Meeting at which the Brightwater development project will be decided, please require that any approval be contingent on maintaining the Lower Bench as open space.

Retaining the Lower Bench will protect wildlife and provide a needed buffer between new housing and the delicate wetlands.

Thank you,



Francis Maywhort



Phyllis Maywhort
(562) 592-1606

2004
7-9-04

July 5, 2004

California Coastal Commission
45 Fremont St.
San Francisco, CA 94105-2219

RECEIVED

JUL 08 2004

CALIFORNIA
COASTAL COMMISSION

Attention: Peter Douglas, Executive Director

Dear Mr. Douglas:

If the Commission is to approve the Upper Bench Brightwater development project, then you must follow the Coastal Act and make this contingent on maintaining the Lower Bench as open space.

We have worked long and hard to accomplish this and now strongly request you do so.

Thank you.

Sincerely,



Chloe Pollock Mieczkowski
19556 Grandview Circle
Huntington Beach, CA 92648-5571

Coastal Commission
Att, Teresa Henry
200 Oceangate #1000
Long Beach, Ca 90802

RECEIVED
South Coast Region

JUL 12 2004

CALIFORNIA
COASTAL COMMISSION

Dear Ms. Henry;

Re: The Bolsa Chica project

I am writing to urge you and your staff to be sure and have a nexus with the upper and lower bench. In case the deal falls through by the developer and the WCB without the nexus and your approval the developer could build on both benches.

Also in crafting your approval of the development on the upper bench I beg you to be sure every federal, state and local statutes intended for the protection of the resources with respect to any development of the remaining open space be protected. Special attention should be paid to buffers, tar plants, burrowing owls and any other environmentally sensitive species which might be affected by the development.

Thanks for all your hard work and diligence.

Sincerely,



Eileen Murphy
201 21st Street
HB CA 92648

RECEIVED
South Coast Region

JUL 9 2004

Jeanne Sprague
17085 Edgewater Lane
Huntington Beach, CA 92649

CALIFORNIA
COASTAL COMMISSION

DEAR MR. DOUGLAS -

ON AUG. 9-13 THE COMMISSION IS
BEING ASKED TO APPROVE THE
UPPER BENCH BRIGHTWATER DEVELOP.
MENT PROJECT. THAT VOTE MUST
BE CONTINGENT ON MAINTAINING
THE LOWER BENCH AS OPEN SPACE
THE BOLSA CHICA HAS TO BE
PROTECTED FROM POLLUTION.

I AM 79 YRS YOUNG AND HAVE
SEEN FISH AND BIRD STOCKS
DIMINISHED - WHERE I LIVE
THE WATER IS SO POLLUTED NO
INTELLIGENT PERSON WOULD VEN-
TURE IN - SO MUCH FOR COASTA.
HEALTH!!

SINCERELY -

Jeanne Sprague



March 20, 2004

RECEIVED
South Coast Region

JUL 28 2004

The Honorable Arnold Schwarzenegger
State Capitol Building
Sacramento, CA 95814

CALIFORNIA
COASTAL COMMISSION

Dear Governor Schwarzenegger,


Very soon, the California Coastal Commission will hear plans for a development called "Brightwater." This project is located on the Bolsa Chica Mesa in Huntington Beach and will be presented by the County of Orange and Hearthside Homes.

We need housing in this state and we need jobs! This project will bring both. We want to protect our environment. This project does so in many ways, including the creation of man made wetlands to capture and filter urban runoff.

You were right - California desperately needs housing and jobs to improve our economy and, subsequently, our quality of life.

**PLEASE LET THE COASTAL COMMISSION KNOW THAT YOU SUPPORT
THE BRIGHTWATER PROJECT!**

Sincerely,



Matt Leonard

Huntington Beach

cc: Senator John Burton
Assemblyman Fabian Nunez
Teresa Henry, California Coastal Commission

5 identified
letters
received in
support

February 29, 2004

RECEIVED
South Coast Region

JUL 28 2004

The Honorable Arnold Schwarzenegger
State Capitol Building
Sacramento, CA 95814

CALIFORNIA
COASTAL COMMISSION

RE: STUDENTS SUPPORT FOR NEW BRIGHTWATER PROJECT!

Dear Governor Schwarzenegger,

Very soon, the California Coastal Commission will hear a proposal for a new housing development in Orange County called "Brightwater."

While this new neighborhood will not cure the devastating housing shortage being experienced by residents of this state, the current powers that control our state's development, economy and overall well-being – namely the California Coastal Commission – have made habitats for our PEOPLE nearly impossible to provide in the coastal regions.

Unfortunately, while the Commissioners would prefer the majority of us relocate inland and perhaps out of state, most Californians – especially those raised near the coast – want to live near the coast.

Please use your voice to urge the approval of this and other needed housing developments in the areas people want to live. These areas should not be the sole domain of those who were fortunate enough to purchase their homes decades ago, or those who can afford the exorbitant prices that are the result of supply not meeting demand.

SUPPORT THE BRIGHTWATER DEVELOPMENT

Very truly yours,



cc: Senator John Burton
Rep. Fabian Nunez
California Coastal Commissioners

Cathy Wang
Huntington Beach, 92647

8 identified
letters received
in support

February 10, 2004

RECEIVED
South Coast Region

MAR 17 2004

The Honorable Arnold Schwarzenegger
State Capitol Building
Sacramento, CA 95814

**CALIFORNIA
COASTAL COMMISSION**

RE: Please support the Brightwater Project!

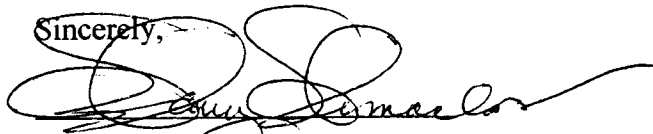
Dear Governor Schwarzenegger,

In April, the California Coastal Commission will hear plans for a development called "Brightwater." This project is located on the Bolsa Chica Mesa in Huntington Beach and will be presented by the County of Orange and Hearthsides Homes.

We need housing in this state and we need jobs! This project will bring both. We want to protect our environment. This project does so in many ways, including the creation of man made wetlands to capture and filter runoff from new residents washing their cars, watering their lawns, etc.

Please add your very respected voice to those that support this and other environmentally and economically smart projects in our state.

Sincerely,



5924 Naples Playa
Long Beach, CA 90803

cc: Senator John Burton
Rep. Herb Wesson

5 identify
letters received
in support

RECEIVED
South Coast Region

February 10, 2004

MAR 17 2004

The Honorable Arnold Schwarzenegger
State Capitol Building
Sacramento, CA 95814

**CALIFORNIA
COASTAL COMMISSION**

RE: MORE HOUSING NEEDED!

Dear Governor Schwarzenegger,

I am a college student in Southern California who is very concerned about what kind of future I can expect to have in this state if things continue as they have for the last twenty years or so. My contemporaries and I need to know that the American Dream is still attainable – even in California. We'd like to think we can buy a home, find a job and raise our families here when that time comes.

We need to start approving more housing developments to help drive the cost of housing down and to allow Californians to remain in California. Without enough housing, employers will also move out of state to find a bigger workforce to choose from.

One of the biggest obstacles to your stated goals regarding housing and the economy is the California Coastal Commission. They keep projects on hold or in litigation for decades, overspend and overstaff, and have begun to look more like a legislative body than a permitting board. We must demand fairness and balance from the Commission, and as Governor, you should do the same.

One such project we like is called Brightwater and will be built on the Bolsa Chica mesa in Huntington Beach. It's a beautiful project of under 400 homes with areas for the public to look out over the soon-to-be-restored wetlands and ocean. The developer is also creating two more wetlands to filter urban runoff from the project.

I strongly urge you to support this project.

Regards,

Connie Shuput
CONNIE SHUPUT

11391 HOMEWAY DR
GARDEN GROVE, CA 92841
cc: Senator John Burton
Rep. Herb Wesson

4 identified
letters received
in support

February 11, 2004

The Honorable Arnold Schwarzenegger
State Capitol Building
Sacramento, CA 95814

RE: MORE HOUSING NEEDED!

Dear Governor Schwarzenegger,

One of the reasons many Californians voted for you is your pledge to bring our state back to greatness and your acknowledgement that housing and jobs has to be a priority.

I am asking you to take a first, small, step in that direction by looking closely at a housing project that will be heard before Coastal Commission in April.

This new community, called "Brightwater," will be located on the upper tier of the Bolsa Chica Mesa. It's important to remember that other homes are also located on this mesa, and, until recently, it was the sight of a large, used telephone poll re-sale yard. In short, there is nothing pristine or environmentally sensitive about this area.

The project has been before the commission, in various revisions, for over THIRTY YEARS! Over two generations of Orange Countians have missed out on the needed property taxes, developer fees, and other builder-funded improvements and now it's time to say enough is enough and let this beautiful, environmentally friendly project go forward.

The Coastal Commission needs to hear from you, Governor.

PLEASE SUPPORT THE BRIGHTWATER DEVELOPMENT.

Sincerely,

Alfredo Navar

1701 S Doreen way

Santa Ana Co. 92704

cc: Senator John Burton
Rep. Herb Wesson
California Coastal Commission - Long Beach

RECEIVED
South Coast Region

MAR 17 2004

CALIFORNIA
COASTAL COMMISSION

3 identified
letters
received in
support

March 31, 2004

RECEIVED
South Coast Region

MAY 13 2004

CALIFORNIA
COASTAL COMMISSION

The Honorable Arnold Schwarzenegger
State Capitol Building
Sacramento, CA 95814

RE: SUPPORT THE BRIGHTWATER HOUSING DEVELOPMENT!

Dear Governor Schwarzenegger,

I am writing to you because there is a huge problem in California that is not getting any better, and we need to do something about it NOW.

The problem I refer to is our lack of housing.

As you know, only 5% of our entire state is used for housing, shopping centers, schools, churches, and offices. (45% is zoned Agricultural and 50% is owned by the state and federal governments as open space, parks, etc.)

Government has done a good job of protecting our environment and carving out huge areas of land for a variety of species – even toads, rats, gnats and plants. We now must do something about habitats for our human residents.

Approving housing projects like Brightwater – which protects the environment, creates new wetlands areas, manages urban runoff and creates a small neighborhood of 378 homes in a desirable area of Orange County – is a small step in the right direction. While these homes will be more expensive due to location, most new homes in California are purchased by people who already live here, leaving older homes available for more affordable prices.

We need new housing and we need it NOW!

Sincerely,

HARRIET K. PRICE

Harriet K. Price

HUNTINGTON BLDG, CA

cc: Coastal Commissioners

Senator John Burton

Assemblyman Fabian Nunez

74 identified
letters received
in support

February 9, 2004

RECEIVED
South Coast Region

MAY 13 2004

CALIFORNIA
COASTAL COMMISSION

The Honorable Arnold Schwarzenegger
State Capitol Building
Sacramento, CA 95814

SUBJECT: BOLSA CHICA MESA PROJECT

Dear Governor Schwarzenegger,

During your State of the State address you spoke of increasing jobs, the need for more housing, and reducing government spending. Well, Governor Schwarzenegger, by supporting the Brightwater project, you will be doing all three of those things.

The Brightwater project is a development plan, on the Bolsa Chica Mesa, that will bring more much-needed homes, create many jobs, and will end a 30 year debate that has cost taxpayers millions.

Over two generations of Orange Countians have missed out on the needed property taxes, developer fees, and other builder-funded improvements and now it's time to say enough is enough and let this beautiful, environmentally friendly project go forward.

I urge you, Mr. Governor, to throw you support behind this project.

Respectfully,

Kelly Fung
Kelleigh Fung
San Francisco
California

cc: Senator John Burton
Rep. Fabian Nunez
California Coastal Commission - Long Beach

9 identified
letters received
in support

RECEIVED
South Coast Region

MAR 17 2004

**CALIFORNIA
COASTAL COMMISSION**

February 11, 2004

The Honorable Arnold Schwarzenegger
State Capitol Building
Sacramento, CA 95814

RE: BRIGHTWATER HOUSING PROJECT AT BOLSA CHICA

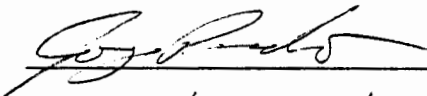
Dear Governor Schwarzenegger,

I am writing to ask your support of the Brightwater development proposed by the county of Orange and slated to go before the California Coastal Commission in April 2004.

This project has been on the drawing board for over 30 years and it has cost the taxpayers millions of dollars in lawsuits, staff time, expert evaluations – simply to further the political careers and agendas of a few. It's time to make people, jobs, housing and the economy a priority again, and this project goes a long way toward that goal. At the same time, it does more to protect the surrounding environment and wildlife than any project in recent memory.

PLEASE SUPPORT THE BRIGHTWATER DEVELOPMENT. THANK YOU!

Sincerely,

 Jorge Prado

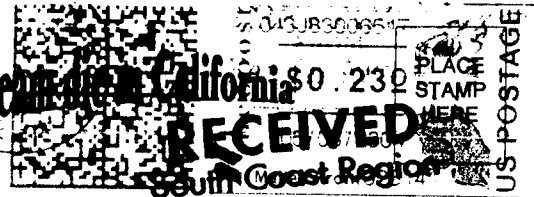
1981 Wallace Apt B-104

Costa Mesa, CA 92626

cc: Senator John Burton
Rep. Herb Wesson
California Coastal Commission – Long Beach

4 identified
letters received
in support

Don't let the American Dream die in California



MAY 06 2004

CALIFORNIA COASTAL COMMISSION

California Coastal Commission Attn: ALL COMMISSIONERS 200 Oceangate, 10th Floor Long Beach, CA 90802-4416



Affordability begins with Availability

90802-4416

Dear Commissioners,

Resource protection has been accomplished at Bolsa Chica. The wetlands are saved, eucalyptus trees are saved, the pond is saved—even a road rut has been saved as "wildlife habitat!"

Unfortunately, we also need homes for California families. The American dream of home ownership is becoming nearly unattainable along the coast of this state because too few homes are being built to meet the needs of so many people who would like to live here.

Affordability begins with Availability!

Please take one small step to remedy this growing problem: APPROVE THE BRIGHTWATER DEVELOPMENT AT BOLSA CHICA MESA.

CPRL w Ba AND SR

Name: [Signature] Sig: [Signature] Address: 9503 Pearbree City: Cypress e-mail address: bolandb@comcast.net

238 identified Post Cards received in Support

