E. EFFECTS OF WATER DISTRIBUTION AND WASTEWATER COLLECTION FACILITIES

This EIR is intended to supplement the *Bolsa Chica Report Local Coastal Program EIR* (SCH# 93-071064) that was certified by Orange County in December 1994 and recirculated in 1996 (see Section A.4.2). The *Bolsa Chica Report Local Coastal Program EIR* evaluated the environmental impacts associated with the Bolsa Chica Local Coastal Program (LCP) that was approved by the California Coastal Commission in 1996. The project evaluated in that EIR included the proposed development of Bolsa Chica Mesa with residential dwelling units and construction of the infrastructure improvements required to support the proposed development, including water storage and distribution facilities and wastewater collection facilities.

In order to provide the reader with a basic understanding of the environmental effects associated with the various water distribution and wastewater collection facilities planned to support the proposed Bolsa Chica Planned Community project, pertinent information and analysis from the *Bolsa Chica Report Local Coastal Program EIR* regarding these facilities is summarized in this section. In some instances, information from the previous EIR has been expanded and updated in order describe current conditions and indicate the status of previous mitigation requirements for Bolsa Chica Mesa. Impact information for the water storage/distribution and wastewater collection facilities planned for Bolsa Chica Mesa is presented because of the functional relationship of these facilities to the Proposed Project; however, the California Public Utilities Commission has no authority to approve or deny the construction of these facilities.

The information in this section is presented for the convenience of the reader. This section is not intended to re-analyze the impacts of any components of the 1996 Bolsa Chica LCP.

E.1 AIR QUALITY

The air quality baseline conditions for Bolsa Chica Mesa are the same as described in Section C.1.1.

The Bolsa Chica LCP incorporated various project design features (PDFs) to reduce potential impacts to the local air quality conditions. The PDFs were designed to restrict emissions and fugitive dust during construction, and to improve traffic flow and stimulate alternative forms of transportation throughout the life of the project.

The *Bolsa Chica Report LCP EIR* identified the following potential impacts to air quality to be significant:

- Site construction will create exhaust pollutants from vehicles used for on-site earth movement and vehicles bringing building materials and workers on-site.
- Site construction will create fugitive dust.

- Construction of the Proposed Project could generate as much as 5,063 tons of VOC emissions due to the application of cutback asphalt.

- Construction of the proposed project could generate 454 pounds per day of VOC emissions from the use of architectural coatings. This value includes the use of high-volume, low-pressure spray equipment, which is typically considered as a mitigation measure.

- The project has the potential to produce significant exhaust emissions from vehicle trips generated by new residents within the County LCP Area.

To reduce these potentially significant impacts, the *Bolsa Chica Report LCP EIR* identified the following mitigation measures:

- To the extent feasible by the Applicant's contractor, exhaust emissions from construction equipment shall be controlled in a manner that is consistent with standard mitigation measures dictated by the SCAQMD (refer to Section 4.10.5 of the *Bolsa Chica Report LCP EIR*).

- Water trucks will be on-site at all times during grading operations and will regularly water the site to deep the soil moist and prevent fugitive dust.

- The Applicant shall specify the use of emulsified asphalt or asphaltic cement, neither of which produce significant quantities of VOC emissions.

- The Applicant shall specify the use of high-volume, low-pressure or manual application of paints and coatings on structures. Where applicable, pre-finished or pre-primed and sanded wood molding and trim products and pre-primed wallboard shall be used. Additionally, where applicable, the Applicant shall specify the use of non-polluting powder-coated metal products.

- The Applicant shall assist the County in implementing Transportation Demand Management measures related to the Proposed Project (ref: "A Reference Guide to Transportation Demand Management") published by SCAG. Such measures shall include coordinating transit service to the development through provision of bus stops, transit stops, shuttle stops, bus shelters and turnouts, and bicycle/transit interface.

- The Applicant shall provide mitigation for secondary source emissions (i.e., emissions associated with stationary sources within the development) through specific design mitigation measures. During design review and prior to issuance of building permits, the County will assure confirmation that the measures have been incorporated to the maximum extent feasible. As stated previously, the project will comply with Title 24 energy-efficient design regulations and shall incorporate to the maximum extent feasible, the specific design measures in Section 4.10.5 of the *Bolsa Chica Report LCP EIR*.

The *Bolsa Chica Report LCP EIR* found that the Proposed Project would result in potential air quality impacts due to short-term construction emissions and long-term mobile emissions from vehicle trips generated by the project. The *Bolsa Chica Report LCP EIR* concluded that implementation of the above mitigation measures would reduce the air emission impacts. However, both short-term NO_2 and ROG impacts are expected to remain significant for the construction phase, and long-term CO, NO_2, and ROG impacts are expected to remain significant during the subsequent occupancy phase.

E.2 NOISE

The ambient noise levels for Bolsa Chica Mesa are similar to the levels described for the southern end of the proposed pipeline route in Section C.2.1. Noise measurements were collected for the *Bolsa Chica Report LCP EIR* at six locations on the mesa, one location adjacent to Warner Avenue and one location adjacent to Pacific Coast Highway (PCH). Leq noise levels measured on the mesa ranged from 51.3 to 56.1 dBA. The readings collected adjacent to Warner Avenue and Pacific Coast Highway were 69.2 and 69.1 dBA, respectively. The measured noise levels were modeled for the purpose of stating the data in terms of a day-night average level (Ldn), which includes the adjustment for the nighttime hours only. Modeling results range from an Ldn of 58 dBA along 17th Street between Atlanta Avenue and PCH to an Ldn of 76 dBA at various locations along PCH, Beach Boulevard, and Warner Avenue.

The Bolsa Chica LCP incorporated various PDFs to reduce potential impacts to local ambient noise levels. In addition, the *Bolsa Chica Report LCP EIR* identifies County Standard Conditions (SCs) that also serve to reduce noise impacts. Refer to the *Bolsa Chica Report LCP EIR* for a list of the PDFs and SCs that will be implemented during the construction of residential development on Bolsa Chica Mesa.

The *Bolsa Chica Report LCP EIR* identified the following potential impacts to ambient noise levels to be significant:

- Vehicle-generated noise from mobile sources will create a noise impact to residences adjacent to Bolsa Chica Street between Warner Avenue and the Mesa Connector under the proposed project.

- Vehicle-generated noise from mobile sources will create a noise impact to residences located along Graham Street, Springdale Street and Talbert Avenue east of the proposed Lowland development.

To reduce these potentially significant impacts to a level of insignificance, the *Bolsa Chica Report LCP EIR* identified the following mitigation measures:

- Prior to extending the segment of Bolsa Chica Street from its current terminus at Warner Avenue to the Bolsa Chica Mesa, the Applicant shall conduct an acoustical analysis to confirm noise impacts and determine the extent of specific noise reduction measures necessary to achieve the 45 dBA interior noise level in residences adjacent to Bolsa Chica Street between Warner Avenue and the Mesa Connector.

- Prior to the issuance of building permits for residential development in the Lowland, the Applicant shall conduct an acoustical analysis to confirm noise impacts and determine the extent of specific noise reduction measures necessary to achieve the 45 dBA interior noise level in residences adjacent to Graham Street, Springdale Street and Talbert Avenue.

The EIR found that implementation of these mitigation measures, in addition to the PDFs and SCs, would effectively reduce the identified noise impacts to a less-than-significant level.

E.3 TRAFFIC AND CIRCULATION

The *Bolsa Chica Report LCP EIR* identified the existing conditions for the study area roadways, and identified that the following roadway segments serve daily traffic volumes in excess of estimated capacities: PCH, 1st Street (Seal Beach) to Warner Avenue; Gothard Street, Ellis Avenue to Garfield Avenue; Beach Boulevard, Edinger Avenue to Garfield Avenue; Magnolia Street, Adams Avenue to Indianapolis Avenue; and Warner Avenue, Magnolia Street to I-405 freeway.

In addition, a total of 129 intersections have been analyzed under existing conditions. Actual traffic count data has been collected for every existing intersection analyzed. Other locations, which do not exist today but are either under construction or planned for the near future were analyzed under future conditions as well. A total of nine intersections experience deficient peak hour operations (LOS "E" or worse) under existing conditions. These intersections are: PCH at Seal Beach Boulevard; Seal Beach Boulevard at I-405; Bolsa Chica Street at Garden Grove Boulevard; Springdale Street at Westminster Avenue; Beach Boulevard at Slater Avenue, Ellis Avenue, and Garfield; Magnolia Street at Warner Avenue; and Brookhurst Street at Warner Avenue.

The Bolsa Chica LCP incorporated various project PDFs to reduce potential traffic and circulation impacts. In addition, the *Bolsa Chica Report LCP EIR* identifies County SCs that also serve to reduce traffic impacts. Refer to the *Bolsa Chica Report LCP EIR* for a list of the PDFs and SCs that will be implemented during the construction of residential development on Bolsa Chica Mesa.

The *Bolsa Chica Report LCP EIR* found the following potential impacts to transportation and circulation to be significant:

- PCH will experience short-term significant adverse impacts due to achievement of LOS "E" or "F" at various intersections along PCH for each phase of the Proposed Project.
- Five intersections along Pacific Coast Highway will experience a measurable traffic contribution from the project and are expected to experience or continue to experience deficient peak hour intersection operations.
- The proposed project may have a significant long term adverse impact on PCH and in other areas within the traffic study area to the extent that jurisdictions other than the County of Orange do not cooperate in funding or constructing roadway segment and intersection improvements identified for fair share contribution in the ATIP or to the extent that funding sources for the share of improvement costs not funded by the proposed project are unavailable when the improvements are required.

The *Bolsa Chica Report LCP EIR* found that no feasible mitigation measures (in addition to the Project Design Features and Standard Conditions) are available to reduce impacts to levels that are below significant.

E.4 ENVIRONMENTAL CONTAMINATION

The *Bolsa Chica Report LCP EIR* included an evaluation of the potential for hazardous substances contamination in the LCP area based on the findings or previous investigations. Information for Bolsa Chica Mesa was derived primarily from the results of geotechnical soil investigation conducted by Woodward Clyde Consultants in 1987, a follow-up study prepared by the Earth Technology Corporation in 1988, and a Phase I Environmental Assessment conducted by Schaefer Dixon Associates in 1991. Areas of potential concern identified during these investigations include inactive and abandoned oil wells, former military bunkers, a wet gas pipeline, and a dry gas "sales" pipeline. The only known area of contamination on the Mesa is along the wet gas pipeline. Soils containing hydrocarbons were found along the wet gas pipeline. Soil and groundwater contamination attributable to the pipeline as found in nine soil and four groundwater samples. Of the approximately 840 feet of wet gas pipeline traversing the Mesa, 650 lineal feet were contaminated. Remediation of the soil was initiated in 1991. In addition, the Woodward Clyde investigation indicated that some organic vapor analyzer readings below 100 parts per million (ppm) were measured from soil samples collected from Bolsa Chica Mesa. The Earth Technology Corporation study reported that soil samples collected near ongoing oil operations on the Metropolitan Water District (MWD) parcel were reported to contain total petroleum hydrocarbon (TPH) concentrations from 120 to 7,500 ppm. In addition, soil samples had concentrations of DDD, DDE, and DDT up to 133.6 parts per billion.

The LCP includes several measures to avoid impacts resulting from existing contamination, including preparation of a Remedial Action Plan for the clean-up of contamination as the various phases of the LCP are implemented. The LCP also indicates that new homes will be set back at least 50 feet from operating oil wells and at least 10 feet from/above an abandoned oil well casing. The *Bolsa Chica Report LCP EIR* identified the following potentially significant impacts related in hazards and hazardous substances in the LCP area:

- Potential for abandoned oil wells to pose a risk of leakage of subsurface gas.
- Potential that future landowners could disturb abandoned oil wells if they are no aware of their existence.
- Potential safety risk related to leaks and ruptures of the pressurized gas line traversing Bolsa Chica Mesa if this line is relocated beneath homes.
- Potential risk of fire or explosion if the pressurized gas line is relocated across the Newport-Inglewood Fault zone.

To reduce the significance of these potential impacts, the *Bolsa Chica Report LCP EIR* incorporates the following mitigation measures:

- Prior to grading in residential areas, all abandoned oil wells shall be relocated and tested for release of gases. Wells shall be reabandoned as necessary in accordance with current Division of Oil and Gas regulations.

- Department of Real Estate disclosure shall be provided to future landowners concerning the location of any abandoned oil wells or other appurtenances.

- The pressurized gas line shall be relocated so that it is a minimum of 20 feet away from habitable structures.

- The pressurized gas line shall be relocated so that it does not cross the Newport-Inglewood Fault zone in a residential planning area and automatic shut-off valves shall be installed which activate in the event of severe seismic movement.

The *Bolsa Chica Report LCP EIR* concluded that these mitigation measures, combined with project design features and standard conditions, would reduce all impacts to a less-than-significant level.

E.5 GEOLOGY AND SOILS

The geology and soils baseline conditions for Bolsa Chica Mesa are generally the same as described in Section C.5.1.

The Bolsa Chica LCP incorporated various PDFs to reduce potential impacts to existing geologic and soil conditions. In addition, the *Bolsa Chica Report LCP EIR* identifies County Standard Conditions (SCs) that also serve to reduce impacts. Refer to the *Bolsa Chica Report LCP EIR* for a list of the PDFs and SCs that will be implemented during the construction of residential development on Bolsa Chica Mesa.

The *Bolsa Chica Report LCP EIR* identified the following potential impacts relating to existing geological and soil conditions to be significant:

- Dynamic deep compaction (DDC) in the Lowland may affect existing adjacent homes due to noise and vibration which may cause damage to structures

- Potentially active fault splays associated with the North Branch Fault may exist and cause surface rupture in the proposed location of the 9-million-gallon water reservoir. Therefore, such rupture may result in the loss of water for domestic and fire-fighting use.

- Underground utilities constructed within the Alquist-Priolo Act exclusionary zone, especially those traversing it, may be damaged from fault movement or rupture.

To reduce these potentially significant impacts, the *Bolsa Chica Report LCP EIR* identified the following mitigation measures:

- DDC for ground improvement shall be designed by a registered Civil Engineer and Geotechnical Consultant so that vibration level do not damage adjacent structure or provide unacceptable nuisance levels as determined and approved by the County.

- Prior to the implementation of the DDC for ground improvement, the Applicant's geotechnical consultant shall also prepare and present to the County an evaluation of an alternative method of compaction involving the use of a rolling surcharge and dewatering of near-surface soils with well points.

- Prior to issuance of a grading permit for construction of the 9-million-gallon tank by the City of Huntington Beach, or other agency, a geologic investigation shall be performed to determine the suitability of the site.

- To prevent discharge of sewage should the force main from the new sewage lift station be sheared, the following design measures are recommended: (1) a backflow preventer could be installed immediately east of the potential area of breakage, (2) the lift station (wet well) could be oversized to accommodate extra capacity until the broken main can be repaired, and (3) an automatic breaker installed in the pump circuit to shut off the system in the event of severe seismic movement.

- Utilities that are expected to cross the fault could include natural gas for residential use, water, telephone, electrical power, and storm drains. Whenever possible, utility lines should be routed to prevent traversing the fault. If utility lines must traverse the fault, the following safety measures shall be implemented: the natural gas line(s) should have automatic shutoff valves installed which would actuate in the event of severe seismic movement:; the water main(s) should have manual valves located on either side of the fault; telephone and cable services should have junction boxes on opposing sides of the fault which could provide for emergency reconnection during repairs of underground lines. Sanitary sewer lines crossing the fault zone should be constructed of ductile iron pipe.

The *Bolsa Chica Report LCP EIR* concluded that although the subject mitigation measures would help to alleviate these impacts, the two impacts regarding fault rupture and movement are still considered unavoidable and significant.

E.6 HYDROLOGY AND WATER QUALITY

Impacts of the water storage/distribution and wastewater collection facilities at the Bolsa Chica Planned Community site are documented in the *Bolsa Chica Report LCP EIR*. A list of short-term and long-term surface water impacts documented in this EIR is presented below:

Short-Term

- Runoff and erosion to Outer Bolsa Bay and Huntington Harbor during construction – Not significant

- Runoff and erosion to Bolsa Bay during construction – Not significant

- Sediment production on Rabbit Island – Not significant

- Runoff and erosion to seasonal ponds during construction – Not significant

- Hazardous substance spill during construction affecting tidal waters – Not significant.

Long-Term

- Additional drainage from urban development will increase storm flows and potential contaminants – Not significant

- Groundwater extraction from an on-site well could result in significant impacts on water quantity and quality if it causes an overdraft in the Orange County Main Basin, or if it results in a vertical downward head within the Bolsa Aquifer severe enough to cause the downward movement of low quality water into the Bolsa Aquifer – Not significant (assuming compliance with well permit requirements)

The *Bolsa Chica Report LCP EIR* concluded that, "the measures proposed can be feasibly implemented and will reduce the identified impacts to an insignificant level. No potential significant unavoidable adverse impacts will remain."

E.7 CULTURAL RESOURCES

The *Bolsa Chica Report LCP EIR* revealed that 17 archaeological sites have been recorded within the Project Area. All sites are prehistoric, but five also contain historic components that relate to modern use of the site, such as the Bolsa Chica Gun Club, oil and gas exploration, and World War II installations.

The Bolsa Chica LCP incorporated various PDFs to reduce potential impacts to archaeological cultural resources. In addition, the *Bolsa Chica Report LCP EIR* identifies County Standard Conditions (SCs) that also serve to reduce potential impacts to archaeological cultural resources. Refer to the *Bolsa Chica Report LCP EIR* for a list of the PDFs and SCs that will be implemented during the construction of the residential development on Bolsa Chica Mesa.

The *Bolsa Chica Report LCP EIR* identified the following potential impacts relating to existing archaeological cultural resources to be significant:

- Residential development of the Mesa Component of the project will result in the demolition and removal of Battery 128, which is an historical resource as defined by CEQA.

- Wetlands restoration activities may impact three potential Lowland sites, ORA-1308 and 1309 and the extension of ORA-86

- Wetlands restoration activities may impact undocumented sites in the Lowland.

- The development of Bolsa Chica Regional Park in Huntington Beach Mesa and the implementation of the WRP may impact archaeological sites that contain cultural resources of significance to Native Americans.

- Park development activities may impact cultural resources on prehistoric sites located on the Huntington Beach Mesa.

- Park development activities may impact cultural resources on sites located on the Huntington Beach Mesa.

To reduce these potentially significant impacts, the *Bolsa Chica Report LCP EIR* identified the following mitigation measures:

- The Applicant shall comply with the conditions and mitigation measures imposed under the demolition permits issued by the county of Orange and the California Coastal Commission.

- The Applicant shall comply with any conditions and mitigation measures that are developed by any agencies having responsibility or jurisdiction over the project under applicable state and federal law, including any measures that may be identified by the Corps of Engineers resulting from the Section 106 consultation process undertaken as part of the Section 404 permit process.

- Two potential archaeological sites in the Lowland, ORA-1308 and –1309, and the Lowland component of ORA-86, shall be tested by a County-certified archaeologist to determine whether they represent unique or important cultural deposits. If they are determined to be unique or important deposits, the County-certified archaeologist will recommend appropriate data recovery mitigation measures.

- A systematic cultural resources survey of the Lowland shall be carried out by a qualified, County-certified archaeologist to determine if cultural resources are present and, if so, to evaluate their significance. If found to be significant, mitigation measures consisting of preservation in open space or data recovery using a data recovery plan shall be implemented at the expense of the Lowland applicant.

- Areas of the Lowland that have the potential to contain buried archaeological sites shall be monitored by a County-certified archaeologist and should include areas within the Lowland adjacent to the Bolsa Chica Mesa and Huntington Beach Mesa bluffs.

- A Native American monitor shall be present during all grading activity monitored by a County-certified archaeologist.

- Sites on the Huntington Beach Mesa that will be affected by construction of the Bolsa Chica Regional Park shall be tested under a coordinated program that evaluates each site as a whole using the regional research design to assess significance.

- For archaeological sites located in the area of the Linear Regional Park, the County shall consider in situ preservation or the "capping" of these sites to prevent disturbance by placing a layer of soil over the site that protects the site once the site boundaries have been determined through a test excavation.

- The County shall evaluate all historic components of ORA-88 and –365, as well as all other facilities, structures and features more than 45 years old with the County LCP Area.

The *Bolsa Chica Report LCP EIR* concluded that the mitigation measures described above are feasible and will reduce the potentially significant impacts to levels of insignificance.

E.8 BIOLOGICAL RESOURCES

The *Bolsa Chica Report LCP EIR* evaluated impacts to biological resources associated with implementation of the LCP, including the effects of residential development on Bolsa Chica Mesa. The following information on biological resources is summarized from the *Bolsa Chica Report LCP EIR*.

Although the mesa's edge is a barrier to most tidal influences, the proposed residential development on Bolsa Chica Mesa would be bordered to the east by the Wintersburg Flood Control Channel (EGGW) that feeds into the tidal systems, to the south by Outer Bolsa Bay, and to the west by Huntington Harbour. Warner Avenue pond is the only aquatic habitat (jurisdictional waters) present on the Mesa. The pond is 1.7 acres of open water and limited pickleweed habitat and is designated as an Ecologically Significant Habitat Area (ESHA) by California Department of Fish and Game (CDFG). The pond receives some seawater flow through a culvert to Huntington Harbour under Warner Avenue and freshwater from runoff from Bolsa Chica Mesa. The water tends to be hypersaline (very salty) in the summer and brackish (somewhat salty) in the winter. The pond does contain some aquatic invertebrates that can tolerate the salinity and is populated by Egyptian mouthbrooders (*Tilapia mossambia*) that are a non-native, opportunistic fish species.

The Mesa is currently dominated by non-native ruderal (invasive, weedy) vegetation. There are scattered patches of coastal bluff scrub and a grove of eucalyptus trees along the western boundary of the Mesa. The coastal bluff scrub is not expanding into the grasslands and is suppressed by the overstory of eucalyptus trees. The eucalyptus trees were planted by employees of the Bolsa Chica Gun Club around the turn of the century and contain trees that could be considered specimen trees. The grove is in decline as a result of mature trees die-off and poor recruitment due to increasing soil salinities. Since 1960 the size of the grove has fallen from 17.7 acres to about five acres. A population of southern tarplant (*Hemizonia australis*), which possibly represents a substantial portion of the population in Orange County, would be removed during construction. This plant has no federal status, but is considered eligible for listing by CDFG.

Monarchs (*Daneus plexippus*) have been observed in the eucalyptus grove, but there is no roosting tree present. Amphibian diversity is limited by the lack of freshwater, riparian, or woodland habitats. However, Western toads (*Bufo boreas*) were observed using the eucalyptus grove on the Mesa. The most conspicuous reptiles on-site are the side-blotched lizard (*Uta stansburiana*) and western fence lizard (*Sceloporus occidentalis*) that typically utilize disturbed sites. A variety of mammals exist on-site including smaller rodents (such as western harvest mouse [*Reithrodontomys megalotis*]), ground-dwelling mammals (such as valley pocket gopher [*Thomomys bottae*]), and meso-predators (red fox [*Vulpes fulva*]) that are preyed upon by predators such as coyotes (*Canis latrans*). The urban interface permits domestic cats and dogs to be plentiful in the area.

Birds of the area change with the daily tidal cycle and with the seasonal migration periods. The greatest abundance of birds is typically between December and March. The nesting season for the area usually begins in mid-April and continues through July. Because of the proximity of urban environments, the

Mesa is more likely to have urban adapted species such as California quail (*Callipepla califronica*) and mourning dove (*Zenaida macroura*). The eucalyptus trees provide roosting and nesting sites for raptors, including an unusually high density of red-tailed hawks (*Buteo jamaicensis*). Ground nesting raptors, such as the short-eared owl (*Asio flammeus*), and song-birds such as northern oriole (*Icterus galbula*) also occur in the grove-grassland interface. Because there are no other documented areas within the region that support such a high number of wintering red-tailed hawks, the eucalyptus grove is considered a unique resource and was designated an ESHA in 1985 by CDFG. Another unique habitat for birds on-site is Warner Avenue Pond that attracts shallow water feeder birds such as mallards (*Anas platyrhynchos*), gulls (*Larus* spp.), and egrets (*Egretta* spp.).

During construction of the urban development, sediment runoff during the earthmoving activities may subject the aquatic communities in Outer Bolsa Bay and Huntington Harbour to increased turbidity in the short-term. To reduce this potentially significant impact, the *Bolsa Chica Report LCP EIR* specified that the Applicant prepare a Stormwater Pollution Prevention Plan (SWPPP) with specific management measures and erosion control practices for tidal water bodies. The EIR found the implementation of this measure would effectively eliminate the short-term sediment impacts to a level of insignificance.

The loss of the Bolsa Chica Mesa southern tarplant population in the project area could affect the status of this species that is currently on a watch list by the California Native Plant Society. Because population figures for the species in the region as a whole are not available, the loss is considered potentially significant. By following the required mitigation of successful revegetation of the species (Mitigation Measure PDF-6) in the project area, the potential impacts are not considered significant.

Development of the Bolsa Chica Mesa will result in the removal of upland habitat that is rare along the coast of southern California. This loss of this habitat will be a significant direct impact to terrestrial vertebrates such as reptiles and mammals that move between the uplands and lowlands to feed. The amount of disturbance on site, coupled with the isolation of the site from outlying natural habitats reduces the ecological value of the area to terrestrial wildlife and therefore the overall impact is not considered to be significant by the *Bolsa Chica Report LCP EIR*.

The loss of the non-native grassland is not a significant loss to birds. The planting of native areas on the slope face of the Huntington Beach Mesa, adjacent to or part of the Bolsa Chica Regional Park, as a replacement to the loss of the grassland, will benefit many species of birds. Since the release of the *Bolsa Chica Report LCP EIR*, the protection of the eucalyptus grove has been stipulated as part of the project design because of its unique ecological significance to the region. The protection of this site reduces all direct impacts to birds to less than significant.

Long-term indirect impacts could occur as a result of the urban development. There will be an increase presence of domestic cats that have the potential for adverse impacts on the bird populations in the wetlands. By requiring the applicant create barriers and support a public education program (Mitigation Measure PDF-7), the impact would not reach a level of significance. The reduction in upland habitat may lead to a decrease in the coyote population that is controlling the red fox population. The loss of

the coyote then indirectly, and speculatively, increase the predation upon sensitive birds. The *Bolsa Chica Report LCP EIR* proposes to monitor the coyote in the area with the consultation with USFWS and CDFG.

Construction on the mesa may eliminate some foraging ground for birds of prey such as hawks, kestrels and owls. A potentially significant but mitigable impact could result if raptors then begin to prey on nesting birds in the nearby wetland. The *Bolsa Chica Report LCP EIR* proposes a commitment by the Applicant to consult with CDFG and USFWS and prepare a relocation program for problematic raptors reduces this potential impact (Chambers, 1996).

E.9 LAND USE AND RECREATION

The *Bolsa Chica Report LCP EIR* provided a detailed description of existing land use on Bolsa Chica Mesa. This is summarized below. Readers should note that since the *Bolsa Chica Report LCP EIR* was recirculated in 1996, some land uses have changed.

The Bolsa Chica Mesa, which is an upland area of mostly non-native grasses has been subjected to intensive use. Agriculture has long been an important use in the area, although it is no longer used for this purpose. The Mesa has also been used for defense purposes; remnants of an abandoned World War II coastal defense system remains and consists of bunkers, gun emplacement pads, and a water storage container. The area was also extensively used for oil exploration and extraction and eleven abandoned well sites as well as oil lines are located on the Mesa.

The area is today is open space. There is a 6.2-acre parcel of land in the northeast of the Mesa that is used by the Woodman Pole Company. Adjacent to this site, a small residential area incorporating 16 residential units is currently is under development. This development is distinct; it does not relate to and is not integrated with the Bolsa Chica Planned Community.

The *Bolsa Chica Report LCP EIR* reported that the Mesa was frequently visited by individuals and organized groups for environmental education, bird-watching and other passive recreational uses. While this undoubtedly remains true for other areas of open space adjacent to the Mesa, the proposed development site for Bolsa Chica Planned Community is currently fenced and access is therefore restricted.

The land uses to the north and east of the Bolsa Chica LCP Area are primarily residential neighborhoods. The land use densities of adjacent areas are described below.

- *Warner Avenue*. Between Los Patos Avenue and the Pacific Coast Highway consists of community commercial uses and medium- and high-density multi-family residences.

- *Los Patos Avenue*. The residential neighborhood to the north of the Bolsa Chica Mesa consists of low density, single-family homes at a density of approximately 5.4 du/ac. Approximately 1/8 mile north of the project area are medium- and high-density apartments.

- *Bolsa Chica Street and Greenleaf Lane*. This residential area consists of high-density condominiums.

The developments proposed for the Mesa are generally consistent with the County of Orange General Plan, although the Land Use Element requires amendment to accommodate the project as proposed. Official County zoning designations for the area of the Proposed Project are Agricultural (A1) with overlay districts of Oil Production (O), Flood Plain-2 (FP-2), Special Studies-Geology (SS-G) and Sign Restrictions (SR). The *Bolsa Chica Report LCP EIR* therefore notes that zoning amendments are required to implement the Proposed Project.

The *Bolsa Chica Report LCP EIR* reported that there were no short-term and no long-term significant environmental impacts to land use and planning on the Mesa. Similarly it found there are no significant environmental impacts to recreational resources resulting from development on the Mesa.

E.10 PUBLIC SERVICES AND UTILITIES

The *Bolsa Chica Report LCP EIR* identified the following agencies and companies that provide public services and utilities within the Proposed Project area:

- Law enforcement – Orange County Sheriff-Coroner Department

- Fire protection/emergency medical - Orange County Fire Department

- Water – the site is located in the service areas of the Orange County Water District and the Municipal Water District

- Wastewater – the project site is not currently located within the jurisdictional boundaries of a local wastewater management agency

- Solid Waste – Collected by Rainbow Disposal, and taken to the Frank R. Bowerman Landfill in the City of Irvine

- Electricity – Southern California Edison

- Natural Gas – Southern California Gas Company

- Telephone – General Telephone Company

- Schools – Ocean View, Huntington Beach City, and Huntington Beach Union High School Districts

- Libraries – Orange County and Huntington Beach Libraries.

The *Bolsa Chica Report LCP EIR* identifies Standard Conditions (SC) that serve to reduce impacts to public services and utilities. Refer to the *Bolsa Chica Report LCP EIR* for a list of the SCs that will be implemented during the construction of residential development on Bolsa Chica Mesa.

For development on the mesa to proceed, utility infrastructure would need to be constructed to serve the proposed residential units. Includes wastewater collection systems, water distribution systems, drainage improvements, electrical distribution systems, natural gas lines, and communication lines. Preliminary plans for the provision for water distribution and wastewater collection services were presented in the 1996 *Bolsa Chica Report LCP EIR*. The *Bolsa Chica Report LCP EIR* also described the increase demand on public services to serve the proposed residential development at the Bolsa Chica Mesa. The *Bolsa Chica Report LCP EIR* found the following potential impacts to public services and utilities to be significant:

- The Proposed Project will result in the need for additional Sheriff services to the project site.
- The Proposed Project will result in emergencies that are beyond the current response capabilities of the Orange County Fire Department.
- The Proposed Project will create potential additional demand on the Ocean View and Huntington Beach City School District facilities that are currently at or near capacity.

To reduce these potentially significant impacts to a level of insignificance, the *Bolsa Chica Report LCP EIR* identified the following mitigation measures:

- The Applicant shall be required to enter into a secured agreement with County to provide Sheriff law enforcement services such as facilities, equipment, or other infrastructure necessary for adequate law enforcement services to the Proposed Project.
- The Applicant shall be required to enter into a secured fire protection agreement with the County or its successor fire protection agency. The agreement shall include the following
    - Provision for dedication of an adequate site within the project area for construction of a fully equipped and furnished fire station, subject to the approval of the Orange County Fire Department or successor agency
    - Provisions for funding of land acquisition, construction, equipping and furnishing the new fire station and adequate fire access, water distribution, and other supporting infrastructure by the Applicant
    - Provisions for commencement of fire station operation in accordance with development phasing.

The EIR found that with implementation of these mitigation measures, in addition to the County's SCs, no significant unavoidable adverse impacts to public services or utilities would occur.