

# City Planning 110

University of California, Berkeley

Final Research Paper



## The Bolsa Chica Wetlands and Mesa



City of Huntington Beach,  
County of Orange,  
State of California



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## Introduction/Abstract

The Bolsa Chica wetlands and mesa are the last unprotected wetland site south of San Francisco in California. This document addresses the potential impacts associated with the implementation of the proposed Bolsa Chica project near Huntington Beach, California. The primary landowner, Koll Real Estate Group, proposes the construction of 4,884 residential units within upland areas of the 1712.3 acre. Filling of an additional 23.6 acres is proposed for roadway construction and flood control improvement. An application has been filed with the U.S. Army Corps of Engineers for permits for discharge of fill material into waters of the United States “under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899.”<sup>1</sup>

The Permit Applicant (Koll Real Estate Group) is proposing the project in order to implement a land use plan developed by the Bolsa Chica Planning Coalition that would result in the planned restoration of the Bolsa Chica Wetlands. The Applicant proposes to restore a portion of the marsh equal to a 1:1 ration of wetlands filled. The Applicant proposes giving 775 acres of the Bolsa Chica Wetlands now in private ownership to a public or private entity so that other parties could restore the wetlands.

An array of alternative development and restoration plans is analyzed in depth in this document. It will also examine their impacts on the community.

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<sup>1</sup> US Army Corps of Engineers. Bolsa Chica Draft EIR, volume 1. Santa Ana, CA: Chamber Group, Inc., 1992.

## Executive Summary

Bolsa Chica wetlands and mesa are a parcel of land approximately 1,712.3 acres in size.<sup>2</sup> It is located in unincorporated northwest Orange County near the city of Huntington Beach, as shown on figures 4 and 5.<sup>3</sup> Presently, the land is predominantly open space and land developed for oil production. The owners of the land, Koll Real Estate Group, wish to build 4,800 dwellings on both the wetlands and the mesa. Their plan would have huge environmental ramifications. In 1997, an agreement with the Ports of Long Beach and Los Angeles saved the lower parts of the wetlands. However, the highlands of the wetlands (the mesa) are still slated for development. The developers have modified their original plan, now wishing to build 1,200 dwellings on that land.

There are still many objections to building at all. Environmentalists argue that the highlands (the Bolsa Chica mesa) are an essential part of the wetlands, since the mesa drains into the wetlands. If the developers build houses on the mesa, then the plants and animals of the wetlands will still be harmed. In addition, the mesa has cultural significance. It was a burial site for the Gabrieleño Indians, and more recently it was the site of a World War II bunker. Also, current residents of the area fear that any increase in population of the region will increase traffic on major corridors leading into northwest Huntington Beach. This increase in traffic on city streets will lead to a diminished standard of living.

The developers say that they will provide the money needed to restore the degraded wetlands if their project goes through. If the project does succeed, the city will have to connect the development to its water, electricity, and sewer grid, and the school district will have to build

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<sup>2</sup> US Army Corps of Engineers. Bolsa Chica Draft EIR, volume 1, pg. 2-1. Santa Ana, CA: Chamber Group, Inc., 1992.

<sup>3</sup> Figure 4 shows the location of the site in relation to roads. Figure 5 shows an aerial view of the proposed development site including the wetlands.

a new elementary school to serve the new residents. Nevertheless, the city will have greater tax revenue from the property tax that will be levied on the land, as well as increased sales tax revenue.

Still, there are many objectors. Some of Huntington Beach's city council-people oppose the plan because of the expenditures required to link this new development to the city, and the increased traffic associated with it. Most of the residents in northwest Huntington Beach also oppose the development for many of the same reasons. They fear that it will lead to higher taxes as well. Residents are also concerned with the environmental issues. However, the County Supervisors support the plan to build houses on the mesa. Technically, the land falls under county jurisdiction, because the land is in an unincorporated area. In the November General Election this year, a local politician hoped to unseat the current supervisor for the area; however, his attempts were unsuccessful. The current supervisor supports the plan to build on the mesa.

An alternative that people suggest includes turning the mesa into a park. The mesa already is a popular hiking/walking place among the locals because of the magnificent views that can be seen from it: the wetlands, the coastline, Catalina Island, Long Beach, and the Palos Verdes Peninsula. It is also a favorite place for horse riders to take their horses.

This report will examine the land use problem this development causes. It will look at the three alternatives: build 4,800 dwelling units on the mesa and parts of the wetlands, build 1,200 dwelling units on the mesa, and no urban development. Through the examination of these three alternatives using the seven step planning process, I will suggest a best alternative to pursue and include tips on how to achieve this alternative.

## Background Information and History

There is much history behind these last remaining unprotected wetlands south of San Francisco. The name Bolsa Chica is from the Spanish settlers who named the general area Rancho la Bolsa Chica, meaning little pocket. The Spanish came up with that name because the area was mostly swamp land and bogs, much too wet to grow any valuable crops. Before 1825, a meander of the Santa Ana River flowed out through the Bolsa Chica Wetlands. However, a flood in 1825 changed the course of the River and no longer flowed through the wetlands. This significantly reduced the amount of fresh water to the estuary.<sup>4</sup> In pre-Columbian times, the area was used as a worship site for the Native American Indians (the Gabrieleño tribe). More recently, the tribe used the mesa as a burial site and as a sacred ritual site. They believed the site had magical powers because of the magnificent views one can see from the mesa: the LA Basin, the Palos Verdes Peninsula, Catalina Island, the San Joaquin Hills, and the Santa Ana and San Bernardino Mountains.

When the Spanish came and settled the land, Rancho la Bolsa Chica was deemed not valuable because it did not support many crops. The Rancho also did not support cattle ranching and sheep grazing, an important cash-producer throughout the 1700's and 1800's. After the annexation of California by the American government in 1848, the area was sold to a land buyer, who then sold off little parcels to settlers and farmers. Settlers in the area constructed ditches to drain the swamps surrounding the wetlands in order to convert much of the inland freshwater marshes to agriculture. Little urban development occurred in the wetlands, however. In the 1890's, the Bolsa Chica Gun Club was established in and around the wetlands. The Gun Club chose Bolsa Chica because of the abundant animal life that was prevalent in the area. A

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<sup>4</sup> Historical Information from: Phillips Brandt Reddick, Inc. *Bolsa Chica Draft EIR: Orange County Land Use Amendment*, volume 1, section 2. Santa Ana, CA: Orange County Planning Commission, 1981.

passenger rail system passed through the coast adjacent to the wetlands in 1904, as did Pacific Coast Highway (US-101A) in 1926. Throughout the 1920's, the wetlands and the mesa were utilized for their oil-producing capability, and in the 1930's the Work Progress Administration (WPA) placed a flood control dam/tidal inlet in the wetlands. In 1933, the Long Beach Earthquake did extensive damage to the Bolsa Chica Wetlands and infrastructure surrounding the area.

In the 1960's, the northern part of the wetlands was developed into Huntington Harbour, with multiple man-made islands used for residential housing and docks. Rapid urbanization spared the main part of the wetlands, which remained undeveloped. The owner of the site, Signal Properties, Inc., had plans to remove the oilrigs in the area (because of the oil production, and the wetlands were polluted from them) and build a residential island system much like Huntington Harbour, and include a massive dock, presumably like those in Newport Harbor. However, those plans never were accomplished, partially because of the environmental concerns the public had in the 1970's. The property changed hands in the 1980's to Koll Real Estate Group, who had similar plans for development for the wetlands. However, the developer faced stiff opposition from political action groups and grassroots groups such as the Amigos de Bolsa Chica and the Bolsa Chica Land Trust.

The Bolsa Chica site has been considered for development for over thirty years. In that time, planners and developers have drafted numerous plans for the fate of the Bolsa Chica. The 1976 Huntington Beach City general plan cited that the mesa would be first priority for acquiring and preserving as open space, as shown on figure 6.<sup>5</sup> The wetlands were also high on the list of land to be saved. The Orange County general plan zoned the area to be open space, agriculture,

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<sup>5</sup> Figure 6 is taken from the 1976 Huntington Beach General Plan, as amended in 1990. It marks the unprotected mesa as first priority to be preserved, and the unprotected lowlands second on the priority list.

and oil production. With the different plans to build on the site, Environmental Impact Reports had to be written. The first one of many was drafted in 1981, as an amendment to the General Plan of Orange County. In 1988, County Supervisor Harriet Wieder, along with the Huntington Beach City Mayor, formed the Bolsa Chica Planning Coalition. This coalition was to work together in coming up with an agreeable outcome over the land. It included representatives of the County, City of Huntington Beach, the developer and major landowner, California State Lands Commission, and some interest groups (Amigos de Bolsa Chica). The US Army Corps of Engineers drafted the most recent EIR in 1992; it examined the alternatives put forth by Koll Real Estate Group. The Orange County Environmental Management Agency revised the EIR in 1994; they took into consideration more alternatives<sup>6</sup> than before and also examined the impact on the flora and fauna of the site more closely. Currently, the developer is fighting lawsuits filed by environmental groups over the proposed development plan. It has been approved by the County Board of Supervisors for now, and has also received approval from the California Coastal Commission. However, a judge in San Francisco has halted development until the lawsuits are settled.

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<sup>6</sup> The 1994 Revised County EIR included 19 alternatives, as opposed to the 5 suggested in the 1992 EIR.



## The Players

In addition to grass-root organizations like Amigos de Bolsa Chica and the Bolsa Chica Land Trust, whose purpose is to save the Bolsa Chica from complete destruction, other statewide and national organizations came to the Bolsa Chica Wetland's aid. They include the Surfrider Foundation and the Sierra Club. These clubs advocated for the restoration of the wetlands and were against any type of development on the lowlands. The Coastal Commission and the Orange County Board of Supervisors both approved the plan to build 4,800 homes on both the mesa and the lowlands, but development was stalled because of lawsuits filed by the interest groups. An Environmental Impact Report was filed on the development site, which recommended cleaning up the site. In 1997, however, an agreement with the Ports of Los Angeles and Long Beach transferred \$80 million to the owners of the wetlands for it to become state property. In exchange, those ports were allowed to expand.

However, the problem of the mesa is still not solved today. The political action groups contend that the mesa is an integral part of the wetlands. If it is built over, the runoff generated from the development will be detrimental to the health of the wetlands, since runoff contains harmful chemicals from cars and asphalt. Currently, the Huntington Beach city council is split concerning this issue. Many members of the Huntington Beach City Council believe that development should be prohibited on the site, including councilman Ralph Bauer and Mayor Shirley Dettloff. Other council-members, like Peter Green, believe in a controlled development that is built gradually, minimizing the impact to existing homeowners.<sup>7</sup> Many city council candidates for this year's general election represented the homeowners in their opposition of the project. The homeowners are also important participants in the planning process, as many have

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<sup>7</sup> Political Information from: County of Orange. *Election Sample Ballot, General Election 1998*. The Registrar of the County of Orange, 1998.

voiced their disapproval over the plans to develop the Bolsa Chica. Many who live along Los Patos Ave. believe the new development will block their view of the ocean. Rick Kao, a member of the Bolsa Chica Land Trust and a resident close to the development site, says he fears the increased noise from construction and the new residents that will be caused by the development.<sup>8</sup> He along with other residents in the area believe in addition that the development will lower the quality of life in their city: overcrowding of public schools, increased traffic, and unnecessary tax and utility fee increases. The plan still must go through other agencies, including the California Coastal Commission and the Army Corps of Engineers. A new Environmental Impact Report must also be filed in light of the change of development.

The County Board of Supervisors has perhaps the greatest say in the fate of the wetlands. The land falls under county jurisdiction, since it is unincorporated county land. The current second district supervisor, Jim Silva, supports the plan to build on the mesa. He is generally pro-growth. This past November, his seat was up for reelection. His opponent, former Huntington Beach Mayor Dave Sullivan, is considered more of a slow-growth advocate. He opposes the project, and says that he would only support “responsible development.”<sup>9</sup> One of Sullivan’s main running points was to preserve open space, especially the Bolsa Chica, saying that the “unique wetlands must be preserved for our children.”<sup>10</sup> The race was especially charged because of a separate issue: plans to build an international airport on El Toro Marine Corp Base, due to close in 1999. Sullivan lost, however, by 57-43%. Silva attacked Sullivan’s crime stances and Sullivan was not endorsed by many local police agencies. Polls taken by the *Orange County Register* showed that the most important issue in this race was not the Bolsa Chica Wetlands or the El Toro issue, but rather the more immediate issues like education and crime.

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<sup>8</sup> Personal Interview, November 27, 1998.

<sup>9</sup> Phone Interview, October 29, 1998.

U.S. senators Dianne Feinstein and Barbara Boxer also are involved in the ultimate fate of the wetlands. Both senators have visited the site and have tried to negotiate a land swap deal with the developer, where land is given to the developer elsewhere in exchange for its property rights to the Bolsa Chica. Local congressman Dana Rohrabacher also is involved with the process, since he can introduce similar bills to save the wetlands from development. State assemblyman Scott Baugh can also influence the outcome of the plan by introducing bills and resolutions that can be passed in the state legislature. The planning agencies of Huntington Beach and Orange County also have great influence over the outcome of the plans. They have authority over the exact specifications of the houses being built, as well as suggesting a best alternative.

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<sup>10</sup> Phone Interview, October 29, 1998.

## Alternatives

### *Introduction*

There are three alternatives suggested by the political and community-based actors:

- The first alternative is to build **4,800 units** on the site
- The second alternative is to build **1,200 units**
- The third alternative is to **not build anything** at all

Political actors who see growth in the community as a positive thing generally favor the first two alternatives. The main proponent in the housing project is current Second District County Supervisor, Jim Silva. He is a pro-growth supervisor who also favors the very controversial El Toro Marine Base conversion into an international airport. His opponent in the November election was Huntington Beach councilman Dave Sullivan, who opposes both projects.

Environmental and slow-growth actors generally support the latter two. They do not wish to see vast amounts of land to be developed into high-density residential areas that might decrease the quality of life for existing residents or decrease the ecological quality of the vital wetlands.

These two groups especially favor the third alternative, which is no development at all.

### *Some Questions to Ask*

In each alternative, one must consider many things. First, what is the density of the project? How will this affect the traffic and capacity of existing infrastructure, such as main arterial roads, sewerage, and water pipelines? Also, how will this new development affect the capacity of existing elementary/middle/high schools? Will new schools need to be built to handle the added strain on existing schools? What about the seismic safety of the site? These along with many other concerns should be considered in reviewing these alternatives.

### Alternative One

The first alternative is to build the 4,800 dwellings on both the highlands and parts of the wetlands, as proposed by the land owner and developer. The proposed plan includes high-density housing on the mesa and some single-family homes on the wetlands and lowlands, as shown on figure 7. Also included in the plan are feeder streets, sewerage and water pipelines, as well as a new elementary school. Proponents of this plan argue that the additional property and sales tax revenue generated from the new residents will benefit both the city and county. The developer will also allocate funds to clean up the degraded wetlands. Even so, opponents of this large-scale plan cite environmental and quality of life issues against the plan.

#### *Environmental and Archaeological Impacts*

Most people believe that developing any part of the existing Bolsa Chica site will be detrimental to the health of the wetlands. First of all, the traffic from the new development will create more roads. These roads will accumulate oil and other chemical particles. During rains, the runoff will most likely go into the wetlands, which will have a negative impact on the existing flora and fauna in the wetlands. In addition, these roads will significantly alter the land form of the mesa, since the roads must have a gentle slope. The cutting and filling of the site will have an impact on the existing fauna, and will only increase the flow of runoff into the wetland area.

The influx of an estimated 10,000 people into the new development will also bring domesticated animals, namely dogs and cats. These domesticated animals will have an effect on existing wildlife and plants in the area. Cats tend to hunt for small game, as it is their natural instinct. Therefore, with the development going through, we will see a decrease in the native

bird population in the area. These birds will also have fewer areas where they can nest. The combination of these elements will result in fewer variety of wildlife in the area.

However, humans will also bring in non-native plants into the region. Some of these plants have a stronger hold on the land than do their native counterparts. Gradually, these non-native plants will take over the landscape, creating an undesirable area unlike the original landscape that could be found years before.

Native American Indian burial sites have been found on the mesa. An archaeological dig was made on them in the early 1990's. Further archaeological analysis of the mesa showed that there were significant findings of Native American cogwheels and three point projectile points. The Gabrieleño Indian tribe believes that the buried bodies are from their ancestors, and that they should not be moved, as per the Native American Burial Site Act. Archaeologists date the remains to be nearly 7,000 years old.<sup>11</sup> The developers argue that the people buried there cannot be related to the Gabrieleño tribe because of the antiquity of the remains. Nevertheless, the remains found on the mesa are among the oldest found in Southern California. If the 4,800 unit project proceeds, these archaeological sites will be lost.

Also, the World War II bunker found on the mesa is among the few remaining on the West Coast. They were built in 1942 because of the fear of a Japanese mainland attack. Many of the bunkers were demolished after the war to make way for new developments along California's valuable coastline. Alternative one would need for this historic site to be demolished to allow for new houses to be built on top of it. Again, this site will be lost.

#### *Seismic Safety*

There are a variety of fault lines that run very near to the site. In fact, there is one fault that runs directly beneath the proposed area of development: the Newport-Inglewood fault. The

last time this fault caused an earthquake was in 1933, which was called the Long Beach Earthquake. It had an estimated magnitude in the high 5's on the Richter scale. This earthquake caused extensive damage to downtown Long Beach and Santa Ana. The epicenter was estimated to be 2 or 3 miles off the coast of Newport Beach. Other faults and their proximity to the proposed development site are described in figure 2.

The existence of the fault line so close to the site poses very hazardous risks to the future residents of the development. It will also necessitate expensive seismic reinforcements on the houses and apartment complexes to be built. In addition, seismologists worry about the chance of liquefaction caused by earthquakes. This is where the shaking of the ground causes the land to rise and sink, which has the potential of causing extensive damage to housing. This is especially true of the lower bench of the mesa, since it is the closest to water.

#### *Utilities, Education, Recreation, and Quality of Life*

Residents are afraid of the additional cost of connecting the new development to the city's existing pipeline system. Other new developments have already increased the average cost of water to the residents of Huntington Beach.<sup>12</sup> The cost of providing services to the new development will undoubtedly increase the cost of living. Freshwater would be provided by the Orange County Water District, which draws 80% of its water from the aquifer located beneath Huntington Beach. The new development will generate demand for 3.3 million gallons of water per day,<sup>13</sup> and might cause the OCWD to import more of its water from expensive outside sources. This will significantly increase the charge paid for water by existing residents. The amount of wastewater generated by the 10,000 new residents is an estimated 1.5 million gallons

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<sup>11</sup> Archaeological data from the Bolsa Chica Land Trust Newsletter, *Music From the Mesa*.

<sup>12</sup> It is alleged that the city started to bill for water monthly rather than bi-monthly to disguise the increased water rates.

per day. This massive amount of wastewater would necessitate a new treatment facility at the expense of Huntington Beach taxpayers. The solid waste generated by the new development is an estimated 20,000 tons per year. This additional amount of solid waste will accelerate the landfill sites already in use by Rainbow Disposal, the solid waste transportation contractor for the proposed development area. This might warrant new charges on existing customers for the creation of new landfill sites.

Electricity, gas, and telephone services are not expected to cause any significant rate increases for existing customers. The new development will generate an estimated 160,000 kWh per day for electricity and 10,000 therms per day for natural gas. The Southern California Edison Electricity Company estimates that the increased growth in the area might hinder the ability for SCE to provide adequate electricity to all its customers during peak times. So although there will be no immediate economic effects on residents, service might be less reliable due to the increased demand for electricity. As for natural gas, the Southern California Gas Company states that this cumulative increase in service can be provided to the project without significant impacts.

Parents generally oppose the development because they fear that too many students will be overcrowding the schools. Even though the developer has agreed to build a new elementary school, parents still believe that this new school will only serve as an additional feeder school to the middle and high schools that are already “at-capacity.” They fear that the additional strain on the educational system in the city will eventually lead to a deterioration of the quality of education their children receive in the public schools. Indeed, the new development will generate 900 new students in the K-8 grades, and about 600 new students in the 9-12 grades.

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<sup>13</sup> All figures and estimated data from Phillips Brandt Reddick, Inc. *Bolsa Chica Draft EIR: Orange County Land Use Amendment*. Santa Ana, CA: County of Orange Department of Planning, 1981.



This new student population would be spread out among the new elementary school, Harbour View Elementary, Hope View Elementary, Marine View Middle, and Marina High Schools. These schools would mainly be in the Ocean View School District (K-8) and the Huntington Beach Unified High School District (9-12). It is questionable if the existing schools can handle the new load of students that will be generated by this alternative. A look at figure 1 shows that most public schools are near or at capacity and may not be able to accommodate the new students.

In addition, the recreational facilities present in the city of Huntington Beach are dwindling. Many of the facilities, such as Murdy and Edison Community Parks are already fully utilized for their basketball, tennis, and baseball fields. The new development will only increase demand for these scarce resources. An examination of figure 9 will show the scarcity of these community resources. Also, the closest county library is 4 miles away in Seal Beach. That library has been determined to be at capacity, as are the overused Huntington Beach Main Library and its Graham annex. There are no funds available for any upgrades to these facilities.

Police service would need to be increased in the area because of the additional residents. These new police officers would theoretically be funded by the additional property tax generated by the new development. Fire service would not need to be substantially increased, as there is a fire station less than 1 mile away from the proposed development site.

#### *Circulation and Noise*

Current residents believe the estimated 10,000 new residents will generate too much traffic on the existing infrastructure, specifically those leading into the area from the freeways and other arterial highways. Existing residents also believe the additional strain on arterial roads such as Bolsa Chica Rd. (leading to I-405), Warner Ave. (leading to Beach Blvd. (CA-39) and I-

405), and Pacific Coast Highway (CA-1) will be too much and will take away from the quiet atmosphere existing in the area. Refer to figure 11 to see the average daily traffic in 1993. It has significantly increased from the traffic conditions in 1978 (figure 10), which reflects the burgeoning growth Huntington Beach has experienced in the past 20 years.

The project is estimated to generate a significant amount of traffic, but not enough to approach the maximum amount of vehicles per day as described by figure 3. However, the traffic perceived by existing residents will seem to be quite large. This additional volume of cars might slow the commute in and out of the area, as well as putting additional traffic on the San Diego Freeway (a 10-12 lane super-freeway, Interstate 405). The additional noise generated by the cars will also increase because of the increased volume of cars. This will be most noticeable on the smaller commuter and feeder streets directly feeding into or adjacent to the project site, such as Los Patos Ave., Springdale St., Graham St., Slater Ave., and Talbert Ave.

In addition, the Orange County Transportation Authority (OCTA) will have to add new bus lines to service the new development. The cost for the new bus lines and potential new ridership will come from county property taxes and Proposition M funds.<sup>14</sup>

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<sup>14</sup> County proposition allocating money for freeways, streets, and other transportation matters.

## Alternative Two

The second alternative is to build 1,200 units of low-density housing on the highlands of the wetlands (the mesa), as shown by figure 8. The plan will allow for the minimal impact on the sensitive wetlands, as well as funds for their renovation. The developers also hope this plan will lessen the impact of the new development. Proponents generally like this plan, because of its positive impact on the city's and county's tax base. They feel that this new low-density housing plan will be cost-effective and economical, and believe that it is a "win-win" situation for the city, county, developer, and the environment.

### *Environmental and Archaeological Impacts*

Certainly, this plan will lessen the impact on the wetlands as compared to alternative one. However, environmentalists still believe that the runoff and construction work on the mesa site will harm the wetlands. They feel that the mesa is an integral part of the wetlands, and the wetland ecosystem uses the runoff generated from the mesa to feed into its marshes and bogs. If the mesa is built upon, the runoff will be severely limited and polluted, and this will eventually cause the deterioration of the wetlands. The land form will also be altered slightly because of the proposed roads to be built to access the new development.

This alternative will also bring in domesticated animals into the area. Their population will be significantly less than what their population would be in the first alternative; however, they would still have a major impact on the plants and wildlife in the area. Their presence will decrease the number of nesting birds in the region. Additionally, the new human residents of the mesa will bring in non-native plants that might overtake the native plants of the region.

The Native American Indian burial sites and their artifacts that might be on the mesa will be lost to development in this alternative. They are culturally significant, so what will happen in

this alternative is an archaeological dig funded by the developer would come and examine these remains and artifacts. They would be cataloged and perhaps sent to a local museum, most likely the Bowers Cultural Museum in Santa Ana. However, the developers and archaeologists face opposition from the Gabrieleño tribe, whose ancestors are buried there. They wish for their ancestors to lay undisturbed forever.<sup>15</sup>

The historically significant World War II bunker would also have to be demolished. Like alternative one, this plan would call for the bunker to be removed so that houses can be built in its place. This bunker would be another bunker lost to the encroaching urban society that we live in today.

#### *Seismic Safety*

This alternative poses the same seismic safety concerns as did alternative one. The Newport-Inglewood fault runs directly underneath the proposed development site. This alternative to build 1,200 new units is considerably safer than the proposal to build 4,800 new units. First, the population density would be less, which will allow for a quicker escape in the event of an earthquake. Also, this alternative would allow for greater areas of open land to where residents can go in an earthquake. Even though this alternative is safer than alternative one, it still can be prone to liquefaction, especially the lower part of the mesa. Liquefaction causes extensive damage to any development will render any house affected to be almost uninhabitable.

#### *Utilities, Education, Recreation, and Quality of Life*

The connection of this development to the existing utility lines would be less of a problem than the first alternative, as there are fewer new residents and units to connect to the lines. However, residents will still be concerned about the system (sewerage, water, electrical)

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<sup>15</sup> Information from the Bolsa Chica Land Trust Newsletter, *Music From The Mesa*.

being over capacity with the new development. Certainly, there will be less of a fear with this plan than in the first alternative, but there will still be that fear held on by a handful of residents. The new residents generated from this new development will generate less than 500,000 gallons of wastewater per day.<sup>16</sup> The current wastewater treatment facilities are able to process this additional amount of wastewater, but it will hinder the process of runoff generated from rainstorms. In the event of a large rainstorm, the excess untreated wastewater that cannot be processed will be pumped directly into the ocean, increasing the danger of the ocean waters and decreasing the quality of life in the city.

Other utilities will also be affected by the new development proposed by this alternative. The Orange County Water District will supply the freshwater. Currently, the OCWD can support the estimated 3,000 new residents generated by this alternative, demanding an estimated 1 million gallons of water each day. However, with the county growing at a steady pace, the OCWD predicts it will have to import more water from the expensive state water projects. This higher cost will be passed on to the residents, both new and current. Also, this alternative will generate an estimated 7,000 tons of solid waste a year. Rainbow Disposal can handle this increase in waste; however, questions still remain over the land available to be used as landfill. At current rates, the Bee Canyon landfill will soon be approaching its capacity, at which time a new landfill will have to be built. The cost of this new landfill will be passed on to the residents.<sup>17</sup>

There are no anticipated problems in providing electricity, gas, and telephone service to the new residents. This alternative is expected to generate demand for 60,000 kWh of electricity

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<sup>16</sup> All estimated data extrapolated from Phillips Brandt Reddick, Inc. *Bolsa Chica Draft EIR: Orange County Land Use Amendment*. Santa Ana, CA: Orange County Dept. of Planning, 1981.

<sup>17</sup> Phillips Brandt Reddick, Inc. *Bolsa Chica Draft EIR: Orange County Land Use Amendment*, page 3-243. Santa Ana, CA: Orange County Dept. of Planning, 1981.

per day and 4,200 therms of gas per day. Both Southern California Edison and the Southern California Gas Company say that the cost to connect the new development to the existing network will be minimal, as there are already power lines and pipelines very close to the site. GTE, the main telephone provider, also says the cost in connecting the new development will be minimal, as there is a switching station less than a mile away.

In addition, the new residents of the city will undoubtedly generate many new pupils to educate, which might increase class size in the public schools. Parents are unreceptive to this plan that would decrease the quality of education in public schools. They might support this plan if the developer gave money to support the Ocean View School District and the Huntington Beach Union High School District, which are the school districts that would be serving the planned development. This money would be used to upgrade facilities and hire new teachers in anticipation of the new influx of students.

The estimated number of students that will be generated by this alternative will be far less than that generated from the first alternative. It will produce about 480 new students in the K-8 grade levels, and will produce 315 new students in the 9-12 grade levels. These students are much easier to spread out among the existing elementary, middle, and high schools than would the students that would be generated from alternative one. A glance at figure 1 shows that space would be available for the high school students, while the new elementary school proposed by the developers can handle the new K-8 students.

The new residents will put an additional strain on the existing community recreational facilities in the city of Huntington Beach. Although there are fewer residents generated by this alternative than the previous one, the development of the mesa would mean one less available space for open recreation within the city. Also, the new residents will need access to the city or

county library facilities, most of which are already utilized to capacity. Figure 9 shows the locations of these community recreational facilities and libraries in Huntington Beach.

Police service would need to be increased, but less protection is needed as compared to alternative one. Fewer new police officers would need to be hired. Because of the close proximity of the site to a fire station, fire protection would not need to be substantially increased.

#### *Circulation and Noise*

The additional traffic that would be generated by this plan would be significant, but certainly not as substantial as the first alternative. Nevertheless, this plan will generate an estimated 3,000 new residents to the area, which will affect the existing arterial highways. Fewer residents are concerned about this addition, but still some residents fear this additional traffic will be intolerable.

The main arterial roads leading into the development would carry the bulk of the new traffic. Bolsa Chica Rd.'s (leads to I-405) traffic is expected to increase by 4,000 vehicles per day, which would still make it well below the maximum capacity for that road (see figure 3). Warner Rd.'s (leads to I-405 and Beach Blvd. (CA-39)) traffic is expected to increase by 3,000 vehicles per day, also below the maximum capacity for that road. Other roads would also be little or moderately affected by the development. The commuter roads would be most affected by the development. They would carry much more traffic than they do today and would generate much more noise. For example, the two lane undivided Slater Ave. is expected to increase by 5,000 vehicles per day in average daily traffic.

Since the development is not generating a massive amount of new residents, new bus lines would not have to be created. However, the Orange County Transportation Authority

should look into altering some lines that travel along Warner Ave. to travel within the new development instead. This might generate more ridership for the bus system.



### Alternative Three

The third alternative is the one favored by most environmentalists and community-based slow-growth groups. Saving the site as a park or recreation area would keep developers out of the few open spaces left in Orange County. The *Los Angeles Times* recently conducted a poll of Orange County residents that showed that most residents are against more development and wish for more open space to be available for future generations. Indeed, the amount of open space available for development is dwindling. Therefore, many existing residents believe there should be no development at all.

#### *Environmental and Archaeological Impacts*

No development or minimal recreational development would have little to no impact on the environment. Recreational development is flexible enough so that the archaeological and historical sites can be preserved and researched more fully. The World War II bunker can be created into a memorial also. The park could be integrated with the wetland ecological preserve. Creating trails linking these two parks would have a minimal effect on the ecosystem.

#### *Seismic Safety*

Earthquakes would not effect the area if it were preserved as open space. If it is converted into a regional park, no significant threats are posed by seismic activity. The park could be used as a local meeting point in the event of an earthquake. It is large enough to provide access to emergency vehicles and helicopters that can service the residents in the area.

#### *Utilities, Education, Recreation, and Quality of Life*

Connecting park facilities to the city's utility lines would not be a major funding or capacity issue. There would also be no additional strain put on the city's educational system.

Changing the area into a park would increase the amount of open space and recreational land for existing residents, thereby increasing the quality of life in the area.

#### *Circulation and Noise*

No development would have little if any effect on the traffic on the city's arterial streets. The average daily traffic on existing city streets would remain about the same, and there would be no additional noise generated by it. If the park option were pursued, the increase in traffic would not be significant. OCTA Bus line number 70/71/72 services the general area, with its route along Warner Ave. towards Pacific Coast Highway. There would not be any new need for additional bus lines to be added.

#### *Funding*

All these considered, it would be the preferred alternatives for most residents of the area. However, having no development on the site has its own problems. The developer currently owns the land, and if the city and county decide against the developer's plan, they could justifiably sue the government agencies, citing that they "took" the land away from them. The government agencies would then have to find money to pay off the estimated \$100+ million the land could be worth, since the zoning is currently being changed from agriculture/open space to residential. The federal government could step in and do a land swap for that land, but as of yet, Congress has not decided on the issue. The city and county could issue bonds to pay off the developer, but this would only incur more debt onto the already bankrupt County of Orange. Also, there would need to be funds to restore the wetlands and the mesa, and to build facilities to host the tourists and other recreating people who wish to use the park. If the local and state governments allow the developer to build as planned, the developer has pledged it will pay some of the cost to restore the wetlands. Therefore, this is a tough decision to make. Should we let the

developer build on the site so that there would be money to restore the wetlands, but what's built could potentially harm the wetlands, or should we incur great debt in order to preserve the wetlands in its entirety for future generations? This would depend on the criteria set for evaluating the alternatives and what values we place on the environment and growth.

## Criteria and More Questions to Ask

The criteria to consider when evaluating the set alternatives are very important. These criteria will be used in deciding which alternative should be selected over the other. Some questions planners could ask themselves and their responses could include:

- “Will this development benefit future generations?”

Future generations should benefit from additional housing because of the high demand for it today. However, it is unclear if future generations would also benefit from the availability of open land, a very scarce commodity in suburban Orange County. Clearly a balance must be made between development to satisfy today’s needs and open space that might be needed in the future.

- “How will it impact existing infrastructure?”

Existing infrastructure will have a shorter use life because of the additional use imposed by the new development. However, the infrastructure was built to be used and should be utilized by all residents. Funds should be available to replace the infrastructure when they do become deteriorated.

- “How will it affect existing schools?”

This question was examined in the alternative exploration. Although most public schools are under but close to capacity, they can accommodate a limited number of new students without compromising the quality of education rendered to the students. Therefore, a limited number of residential units should be approved as to not overcrowd existing schools.

- “Will this development be detrimental to the environment and the wetlands?”

Runoff generated by the development will be the most detrimental to the water quality of the lowland wetlands. The runoff will contain chemical particles and other harmful chemicals

that will contaminate the unique fresh and saltwater wetlands found at the Bolsa Chica site. The pollution will be harmful to the plants, fish, birds, and other animals that live in the wetlands.

- “Is there enough money to fund a purchase of the property, as specified in the Huntington Beach general plan of 1976?”

Although ideally the government can purchase the land outright, there are not enough funds to buy the property. With the County in bankruptcy and the City without the needed capital to buy it, the only other alternative is to allow the owner of the land develop it. However, how the city and county let the developer develop the land can also determine how much land is left available as open space as well as the housing density of the property.

- “Will leaving the land as open space be beneficial to future generations?”

Leaving open space available to future generations would be beneficial because it would allow them to decide what they would like to do with it. Perhaps they will discover a better way of utilizing the land that we today have not thought of. However, there is a need for housing in the region, especially new homes. It is a difficult decision to make, however, I believe the majority of the site should be saved as open space while having some land used for limited development.

These are all important questions to ask when choosing the best alternative. They focus on the most important points that face the residents of the area today. They are also questions that focus more closely on the topics that can help the planner choose which alternative is the best to pursue. The planner should consider all the answers to these questions before making one broad-reaching decision. Planners should be sensitive not only to the concerns of residents and developers, but also should consider what their decision could mean for future generations and the environment, things which do not voice their opinions.

There are more criteria that planners should ask when trying to single out an alternative to pursue. They include political acceptance and sustainability. Generally, Orange County is not a hotbed of environmental activism. The residents stereotypically are conservative and in favor of growth. Therefore, it would seem more politically acceptable locally to allow the private developer build their project without government intervention. However, planners still must weigh in other points of view, not necessarily only the conservative view. Also, planners must know if the new development will be able to fully sustain itself without needing massive amounts of support from the government. For instance, will the development be able to pay enough property tax to finance road construction or pipeline reconstruction? All of the three alternatives suggested have their pros and cons. However, it is in the weighing of these pros and cons that allow us to choose which is the best alternative. We must also decide which values we value most: growth, prosperity, the environment, open space, or quality of life. This is a difficult question to answer, as all of these are important values that are essential to living in a modern industrialized urban area.

## Selection of an Alternative and its Implementation

The selection of the best alternative is a tough decision. However, I personally believe a compromise should be made between the environmental groups and the developer. Morally, I believe that no development should be taken, but I understand the economic ramifications this decision would have on the city and county. Out of the three alternatives, I feel the best one is alternative number two: to build no more than 1,200 units on the mesa. Ideally, this number would be reduced so that only the mesa is used and only single family homes are built. This would minimize the impact the new population would have on existing residents and wildlife. Also, building only on the mesa would lessen the chance of a seismic catastrophe that local fault lines might pose. The compromise would have to be made concerning the runoff generated by the development, which I believe would be much less than the first alternative.

I feel the first alternative has many flaws. Although this would allow for the maximum return for the developer, it would generate too many people that would decrease the price and quality of living for existing residents. It would have huge environmental impacts as well, taking into consideration pets, non-native plants, and polluted runoff. The high cost of providing the new development with wastewater treatment facilities, services, and other utilities makes this alternative unattractive, even though it would allow for the maximum amount of tax for both the city and the county.

The third alternative is environmentally sound; however, questions remain about the funding of the acquisition of the land and the restoration of the wetlands. Without the help of the state and federal governments, purchasing the land would be an impossible task for the city and county to take on. Therefore, because of the lack of funds for the government to acquire the land, I feel this option would be unfeasible. The best alternative following the criteria set forth

in the previous section would be something similar to the second alternative. I would amend the plan to include fewer apartment complexes and replace those with single family homes. These single-family homes can fetch anywhere between \$400,000 to \$2 million, depending on the size of the lot and if it has an ocean view. The housing market in Orange County is very active right now, and would prove to be very favorable for these new single-family homes. In addition, the fewer residents would mean fewer students, and would make overcrowding of schools less likely to happen. This would please the existing residents and parents around the development. In addition, leaving the majority of land open would be beneficial to future generations. They will be able to enjoy the beauty and splendor of the wetlands without also observing someone's backyard.

Implementation of this plan should not be very hard to accomplish. First of all, a new draft of the plan would have to be prepared, as well as a new EIR reflecting the new changes in development. Hopefully, without any legal barriers, the County Board of Supervisors, California Coastal Commission, and the US Army Corps of Engineers will approve the plan. With all the permits and approvals in hand, the developer can proceed with its plans for development with the site.



## Conclusions and Analysis

There are still many things that could go wrong with the process. The local residents might still think the second alternative to be too much development. Environmental, grassroots, and slow growth organizations might file lawsuits over the proposed development. This would stall the building process as it already has for nearly twenty years.

However, assuming that the alternative proposed is successful in being built, 1,200 new residents can call Huntington Beach and Orange County home. They can take advantage of the superb school system the city school districts can offer. They can enjoy the wonderful views of the Pacific Ocean from their home. They can take walks along the wetlands to enjoy the wonderful variety of wildlife there and be glad that it was not destroyed and that their homes are not deteriorating them to a great extent. Growth is a positive force in any community, but in an urbanized area like Orange County, controlled growth is the best option we have available to us. Planning allows us to control growth and to consider alternatives to projects so that the best decision can be made given the circumstances of public, private, and ecological concerns.

Most planners use the seven step planning process to determine an alternative to pursue. I employ the seven step planning process here in this report as well, but how can we be certain that this is the best method of producing the best alternative? The answer is that we cannot. First of all, we as planners do not know all the information that is available. This report, especially, does not take into consideration the tomes of information available on this topic that professional planners would consider. Without knowledge of this information, it is harder to make an informed decision about which is the best alternative to take. Sometimes, the planner can not pick the best or “right” alternative. Events are constantly occurring and things are constantly changing, and so the alternative chosen could be valid one day and inapplicable the

next day. In addition, the planning process cannot represent everyone's concerns. Planners try very hard to accommodate every groups concerns, but most of the time this is impossible. For instance, how can planners satisfy local groups' wish to keep the entire site as open space while also satisfying the developer's wish to build large apartment complexes and a fully functional marina? They cannot. Therefore, the planner has to be the third party that compromises each group's wishes. However, in choosing a best alternative, planners cannot avoid their own biases. In this report, for example, I began with the intention of recommending keeping the land as open space and allowing no development at all. That was what I believed should happen to the land, a belief that was heavily influenced by my living directly across from the proposed development site. Nevertheless, I tried to be as impartial as possible by using the criteria I set forth to decide the best alternative. For all these reasons, the planning process employed in this document and usually throughout the country at professional planning offices is somewhat problematic. However, it is the best method of systematically going through planning processes to come up with a best alternative. Therefore, the reader should be cautious of the limitations posed by this document, knowing that it is still among the best and most frequently used method planners have available to them.

## Figures, Maps, and Pictures

**Figure 1**

School	1991 Enrollment	Capacity
Hope View Elem. (K-5)	398	450
Harbour View Elem. (K-5)	625	840
Smith Elem. (K-5)	694	690
Marine View Mid. (6-8)	678	780
Dwyer Mid. (6-8)	780	780
Huntington Beach HS (9-12)	2197	2651
Marina HS (9-12)	2155	2373

Source: US Army of Engineers, 1992 Draft EIR

**Figure 2**

Fault	Closest Distance from site
San Andreas	80 km
Newport-Inglewood	0 km (on site)
Palos Verdes	13 km
Whittier	30 km
Elsinore	40 km
Sierra Madre	48 km
Santa Monica	48 km
Catalina Escarpment	54 km
San Jacinto	77 km

Source: OC Environmental Management Agency, 1994 Revised Draft EIR

**Figure 3**

Road	Format	1993 Average Daily Traffic (vehicles/day)	Maximum Capacity (vehicles/day)
Bolsa Chica Rd.	6 lanes divided	27,000	54,000
Warner Ave. (east of Algonquin)	6 lanes divided	32,000	54,000
Warner Ave. (PCH to Algonquin)	4 lanes divided	26,000	36,000
Goldenwest St.	6 lanes divided	40,000	54,000
Springdale St.	4 lanes undivided	14,000	24,000
Graham St.	2 lanes undivided	8,000	12,000
Slater Ave.	2 lanes undivided	11,000	12,000
Talbert Ave.	2 lanes undivided	2,000	12,000
Pacific Coast Highway	4 lanes divided	32,000	36,000
Beach Blvd.	8 lanes divided	60,000	72,000

Source: HB and OC planning departments, general plans, 1981.

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