

CITY of LAGUNA WOODS



FINAL ENVIRONMENTAL IMPACT REPORT

STATE CLEARING HOUSE NO. 2002031008

LAGUNA WOODS GENERAL PLAN

prepared by:

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1.0 INTRODUCTION

As required by the California Environmental Quality Act (CEQA), Public Resources Code Section 21080 (a), this Environmental Impact Report (EIR) has been prepared by the City of Laguna Woods, the lead agency. The EIR will inform decision makers and the general public about potential environmental impacts associated with adoption of the Laguna Woods General Plan. The Environmental Impact Report identifies possible means of mitigating significant impacts. Reasonable alternatives to the project are described and their potential impacts are compared with those associated with the General Plan proposed for adoption.

The Environmental Impact Report is a Program EIR as it anticipates future actions within the geographic boundaries of the City of Laguna Woods to implement policies and programs identified in the Laguna Woods General Plan. These will include revision of the City's Zoning Ordinance and adoption of municipal capital improvement programs. A Program EIR is used to satisfy CEQA requirements in conjunction with subsequent actions to implement the General Plan including preparing and adopting the revised Zoning Ordinance. The Zoning Ordinance will be revised to maintain consistency with the General Plan, and will be a primary means to implement the General Plan.

The Laguna Woods General Plan will be the principal policy document guiding the physical development of the City. California Government Code Section 65300 et. seq. requires preparation and adoption of a General Plan, and identifies subjects which must be addressed and minimum content requirements. The Laguna Woods General Plan includes a comprehensive revision of all seven State-mandated elements and, upon adoption, will replace the Interim General Plan adopted in January 2001 after the City's incorporation.

The City Council of the City of Laguna Woods has the authority to reject, modify, or adopt the General Plan. Prior to taking action on the General Plan, the City Council will consider information in the Program Environmental Impact Report as part of the decision making process. Information included in the

Environmental Impact Report, however, does not limit the City's discretion to reject, modify, or adopt the General Plan.

The EIR was prepared pursuant to *Guidelines for the Implementation of the California Environmental Quality Act of 1970* (Guidelines), Sections 15000-15387 of the California Code of Regulations. An EIR must be prepared for any project that may have a significant impact on the environment. As defined in Section 15060 (c), the Laguna Woods General Plan 2015 has been determined to be a project under CEQA. Initial review by the City indicated the project may have a significant adverse impact on the environment, thus requiring preparation of the Environmental Impact Report.

2.0 EXECUTIVE SUMMARY

2.1 PROJECT OVERVIEW

The project, which is the subject of this Environmental Impact Report, is the General Plan for the City of Laguna Woods. The General Plan is the blueprint for future physical development of the City and guides decisions about the built environment and those municipal matters that both affect and are affected by this environment. The City's Zoning and Subdivision Ordinances are formulated to effect development of the physical environment consistent with the General Plan. The Zoning and Subdivision Ordinances and the City's capital improvement plan are the primary vehicles for implementing the General Plan. Amendment of the Zoning Ordinance consistent with changes proposed to the General Plan is anticipated.

The General Plan includes an inventory of existing conditions in each of the seven topical areas (Elements) mandated for inclusion by State law: Land Use Element; Housing Element; Circulation Element; Open Space Element; Conservation Element; Safety Element; Noise Element. Future physical development of the City and supporting municipal programs and services are directed and facilitated by Objectives, Policies, and Implementation Measures in each of the General Plan Elements.

The Land Use Plan of the General Plan indicates the future distribution and locations of various land uses including "Open Space," "Commercial," "Low-Density Residential," "Medium Density Residential," and "High-Density Residential" that will be achieved through adoption and implementation of the General Plan. Potential environmental effects associated with adoption and implementation of the General Plan will result principally from changes in land use designations that will accommodate additional physical development in Laguna Woods.

The Land Use Plan of the General Plan will change the land use designations of approximately seventy-one (71) acres from “Open Space” and accommodate future development of these sites: forty-five (45) acres would be redesignated as “Commercial,” twenty-three (23) acres as “Medium Density Residential,” and three (3) acres as “High Density Residential.” An additional two (2) acres of undeveloped land previously designated as commercial retain that designation. A maximum of 414 new dwelling units and approximately 494,000 square feet of additional commercial building area could be constructed consistent with the Land Use Plan of the Laguna Woods General Plan.

The Environmental Impact Report will inform the public, affected agencies, and the Laguna Woods City Council of potential environmental impacts associated with adoption and implementation of the Laguna Woods General Plan. Through review of the EIR, the Laguna Woods City Council can evaluate the General Plan and Alternatives presented herein to make an informed decision in selecting among General Plan options. The General Plan will be adopted by resolution of the City Council of Laguna Woods.

2.2 POTENTIAL IMPACTS FOUND TO BE NOT SIGNIFICANT

A preliminary review of potential impacts associated with adoption of the Laguna Woods General Plan was completed prior to preparation of the Environmental Impact Report. The results of this review are included in an Initial Study (Appendix A). Based on information in the Initial Study, it was determined that an Environmental Impact Report was required to assess those impacts indicated as “potentially significant.”

The Initial Study also identifies and assesses other potential impacts determined to be “less than significant” or of “no impact.” Such impacts are found to be not significant and are not included for further evaluation in the Environmental Impact Report.

2.3 SIGNIFICANT ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table 2.0-1 summarizes the potential environmental impacts associated with adoption and implementation of the project General Plan, recommended mitigation measures for impacts, and the level of significance of impacts after mitigation. The body of the EIR provides discussion of these impacts and mitigation measures. Other potential impacts which after evaluation were determined to be less than significant without mitigation, or which were determined to be beneficial, are also identified in the body of this EIR.

Table 2.0- 1: Summary of Impacts and Mitigation Measures

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
<i>LAND USE AND PLANNING</i>		
Potential inconsistency with Southern California Association of Governments Regional Comprehensive Plan & Guide.	LU-1 Consistency is achieved through Mitigation Measure CR-1 included in Section 4.1.5, <i>Mitigation Measures</i> , <u>Archaeological Resources</u> , herein.	Less Than Significant
Conflicts with the County of Orange Airport Environs Land Use Plan.	LU-2 Amendment of the Airport Environs Land Use Plan (AELUP) by the County of Orange Airport Land Use Commission so as to delete the former Marine Corps Air Station – El Toro from the planning area of the Airport Environs Land Use Plan for Orange County.	Significant Unavoidable Impact
Potential view impacts.	LU-3 Revise the Zoning Ordinance to include discretionary project approval consideration of impacts to views.	Less Than Significant

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Potential incompatibility of future development projects with existing development.	LU-4 Revise the Zoning Ordinance to include consideration of compatibility of building scale, bulk, and height as part of the discretionary development project approval process.	Less Than Significant
<i>GEOLOGY</i>		
Expose people to seismic ground failure including liquefaction	<p>GS-1 The City shall require developers to prepare detailed foundation investigations for potentially unstable ground areas so that structures that are built are not subject to ground movement effects such as liquefaction.</p> <p>GS-2 The City shall continue to incorporate the most recent seismic safety practices into City codes and project review processes.</p>	Less Than Significant
<i>HYDROLOGY AND WATER</i>		
Surface Water Increase surface run-off and exceed existing storm drain capacity	HD-1 The City of Laguna Woods shall require preparation of a master drainage plan to accommodate run-off associated with a 100-year	Less Than Significant

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<p>storm prior to approval of a development project on any potential development site indicated in the General Plan Land Use Element.</p> <p>HD-2 Application for discretionary project approval on potential development sites shown in the Land Use Element must be accompanied by appropriate hydrology study indicating means by which stormwater run-off will be handled consistent with local, state and federal laws.</p>	
<p>Water Quality</p> <p>Violate a water quality standard</p>	<p>HD-3 Storm water drainage facilities will be constructed and/or appropriate development impact fees paid to ensure adequate facilities will exist to meet the surface water runoff generated by new development.</p> <p>HD-4 During the construction and operation of new development, the City Laguna Woods will require the implementation of best management practices to minimize pollutant runoff. This will</p>	<p>Less Than Significant</p> <p>Less Than Significant</p>

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<p>include, where applicable, the preparation of Storm Water Pollution Prevention Programs (SWPPPs) to control runoff from construction sites.</p> <p>HD-5 The City will require water quality management plans for new long-term activities to control urban constituents entering the existing storm drain system.</p>	Less Than Significant
<i>AIR QUALITY</i>		
Increase in daily emissions that exceed thresholds established for criteria pollutants	<p>AQ-1 The City shall prepare a “Development Project Review Procedure Manual” which will include development project level impact measures as follows:</p> <ul style="list-style-type: none"> ❑ Prior to issuance of a building permit for any development project, the City will promote incorporation of site design features that encourage use of alternative forms of energy and modes of transportation as suggested by the current Air Quality Management Plan. 	Significant Unavoidable

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<ul style="list-style-type: none"> ❑ Prior to approval of any development project, the City of Laguna Woods will require that project designs include plant materials and other landscape features to promote cooling during hot periods and prevent wind chill during the cool season. ❑ Prior to issuance of building permits, project plans will ensure that building design and construction materials reflect State Title 24 energy conservation requirements, and current energy efficiency design to the maximum extent feasible. ❑ The following measures will be implemented for all development projects to reduce emissions during the construction phase: <ul style="list-style-type: none"> ▪ Develop a construction traffic management program that includes, but is not limited to, rerouting construction-related traffic off congested streets, consolidating truck 	

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<p>deliveries, and providing temporary dedicated turn lanes for movement of construction traffic to and from the site;</p> <ul style="list-style-type: none"> ▪ Sweep streets at the end of the day if visible soil material is carried onto adjacent paved public roads; ▪ Wash off trucks and other equipment leaving the site; ▪ Replace ground cover in disturbed areas immediately after construction; ▪ Keep disturbed/loose soil moist at all times; ▪ Suspend grading activities when wind speeds exceed 25 miles per hour; ▪ Enforce a 15 miles per hour speed limit on unpaved portions of the construction site. 	
<i>TRANSPORTATION/TRAFFIC</i>	<i>TRANSPORTATION/TRAFFIC</i>	<i>TRANSPORTATION/TRAFFIC</i>

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Increase in traffic that is substantial in relation to existing capacity of street system (Moulton Parkway).	None feasible.	Significant Unavoidable
Exceed the level of service standard for segments roadways or the Master Plan of Arterial Highways (Moulton Parkway)	None feasible.	Significant Unavoidable
BIOLOGY		
Impacts to endangered, threatened or rare species Impacts to wetland habitat	BR-1 The City shall prepare a “Development Project Review Procedure Manual” which will include the following conditions: <input type="checkbox"/> Prior to the commencement of tree removal during the nesting season (February-July), all suitable habitats should be thoroughly surveyed for the presence of nesting birds by a qualified biologist. If any active nests are detected, the area should be flagged and avoided until the nesting cycle is complete. Tree removal and grading could be delayed	Less Than Significant

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<p>until after the breeding season (August–January).</p> <ul style="list-style-type: none"> ❑ Proposed development in the riparian corridors should be restricted and permitted only after a site investigation has assessed potential disturbance to plant and animal resources. Building and road construction will be planned to minimize disturbance to plants and animals by site planning and noise, dust and soil erosion control practices. The USACE and CDFG should be consulted with respect to any project containing jurisdictional areas. ❑ In connection with notification to the USACE under Section 404 of the Clean Water Act, pursuant to 33 CFR Part 330, Appendix A, a written request for Section 401 water quality certification must be submitted to the Regional Water Quality Control Board (RWQCB) to ensure that no degradation of water quality will result from project implementation. RWQCB 	

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<p>certification must be issued prior to commencement of any activity that might affect quality (i.e., project grading). RWQCB processing of a certification request generally takes 45-60 days. The project proponent is also required to submit a Stormwater Pollution Prevention Plan (SWPPP) to the RWQCB prior to site grading.</p> <p>❑ A CDFG Section 1603 agreement would be required prior to any alteration of a streambed or riparian habitat within CDFG jurisdiction. The 1603 permit will be obtained utilizing the project's approved Environmental Impact Report. To ensure rapid and favorable action on a 1603 notification, mitigation measures (e.g., minimization of disturbance to existing onsite riparian habitat and enhancement and creation of riparian habitat with the project site) should be submitted with the notification package.</p>	

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
<i>Noise</i>		
<p>Exceed applicable noise standards</p> <p>Exposure of persons to, or generation of noise levels in excess of applicable standards.</p> <p>Result in a permanent increase in noise above levels anticipated without the project</p> <p>Temporary or periodic increase in ambient noise levels anticipated without the project</p>	<p>N-1</p> <p>The City shall include conditions in permit processing to ensure that project approvals will have appropriate noise levels. The conditions will be adopted in the “Development Project Review Procedures Manual” and shall include:</p> <ul style="list-style-type: none"> ❑ For purposes of characterizing the noise environment, prior to the issuance of building permits, the applicant shall submit a final acoustical report consistent with requirements of Title 24 of the California Code of Regulations and the Uniform Building Code. ❑ For purposes of mitigating noise impacts during the development project construction phase, prior to issuance of grading permits, the project applicant shall incorporate the requirements of the City’s Noise Ordinance as a note on the grading plan cover sheet, for review and approval by the Director of Community Development. ❑ For purposes of mitigating noise impacts 	<p>Less Than Significant</p>

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<p>during the development project construction phase, prior to issuance of building permits, the project applicant shall incorporate the following measures as a note on the grading plan cover sheet:</p> <ul style="list-style-type: none"> ▪ Construction equipment, fixed or mobile, shall be maintained in proper operating condition with approved noise mufflers; ▪ Construction staging areas shall be located away from off-site receptors and occupied buildings on site during the later phases of project development; ▪ Stationary equipment shall be placed such that emitted noise is directed away from residential areas to the greatest extent feasible; ▪ Construction access routes shall be selected to minimize truck traffic near existing residential uses where reasonably feasible. <p>□ For purposes of development project</p>	

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<p>implementation, all development project residential lots and dwellings shall be sound attenuated against present and project noise, so as to comply with exterior and interior noise standards. Evidence prepared under the supervision of a City-approved acoustical consultant that these standards will be satisfied in a manner consistent with Title 24 of the California Code of Regulations and the Uniform Building Code shall be submitted as follows:</p> <ul style="list-style-type: none">▪ The final acoustical report shall describe in detail the exterior noise environment and preliminary mitigation measures necessary to achieve noise standards. The report shall also describe the acoustical design features of the structures required to satisfy the exterior and interior noise standards along with satisfactory evidence, which indicates that the sound attenuation measures specified in the preliminary acoustical	

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<p>report, have been incorporated into the design of the project.</p> <ul style="list-style-type: none"> ▪ Prior to the issuance of building permits, all freestanding acoustical barriers must be shown on the project plot plan illustrating height, location and construction in a manner approved by the approval of the Director of Community Development. 	
<i>PUBLIC SERVICES AND UTILITIES</i>		
<p>Schools</p> <p>Increase the number of students to require new facilities</p>	<p>PS-1 Prior to the approval of a tentative tract map or site plan, the applicant shall enter into an agreement satisfactory to the Saddleback Valley Unified School District which provides full mitigation of the impact of this project and the addition of K-12 students on existing schools. Such an agreement must address the method and timing of fees including, but not limited to, Developer Fee Agreements and/or Community Facility District (Mello Roos) implementation which include both commercial and residential</p>	<p>Less Than Significant</p>

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	development.	
<i>UTILITIES AND SERVICE SYSTEMS</i>		
Storm Water Requires expansion of storm water drainage facilities	<p>US-1 The City of Laguna Woods shall require preparation of a master drainage plan to accommodate run-off associated with a 100-year storm prior to approval of a development project on any potential development site indicated in the General Plan Land Use Element.</p> <p>US-2 Application for discretionary project approval on potential development sites shown in the Land Use Element must be accompanied by appropriate hydrology study indicating means by which stormwater run-off will be handled consistent with local, state and federal laws.</p> <p>US-3 Storm water drainage facilities will be constructed and/or appropriate development impact fees paid to ensure adequate facilities will exist to meet the surface water runoff generated by new development.</p>	Less Than Significant

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<p>US-4 During the construction and operation of new development, the City Laguna Woods will require the implementation of best management practices to minimize pollutant runoff. This will include, where applicable, the preparation of Storm Water Pollution Prevention Programs (SWPPPs) to control runoff from construction sites.</p> <p>US-5 The City will require water quality management plans for new long-term activities to control urban constituents entering the existing storm drain system.</p> <p>HD-6 The City shall prepare a “Development Project Review Procedure Manual” which will include development project level impact measures as follows:</p> <ul style="list-style-type: none"> ❑ Avoid or limit disturbance to natural water bodies and drainage systems and provide adequate buffers of native vegetation along drainage systems to lessen erosion and protect water quality standards; 	

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<ul style="list-style-type: none"> <li>❑ Drainages should be left in a natural condition or modified in a way that preserves all existing water quality standards; any discharges or sediment or other wastes, including wastewater, to the waters of the U.S. or waters of the State of California must be avoided to the maximum extent practicable; all such discharges require a National Pollutant Discharge Elimination System (NPDES) permit issued by the Regional Water Quality Control Board (RWQCB); <li>❑ Impacts to waters of the U.S. should be avoided, but where not practicable, should be minimized; mitigations must replace, at a minimum, the full function and value of the impacted waterbody; impacts to waters of the U.S. require a Section 401 Water Quality Standards Certification from the RWQCB, a Clean Water Act Section 404 permit from the U.S Army Corps of Engineers (USACE) and a Streambed 	

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<p>Alteration Agreement from the California Department of Fish and Game (CDFG);</p> <ul style="list-style-type: none"> ❑ Use of pervious materials to retain absorption and allow more percolation of stormwater is encouraged including the use of grass in swales and permeable/porous pavement for runoff channels and parking areas; avoid lining runoff channels with impermeable surfaces i.e. concrete, grouted rip-rap; ❑ Construction of detention basins or holding ponds and/or constructed wetlands within a project site to capture and treat dry weather urban runoff is encouraged and should be designed to detain runoff for a minimum time e.g. 24 hours to allow particles and associated pollutants to settle and to provide for natural treatment; ❑ Retain areas of open space to aid in the recharge and retention of runoff; native plant materials should be used in replanting and hydroseeding operations; 	

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<ul style="list-style-type: none"> ❑ Post-development stormwater runoff flow rates (Q) should not differ from pre-development Q; ❑ Projects in areas tributary to San Diego Creek, Upper Newport Bay Ecological Preserve, and the Lower Newport Bay will be subject to Total Maximum Daily Loads pursuant to State and federal regulations and could include discharge prohibitions, revisions to discharge permits, or management plans to address water quality impacts; environmental documents for such projects need to acknowledge that these additional requirements may be imposed in the future; ❑ Projects should be designed and implemented to protect, and if possible, improve the quality of underlying groundwater, and encourage groundwater recharge whenever possible; 	
<i>CULTURAL RESOURCES</i>		

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
<p>Archaeological Resources</p> <p>Create a substantial adverse change to an archaeological resource.</p>	<p>CR-1 The City shall prepare a “Development Project Review Procedure Manual” which will include the following conditions:</p> <ul style="list-style-type: none"> ❑ A Phase I archaeologic field assessment should be performed prior to any earth-disturbing activities if a proposed construction site (a) has not been surveyed within the last 10 years, (b) has a recorded prehistoric site on it or in its vicinity, or (c) if a potentially historic site is on or adjacent to the property. Excluded are heavily disturbed areas and grounds obscured by water or pavement. If a recorded prehistoric site is located on the property, it should be re-evaluated. A technical report following format and content guidelines proposed by the State Office of Historic Preservation (SHPO) must be completed. This report shall include a discussion of the sites’ significance (depth, nature, condition, and extent of the resources), final mitigation 	<p>Less Than Significant</p>

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<p>recommendations, and cost estimates. Excavated finds shall be offered to the City of Laguna Woods, or designee, on a first refusal basis. The City or designee may retain said finds if written assurance is provided that they will be properly preserved in Orange County, or in accordance with County guidelines, said finds shall be prepared to the point of identification by a qualified archaeologist for deposit in the County repository. The land owner may be required to pay potential curation fees to the County or other suitable repository for the long-term curation and maintenance of donated collections. Final mitigation shall be carried out based upon the report recommendations and a determination as to the sites' disposition by the City. Possible determinations include, but are not limited to, preservation, salvage, partial salvage, or no mitigation necessary.</p> <p>□ If buried cultural materials are exposed</p>	

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<p>during construction, work must be halted in and near the find until a qualified archaeologist can assess its significance.</p> <ul style="list-style-type: none"> ❑ If prehistoric artifacts and/or features are exposed, the archaeologist will remove the cultural remains in a timely and professional manner in accordance with CEQA Section 15064.5-f and PRC Section 21082. ❑ In the unlikely event that human remains are unearthed during construction, and in compliance with California State Health and Safety Code Section 7050.5 and CEQA Section 15064.5-e, the Orange County Coroner must be contacted within 24 hours of the discovery. No further disturbance shall occur until the coroner has made the necessary findings as to origin and disposition pursuant to CEQA Appendix K and Public Resources Code Section 5097.98. ❑ The archaeologist will submit a report of all archaeologic discoveries on the site for review and approval by the City of Laguna 	Less Than Significant

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
<p>Paleontological Resources Create a substantial adverse change to paleontological resources.</p>	<p>Woods, which shall include the period of site inspection, a catalog and analysis of recorded features, and repository of the collection.</p> <p>CR-2 The City shall prepare a “Development Project Review Procedure Manual” which will include the following conditions:</p> <ul style="list-style-type: none"> ❑ Prior to the issuance of grading permits for any future construction project, the landowner or designee shall provide written evidence to the City of Laguna Woods that a certified paleontologist has been retained to oversee paleontologic monitoring of excavations and to salvage and document fossils as necessary. The paleontologist shall be present at the pregrading conference, and shall establish, in cooperation with the project developer, procedures for temporarily halting or redirecting work to permit the evaluation and, if necessary, salvage of resources encountered. 	

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<ul style="list-style-type: none"> ❑ Upon discovering a major paleontologic resource that requires long-term halting or redirecting of grading, the paleontologist will report the find to the City or designee. The paleontologist shall determine appropriate actions, in cooperation with the City or designee to ensure proper assessment of the find and/or its salvage. ❑ Excavated finds will be offered to the City, or designee, on a first-refusal basis. The City or designee may retain said finds if written assurance is provided that they will be preserved in Orange County, or in accordance with County guidelines, said finds shall be prepared to the point of identification by a qualified paleontologist for deposit in the County repository. The land owner may be required to pay potential curation fees to the County or other suitable repository for the long-term curation and maintenance of donated collections. Final mitigation shall be carried out based upon 	

SIGNIFICANT IMPACT	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	<p>the report recommendations and a determination as to the sites' disposition by the City. Possible determinations include, but are not limited to, preservation, salvage, partial salvage, or no mitigation necessary.</p> <ul style="list-style-type: none">❑ Otherwise, and in accordance with County guidelines, said finds will be deposited in the County repository. Final mitigation and disposition of the resources will be subject to the approval of the City.❑ The paleontologist will submit a report for review and approval by the City, which shall include the period of site inspection, a catalog and analysis of recorded fossils, and repository of the collection.	

2.4 MITIGATION MONITORING AND REPORTING

Section 21081.6 of the California Public Resources Codes requires preparation of a mitigation monitoring and reporting program in conjunction with certification of an EIR. Preparation and implementation of the mitigation monitoring and reporting program will ensure that measures included in the EIR, or incorporated in the project, to minimize or avoid significant environmental impacts are carried out. The program will identify each mitigation measure, the reason the measure is required, identify the party responsible for carrying out the measure, and indicate when each measure is to be implemented. The mitigation monitoring and reporting program will be included for adoption by the City of Laguna Woods at the time the final EIR is presented for certification.

2.5 SIGNIFICANT, UNAVOIDABLE ENVIRONMENTAL IMPACTS

Adoption and implementation of the Laguna Woods General Plan would result in the following impacts that cannot be avoided: **Land Use/Planning**

A conflict between the project General Plan and the County of Orange Airport Land Use Plan (Section 4.1.4);

Air Quality

An increase in daily airborne emissions that exceeds thresholds for established for criteria pollutants in the South Coast Air Basin (Section 4.4.4);

Transportation/Circulation

An increase in traffic on Moulton Parkway which is substantial in relation to the existing traffic load and capacity of Moulton Parkway (Section 4.5.6); An increase in traffic on Moulton Parkway resulting in Level of Service of “F” falling below the minimum Level of Service “E” in the County of Orange Congestion Management Plan (Section 4.5.6).

2.6 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Adoption and implementation of the Laguna Woods General Plan will facilitate conversion of up to 71 acres of land currently undeveloped or underdeveloped, land designated for open space use to developed, urban land uses. Redesignation from “Open Space” and subsequent development for residential and/or commercial use will likely commit these sites irretrievably for uses other than open space.

2.7 GROWTH INDUCING IMPACTS

Adoption of the Laguna Woods General Plan will not result in significant growth-inducing impacts. Land designated in the General Plan for future development is located near the geographic center of the City among properties already developed for urban uses. The General Plan does not anticipate or accommodate extension of backbone infrastructure such as roadways and water and sewer mains beyond this existing urbanized service area.

Approximately 1,400 permanent employment opportunities may accompany new commercial land uses facilitated by the General Plan (see *Population and Housing*, Section 4.1). The General Plan also anticipates construction of up to 414 new dwelling units.

One measure of balance among residential and jobs-generating commercial land uses in a community is the jobs-housing ratio. A jobs-housing ratio of 0.13 indicates that Laguna Woods is “housing rich” i.e. there are 13 jobs for each 100 dwelling units in the City. This contrasts with a target jobs-housing ratio of the Southern California Association of Governments of 1.0 to 1.29 jobs per dwelling unit. Development consistent with the General Plan is expected to result in improvement of the jobs-housing ratio from 0.13 to 0.20 upon build-out of the City. Accordingly, jobs creation under these circumstances is not considered an inducement to growth.

Population increase in Laguna Woods indirectly attributable to adoption of the General Plan is projected to range between 580 and 1,245 new residents by the year 2015 as a result of construction and occupancy of new dwelling units. Population of the City at build-out is projected to be in the range of 17,000 to 17,750, an increase of up to 7.5% from the Census 2000 count of 16,507. This contrasts with the current County-wide population of 2,846,289 and projected increase of 314,000 or 10.9% over the same period. In both absolute and relative terms, population increase in Laguna Woods indirectly resulting from adoption and implementation of the General Plan is considered less than significant.

2.8 AREAS OF KNOWN CONTROVERSY

An area of controversy known to the City of Laguna Woods relative to the General Plan and identified through the environmental review process is the future use of the former Marine Corps Air Station at El Toro. Located approximately two miles north of the City of Laguna Woods, the former air station facility is included in the Airport Environs Land Use Plan (AELUP) of the County of Orange Airport Land Use Commission. The AELUP includes the central portion of Laguna Woods and includes restrictions on land use and building height attendant with potential crash hazards and adverse noise impacts associated with flight operations at the former Air Station.

The County of Orange and the Airport Land Use Commission maintain that the AELUP restrictions must be maintained by the City of Laguna Woods despite closure of the Air Station in 1999. A subsequent court ruling in a legal dispute with another jurisdiction indicated that the AELUP restrictions remain in effect as long as the potential exists for the Department of Defense to re-open the facility for military use.

On March 5, 2002, the voters of Orange County passed the “Orange County Central Park and Nature Preserve Initiative” (Measure W) which requires the designation of the former Marine Corps Air Station for non-aviation use in the County of Orange General Plan. On April 23, 2002, the Department of the Navy issued its Record of Decision relative to disposition of the former Air Station

property and indicated future use would be consistent with the local land use designation for the site. Future use of the property is expected to be consistent with the non-aviation land use of Measure W.

The City of Laguna Woods anticipates subsequent deletion of the former Marine Corps Air Station and associated planning area from the County of Orange Airport Environs Land Use Plan. This action would reflect the Navy's Record of Decision and the land use designation directed by Measure W. Accordingly, the Laguna Woods General Plan does not include or propose restrictions on land use and building height. The County of Orange and the Airport Land Use Commission contend that implementation of the directive of Measure W cannot be presumed until legal challenges to Measure W are resolved.

2.9 ALTERNATIVES TO THE PROJECT / UNRESOLVED ISSUES

Two reasonable alternatives to the project are evaluated as required by CEQA. Reasonable alternatives are those that would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. Inclusion of alternatives to the project permits decision makers to make a reasoned choice in approving, modifying, or denying the project. Both alternatives are defined by proposed land use patterns and development intensities different from that proposed in the Land Use Element of the Draft General Plan which is the project for purposes of CEQA. The City Council of Laguna Woods may, after review of the EIR, choose not to adopt the General Plan (Alternative 1) or adopt a General Plan incorporating a changed Land Use Plan (Alternative 2).

Alternative 1 – “No Project”

Alternative 1 is the “no project” option. Pursuant to this option, the Laguna Woods General Plan would not be adopted and the Interim General Plan would remain in effect. No changes in land use designations would be effected and development would be limited to that permitted under the Interim General Plan and current zoning ordinance. Potential future development would be effectively

limited to a two-acre vacant parcel designated for “Commercial Office” use and to additional recreation-related structures on properties designated for “Open Space” use.

Alternative 2 – Environmentally Superior Alternative

Alternative 2 is comprised of substantially the same Goals, Policies, and Implementation Measures as in the project General Plan. These would be subject to modifications necessary to maintain consistency with the Land Use Plan in this Alternative that accommodates fewer dwelling units, less commercial building area, and more open space at build-out than the project General Plan. All potential development sites would be designated “Urban Activities Center.” Properties designated Urban Activities Center would be subject to general performance and development standards in the Land Use Element of the General Plan that would be subsequently incorporated into a Specific Plan in the Zoning Ordinance.

The extent of future development within the Urban Activities Center would be limited based on projected vehicle trip generation for proposed land uses and the capacity of arterial highways to accommodate the additional trips within established Level of Service standards set forth in the Circulation Element of the draft General Plan. The mix of commercial and residential uses to be developed at build-out in this alternative will be determined after consideration of both vehicular trip generation and the potential for generation of revenues to the City necessary to maintain appropriate levels of municipal service. In this Alternative, the total additional land area to be developed at build-out is projected to be up to thirty (30) acres of land re-designated as an Urban Activities Center.

3.0 PROJECT DESCRIPTION

3.1 PROJECT LOCATION AND SETTING

The City of Laguna Woods is located in south Orange County between the San Joaquin Foothills and the Santa Ana Mountains (Maps 3.0-1 and 3.0-2). Laguna Woods is bordered on the north, east, and southeast by the City of Laguna Hills, on the northwest by the City of Irvine, on the west by unincorporated Orange County and the City of Laguna Beach, and on the south by the City of Aliso Viejo. The Interstate 5 Freeway provides access to the City via El Toro Road. El Toro Road traverses Laguna Woods east to west. Moulton Parkway crosses the City north to south.

The City of Laguna Woods was incorporated in March 1999 and encompasses approximately 2,100 acres of land. Laguna Woods includes the planned, gated retirement community of Leisure World whose residents comprise approximately 96% of the City's population of 16,507¹. The balance of the population resides in three seniors' complexes outside the Leisure World gates.

3.2 PROJECT CHARACTERISTICS

The project that is the subject of this Environmental Impact Report is the General Plan for the City of Laguna Woods. California Government Code Section 65300 requires that each City and County prepare and adopt a General Plan to guide future physical development within its borders. Upon adoption, the Laguna Woods General Plan will provide the City's decision makers with guidance in preparation and implementation of a new zoning ordinance, in administration of the Subdivision Ordinance, in preparation of capital improvement programs, and in development of municipal services options.

After the City's incorporation, the General Plan of the County of Orange remained operative within Laguna Woods. In January, 2001, the City of Laguna Woods adopted an Interim General Plan largely excerpted from the applicable

¹ U.S. Census Bureau, Census 2000

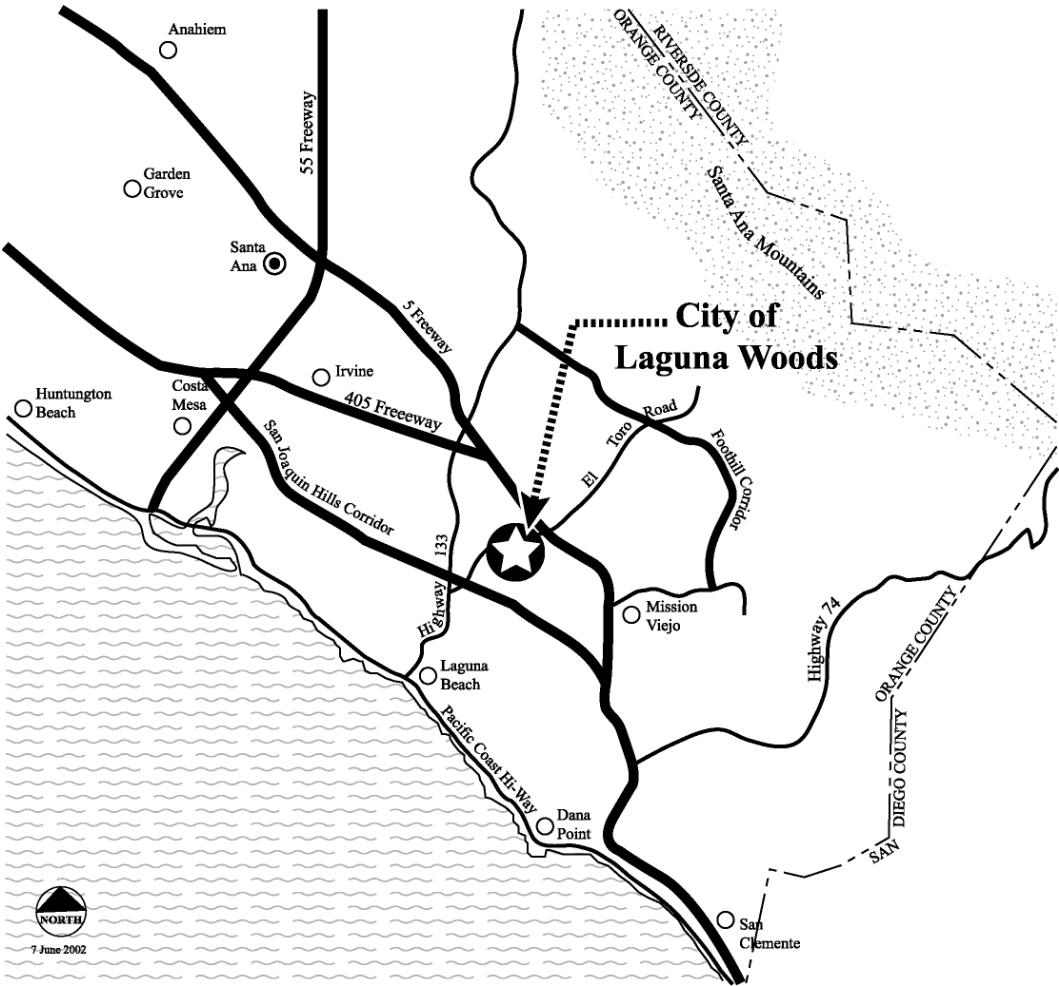
provisions of the County General Plan. The City undertook preparation of the Laguna Woods General Plan in 2000 to provide greater emphasis and detail on land use matters at the municipal level than is provided in the Interim General Plan.

Preparation of the General Plan included a series of community workshops to receive input on issues and opportunities to be addressed in the General Plan. Based on this information, the seven State-mandated elements that comprise the General Plan were prepared and considered at monthly public meetings of the General Plan Coordinating Committee.

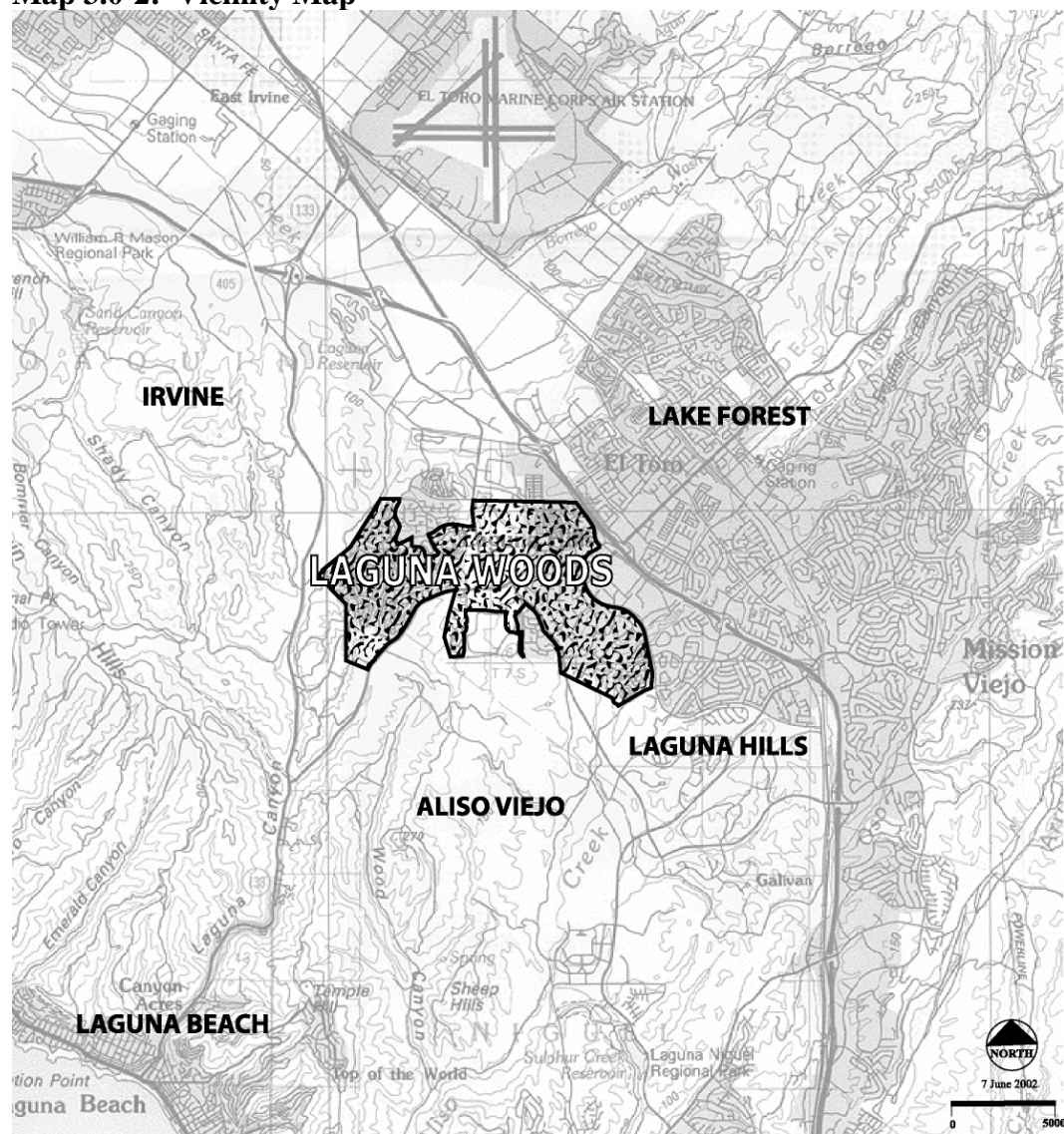
The Land Use Element of the project General Plan will effect changes in land use designations and is the principal source of potential environmental impacts. The Land Use Plan of the General Plan indicates the general locations and distribution of land uses (Map 3.0-3). Anticipated changes in land use designations enabling additional physical development are shown on Map 3.0-4, *Potential Development Sites*. Quantitative descriptions are included in Table 3.0-1 *Potential Development Sites*. Long-term outcomes associated with adoption and implementation of the General Plan is summarized in Table 3.0-2: *Long-Term Project Outcomes*.

Data and analysis of both existing and contemplated future development, and matters of municipal concern related to this development, are included in Background Reports and Policy Documents in each of seven State-mandated components, or “Elements,” of the General Plan discussed below.

Map 3.0-1: Regional Map



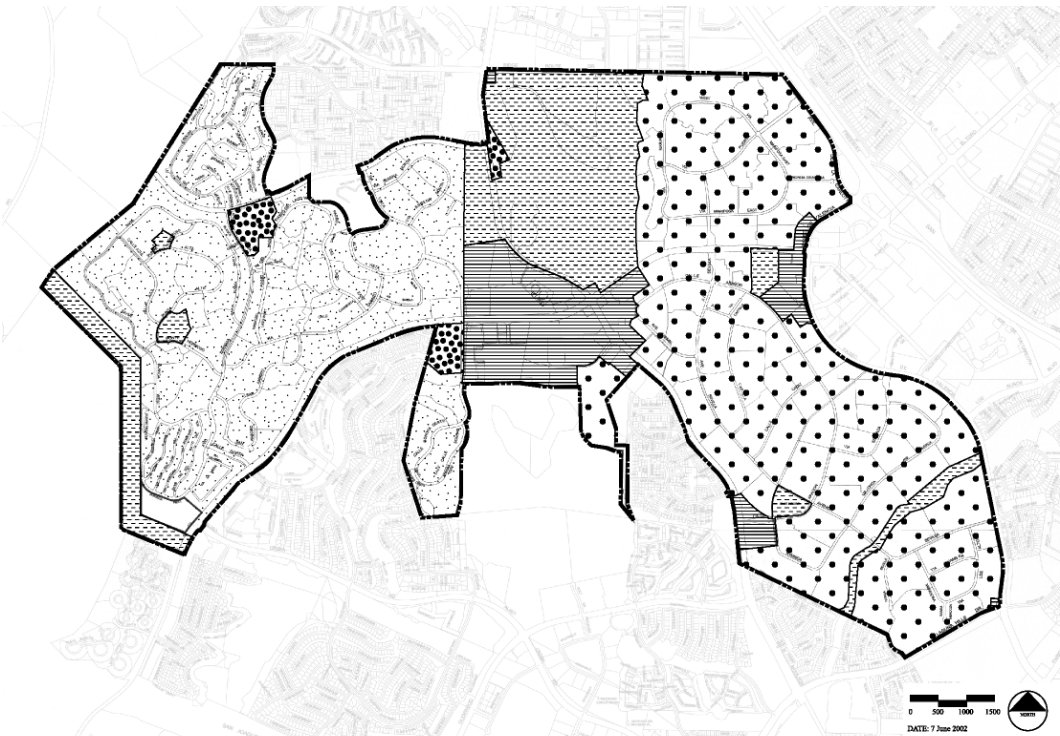
Map 3.0-2: Vicinity Map








Land Use Element

The Land Use Element establishes a blueprint for the distribution, locations, and intensity of future physical development. The Land Use Plan map included in the Land Use Element designates properties consistent with their anticipated future use as either “Commercial,” “Low-Density Residential,” “Medium-Density Residential,” “High-Density Residential,” or “Open Space.” The Land Use Element will be reflected in and implemented largely through the Zoning and Subdivision Ordinances.

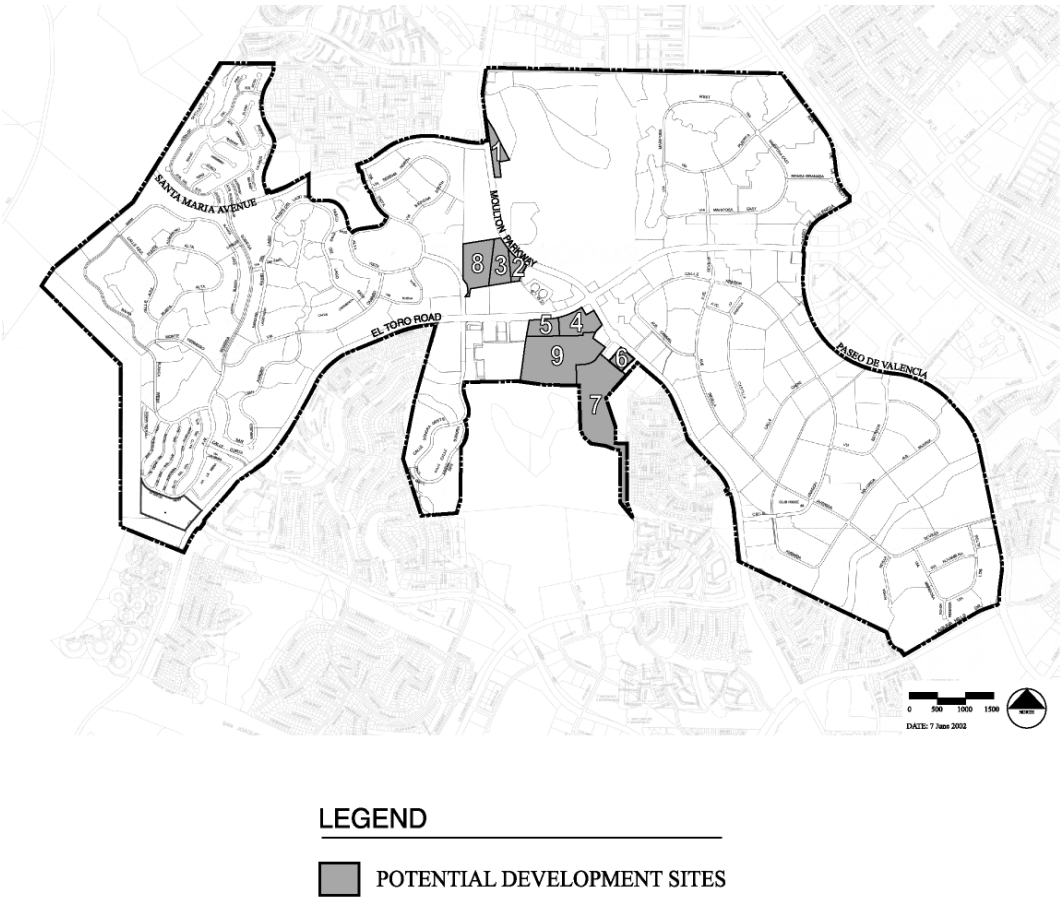
Map 3.0-3: Land Use Map



LEGEND

 LOW DENSITY RESIDENTIAL	 COMMERCIAL
 MEDIUM DENSITY RESIDENTIAL	 OPEN SPACE
 HIGH DENSITY RESIDENTIAL	

Map 3.0-4: Potential Development Sites



Circulation Element

The Circulation Element describes the general location and extent of existing and proposed streets and arterial highways, transportation routes, transit facilities, pedestrian, bicycle, and alternative vehicle routes, and infrastructure for providing potable water, conveying sewage and stormwater, and for public utilities including electricity and natural gas. The Circulation Element identifies infrastructure required in each of these areas to meet future needs associated with development defined in the Land Use Element and throughout the General Plan.

Safety Element

The Safety Element identifies forces of nature and events resulting from human action that have the potential for causing significant harm to life and property. The Safety Element includes measures for preemptory action to avert or minimize loss of life and property damage particularly as they relate to physical development.

Conservation Element

The Conservation Element identifies important natural resources in the community including water and wildlife and defines strategies for protecting each. In urbanized areas such as Laguna Woods, air quality and waste management issues are included together with historical, paleontological, and archaeological resources.

Open Space Element

The Open Space Element includes an inventory of sites which provide both passive and active recreational opportunities and those which provide visual relief from urban development. The means to maintaining open space consistent with State-recommended guidelines and community demands are indicated. In addition, the Laguna Woods Open Space Element addresses recreational and entertainment programs oriented to the unique population of the City.

Noise Element

The Noise Element identifies and assesses the sources of noise, both mobile and stationary, within the community. The extent and distribution of noise from these sources are mapped as noise contours. The noise contours guide land use decisions so as to avoid exposure of residents to excessive noise levels. The Noise Element is instrumental in ensuring that new buildings comply with State noise insulation standards.

Housing Element

The Housing Element is mandated by law as a means to attaining the State-wide goal of providing decent and affordable housing for all Californians. Accordingly, the Housing Element includes an analysis of current and future local housing needs, and the resources and constraints that define the City's ability to accommodate this need. As required by State law, the Housing Element identifies adequate sites for new housing construction in the City consistent the Regional Housing Needs Assessment of the Southern California Association of Governments.

3.3 PROJECT OBJECTIVES

California Government Code Section 65300 requires that each city adopt a general plan to guide the long-term physical development of the city. A general plan reflects the community's intentions about land use and its relationship to vehicular and pedestrian circulation, housing, open space and recreation, noise, public safety and resource conservation, and environmental protection.

The primary objective of the General Plan is to provide direction in developing a self-sustaining community affording goods, services, housing, employment, and recreational opportunities appropriate to the needs of current and future residents. The Laguna Woods General Plan will inform the public and decision makers about trade-offs that may be required in achieving a balance among land uses for a self-sustaining community consistent with the infrastructure and municipal

services capabilities of the City. Accordingly, the General Plan accommodates maintenance and future development of commercial uses that will generate sufficient municipal revenues necessary to maintain and enhance the level of municipal services.

Adoption of a new General Plan as the basis for new or revised ordinances is particularly important for Laguna Woods as a newly-incorporated City in establishing itself as a distinct and unique community within Orange County. Local issues, opportunities, and constraints will shape Laguna Woods independent of the General Plan of the County of Orange that shaped the community from inception until incorporation in 1999. The General Plan also will correct discrepancies between Interim General Plan and Zoning Ordinance land use designations for certain properties.

Both the numbers and types of new housing units anticipated at General Plan build-out are indicated in the General Plan. Consistent with Section 65583 (3) of the California Government Code, potential sites for new residential construction consistent with the Regional Housing Needs Assessment of the Southern California Association of Governments are identified. Adoption of the General Plan will bring the City into conformity with the Regional Housing Needs Assessment. Local decision makers are guided in choices among various land use options that will integrate housing with programs for providing the municipal services and facilities needed to support accompanying population growth.

Demographic information included in the General Plan suggests a specialized role for the City of Laguna Woods in serving a resident population comprised entirely of senior citizens living in age-restricted communities. The General Plan includes City service programs tailored to the mobility, security, and health care concerns of residents.

3.4 INTENDED USES OF THE EIR

The Environmental Impact Report is available during a 45-day mandatory circulation period for review and comment by the general public and agencies and

organizations responsible for resources that may be affected by the project. The Environmental Impact Report must be certified by the City Council of the City of Laguna Woods as meeting the requirements of the California Environmental Quality Act prior to and in conjunction with adoption of the Laguna Woods General Plan. An updated Zoning Ordinance necessary to implement and maintain consistency with the General Plan will be prepared and adopted. The EIR will satisfy CEQA requirements applicable to adoption of the Zoning Ordinance.

The project General Plan may be reviewed at:

Office of the City Clerk
Laguna Woods City Hall
24264 El Toro Road
Laguna Woods, CA 92653

Comments on the Draft Environmental Impact Report should be addressed to:

David Lepo, Project Manager
Hogle-Ireland, Inc.
42 Corporate Park, Suite 250
Irvine, CA 92606

Table 3.0- 1: Potential Development Sites

PARCEL	ACRES	EXISTING CONDITIONS	CURRENT / PROPOSED DESIGNATION (POTENTIAL INTENSITY/DENSITY)
1	3.3	Located east side of Moulton Parkway @ Santa Maria; currently used as a Leisure World garden plot.	Open Space/HIGH DENSITY RESIDENTIAL (115 dwellings @ 35 per acre)
2	2	Vacant parcel opposite Gate 12 of Leisure World on the west side of Moulton Parkway.	Open Space/COMMERCIAL (10,000 sq. ft. retail/10,000 sq. ft. restaurant)
3, 8	14	Located adjacent to and north of Town Center (Ayers Hotel) currently vacant; existing tennis courts, parking lot, proposed activities building site on west side of Moulton Parkway opposite Gate 12.	Open Space/COMMERCIAL (65,000 sq. ft. retail/105,000 sq. ft. office)
4	5.6	Leisure World Equestrian Center at the intersection of El Toro Road and Moulton Parkway.	Open Space/COMMERCIAL (73,000 sq. ft. retail)
5	2.4	Vacant parcel west of Moulton Parkway on El Toro Road (adjacent to Home Depot center).	Open Space/COMMERCIAL (31,000 sq. ft. retail)
6	2	Vacant parcel with frontage on Moulton Parkway south of Campo Verde.	Employment/COMMERCIAL (26,000 sq. ft. office)
7	23	Located south of Campo Verde west of Moulton Parkway; undeveloped and used for Leisure World compost production.	Open Space/MEDIUM DENSITY RESIDENTIAL (299 dwellings @ 13 per acre)
9	20.7	Leisure World maintenance garages and offices, Garden Plot 2, R.V. Storage Lot "B", and PCM employee parking lot located at Campo Verde.	Open Space/Commercial (174,000 square feet retail)
Total	73		414 dwellings 363,000 sq. ft. retail/131,000 sq. ft. office

Table 3.0- 2: Long -Term Project Outcomes

	Existing	With Project
Population	16,507	17,752
Employment	1,740	3,210
Dwelling Units	13,252	13,666
Commercial Building Area (Sq. Ft.)	844,780	1,340,780

EXISTING CONDITIONS, PROJECT IMPACTS, AND MITIGATION MEASURES

This section describes the current environmental conditions relevant to each of the topical areas of impact analysis. In each area of impact analysis, potential impacts resulting from the project are considered, mitigation measures appropriate to minimizing or eliminating potential project impacts are identified, thresholds are defined for determining the level of significance of impacts after mitigation, and the resulting significance of impacts are determined.

4.0 LAND USE/PLANNING

4.0.1 EXISTING CONDITIONS

Laguna Woods

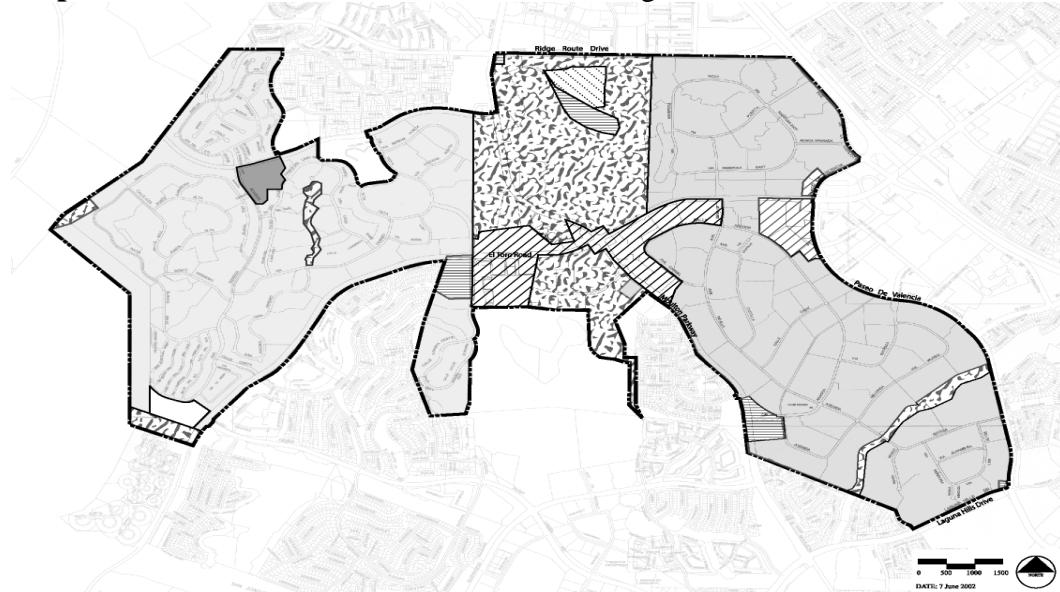
The pattern of existing land uses in Laguna Woods was shaped largely under the authority of the County of Orange prior to incorporation of the City in 1999. After incorporation, Laguna Woods adopted an Interim General Plan and a Zoning Ordinance derived from the General Plan and the Zoning Ordinance of the County of Orange, respectively.

Over 96% of the land area within the City of Laguna Woods is currently developed. The general distribution of land uses is reflected in “Interim General Plan Land Use Designations,” Map 4.0-1. Residential uses comprise the bulk of developed area (73%); approximately 4% is in commercial use (“Community Commercial” and “Employment” designations); 19% is used for open space and recreation purposes (“Open Space” and “Public Facilities” designations).

All but 516 of the 13,252 dwelling units in Laguna Woods are located within the walled community of Leisure World. Residential uses predominate throughout the City, and at the periphery adjoining other jurisdictions. Densities of existing residential development are indicated in Table 4.0-1. The maximum existing commercial development intensity is consistent with a floor area ratio of .30, Table 4.0-2. The uses, character, densities, and intensities of existing

development in Laguna Woods are generally similar to that of the surrounding geographic area (“Land Designations Surrounding Jurisdictions”, Map 4.0-2).

Map 4.0-1: Interim General Plan Land Use Designations



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


	SUBURBAN RESIDENTIAL		COMMUNITY COMMERCIAL
	URBAN RESIDENTIAL		OPEN SPACE
	EMPLOYMENT		PUBLIC FACILITIES

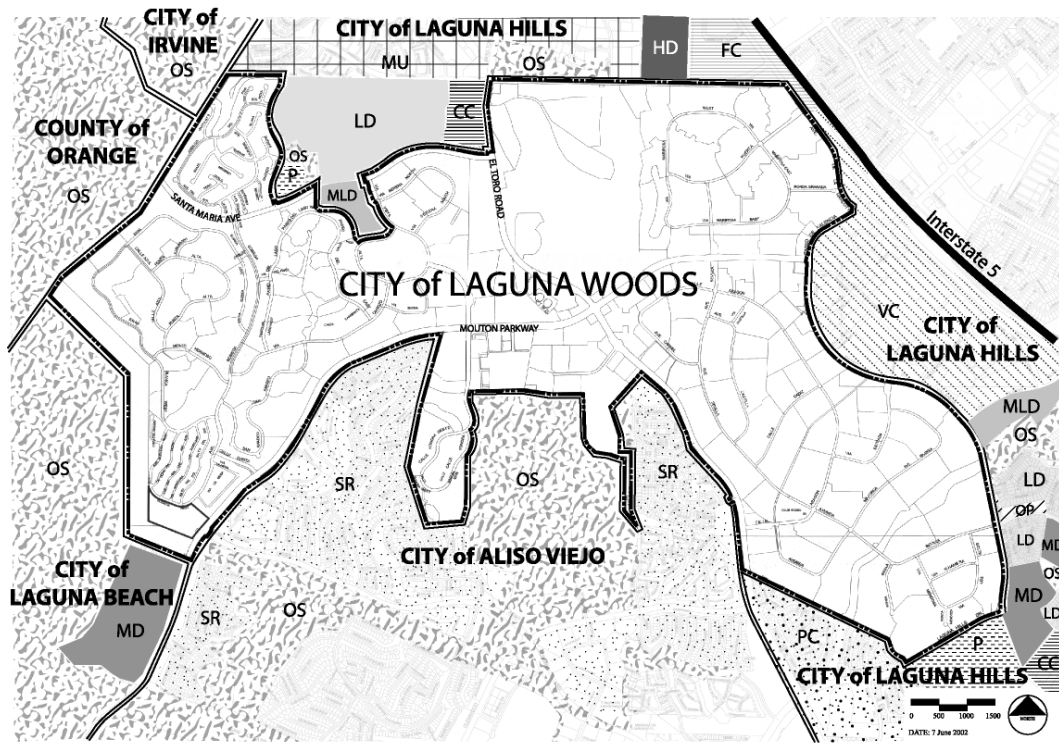
Table 4.0- 1: Existing Residential Densities

Interim General Plan Designation	Dwelling Units	Acres	Density	Population Density
Suburban Residential	12,093	1,474	Fewer than 13 Dwelling Units per Acre	13 Persons per Acre
Urban Residential	827	27	13 to 35 Dwelling Units per Acre	26 Persons per Acre
Employment	332	11	30 Dwelling Units per Acre	30 Persons per Acre

Table 4.0- 2: Maximum Permissible Commercial Building Intensity

Land Use Category	Floor Area Ratio
Commercial	0.30

Map 4.0-2: Land Designations Surrounding Jurisdictions



Legend

LD	Residential Low Density	SR	Suburban Residential	VC	Visitor Commercial
MLD	Residential Medium-Low Density	OS	Open Space	FC	Freeway Commercial
MD	Residential Medium/Moderate Density	OP	Office/ Professional	P	Public/ Institutional
HD	Residential High Density	MU	Mixed Use		
PC	Planned Community	CC	Community Commercial		

Unincorporated Area of Orange County and City of Irvine

The northwesterly flank of the City of Laguna Woods abuts both unincorporated County and the City of Irvine. In this area, properties in Laguna Woods are developed with attached and detached dwellings at densities of less than ten (10) units per acre.

The Land Use Plan for Orange County designates undeveloped land adjacent to Laguna Woods south of Santa Maria Avenue as “Open Space Reserve”. This area is part of the Laguna Coast Wilderness Park. The area north of Santa Maria is currently designated as “Suburban Residential” and undeveloped. A conservation easement over the entire property, however, was recently recorded by the landowner for preservation as a natural area

Land in the City of Irvine adjoins Laguna Woods along an approximately 1,000-foot length of common boundaries northerly of the unincorporated County area and is undeveloped. The Irvine General Plan includes a “Preservation” designation for this property requiring dedication to the City of Irvine or a public agency for open space use.

City of Laguna Hills

The City of Laguna Hills adjoins Laguna Woods on the north, east, and southeast. Properties in Laguna Hills that abut Laguna Woods are developed with urbanized uses conforming to General Plan designations that include “Low Density Residential,” “Medium-Low Density Residential,” “Medium Density Residential,” “High Density Residential,” “Mixed Use,” “Community Commercial,” “Village Commercial,” “Office Professional,” “Planned Community,” and “Public/Institutional”.

City of Aliso Viejo

The City of Aliso Viejo adjoins the south central and flanks Laguna Woods to the southeast. Aliso Viejo was incorporated in 2001 and thereafter adopted the applicable provisions of the County of Orange General Plan pursuant to which the City had been developed. Areas adjoining Laguna Woods are designated in the General Plan as “Suburban Residential” and “Open Space”. The residential portions are built-out as part of the Aliso Viejo planned community. The Open Space area is developed as the Aliso Viejo Golf Course.

City of Laguna Beach

The City of Laguna Beach abuts the extreme southwesterly portion of Laguna Woods. This area of Laguna Beach includes property designated for “Moderate Density Residential” use of five to nine units per acre and is developed with multiple family condominium units. Open Space west of the condominium development is included in the Laguna Coast Wilderness Park.

4.0.2 EXISTING PLANS AND ORDINANCES

City of Laguna Woods Interim General Plan

The General Plan proposed for adoption will replace the Interim General Plan. Where appropriate to this EIR, Objectives, Policies, and Implementation Measures of the proposed General Plan will be cited.

City of Laguna Woods Zoning Ordinance

Comprehensive revision of the Zoning Ordinance will be undertaken to implement the Objectives, Policies, and Implementation Measures of the proposed General Plan and to maintain consistency between the two documents. Where appropriate to this EIR, Zoning Ordinance revisions necessitated by adoption of the General Plan will be cited.

Southern California Association of Governments Regional Comprehensive Plan and Guide (RCPG)

Projects of regional significance, including General Plans, are subject to review by the Southern California Association of Governments (SCAG) as to conformity with the Regional Comprehensive Plan and Guide. Conformity of the proposed General Plan with provisions of the Regional Comprehensive Plan and Guide is evaluated.

Southern California Association of Governments Regional Housing Needs Assessment (RHNA)

The Regional Housing Needs Assessment is prepared as required by Section 65584 of the California Government Code and quantifies existing and future housing needs.

County of Orange Airport Land Use Commission Airport Environs Land Use Plan (AELUP)

The Airport Environs Land Use Plan provides for the orderly growth of airports, prevention of encroachment of urban uses on airports and navigable airspace, and protection of inhabitants from the adverse impacts of noise and accidents resulting from aircraft over flights.

4.0.3 THRESHOLDS OF SIGNIFICANCE

Impacts to land use resulting from adoption and implementation of the General Plan could be deemed significant if this action would:

- ❑ Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect;
- ❑ Result in establishment of land uses incompatible with existing land uses in the vicinity.

4.0.4 PROJECT AND CUMULATIVE IMPACTS

The project General Plan includes changes in nomenclature for certain land use categories. “Community Commercial” and “Employment” designations of the Interim General Plan are included in the project General Plan as “Commercial”; “Public Facilities” are included within the “Open Space” designation; “Suburban Residential” uses are indicated as “Medium Density Residential” (10-13 units per acre) or “Low Density Residential” (fewer than 10 units per acre).

The General Plan Land Use Element includes changes in land use designations for twenty-four parcels to correct inconsistencies between Interim General Plan Land Use Map and existing Zoning Map classifications. Uses on these parcels conform to the Zoning Map use categories as adapted from the County of Orange Zoning Ordinance pursuant to which they were originally permitted; however, Interim General Plan land use designations carried forward from the County of Orange General Plan for these parcels are not consistent with the existing uses and zoning. Table 4.0-3 and Map 4.0-3 show these changes and the respective locations. No impacts will result as these are clerical corrections.

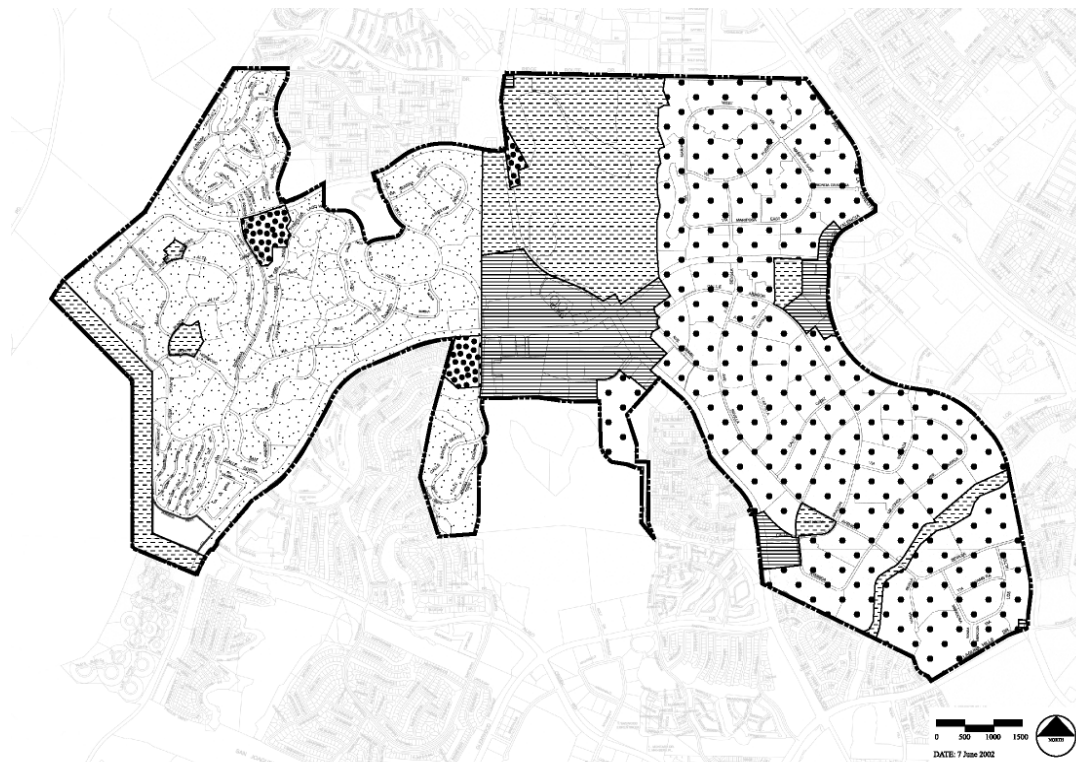
Table 4.0- 3: Land Use Changes to Achieve Conformity with Zoning

PARCEL	INTERIM GENERAL PLAN	GENERAL PLAN
1 - Temple and Methodist Church	Community Commercial	Residential Medium Density
2 - Catholic Church	Community Commercial	Residential Medium Density
3 – Regency	Employment	Residential High Density
4 – Fountains	Employment	Residential High Density
5 - Alterra Wynwood	Suburban Residential	Commercial
6 – Mortuary	Employment	Commercial
7 - Offices on PDV @ Laguna Hills Dr.	Employment	Commercial
8 – Comm'l on Moulton @ Ridge Rt.	Employment	Commercial
9 - Water Tanks	Open Space	Commercial
10 - Bank on PDV @ La Plata	Suburban Residential	Commercial
11 - Fire Sta. & Bank – El Toro @ PDV	Suburban Residential	Commercial
12 - Edison R/W	Suburban Residential & Open Space	Open Space
13 - Residential @ Gate 1	Commercial	Residential Medium Density
14 – R.V. Storage Lot “A”	Employment	Open Space
15 - El Toro Water Treatment Plant	Public Facilities	Open Space
16 – Clubhouse 1	Community Commercial	Open Space
17 – Clubhouse 2	Community Commercial	Open Space
18 - Clubhouses 3, 5, & 6	Suburban Residential	Open Space






Land use designation changes for approximately seventy-one (71) acres of land will facilitate additional development. All seventy-one (71) acres are currently designated as “Open Space”. Of these, forty-five (45) acres will be designated for future commercial development and twenty-six (26) acres for future residential uses. An additional three-acre site previously designated for commercial use retains that designation in the General Plan.

The General Plan Land Use Plan is included as Map 4.0-3. Descriptions of parcels comprising potential development sites in the General Plan are indicated in Table 4.0-4. Locations of these potential development sites are shown in Map 4.0-5.

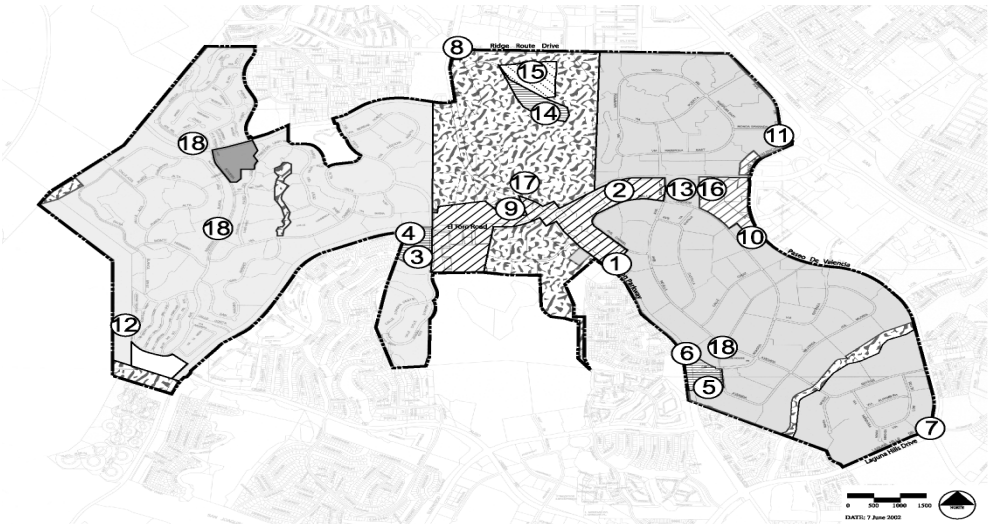
Map 4.0-3: General Plan Land Use



LEGEND

	LOW DENSITY RESIDENTIAL		COMMERCIAL
	MEDIUM DENSITY RESIDENTIAL		OPEN SPACE
	HIGH DENSITY RESIDENTIAL		

Map 4.0-4: Interim General Plan Land Use\Zoning Inconsistency



LEGEND







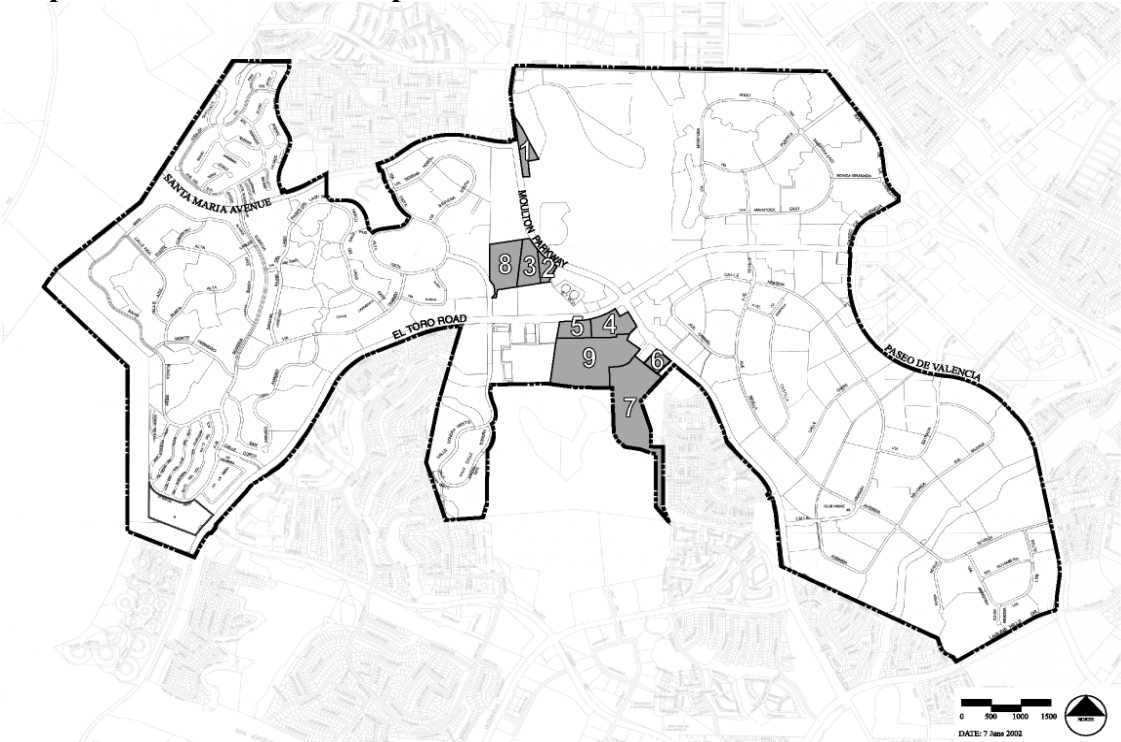
	SUBURBAN RESIDENTIAL		COMMUNITY COMMERCIAL
	URBAN RESIDENTIAL		OPEN SPACE
	EMPLOYMENT		PUBLIC FACILITIES

Table 4.0- 4: Potential Development Sites

PARCEL	ACRES	EXISTING CONDITIONS	CURRENT / PROPOSED DESIGNATION (POTENTIAL INTENSITY/DENSITY)
1	3.3	Located east side of Moulton Parkway @ Santa Maria; currently used as a Leisure World garden plot.	Open Space/HIGH DENSITY RESIDENTIAL (115 dwellings @ 35 per acre)
2	2	Vacant parcel opposite Gate 12 of Leisure World on the west side of Moulton Parkway.	Open Space/COMMERCIAL (10,000 sq. ft. retail/10,000 sq. ft. restaurant)
3, 8	14	Located adjacent to and north of Town Center (Ayers Hotel) currently vacant; existing tennis courts, parking lot, proposed activities building site on west side of Moulton Parkway opposite Gate 12.	Open Space/COMMERCIAL (65,000 sq. ft. retail/105,000 sq. ft. office)
4	5.6	Leisure World Equestrian Center at the intersection of El Toro Road and Moulton Parkway.	Open Space/COMMERCIAL (73,000 sq. ft. retail)
5	2.4	Vacant parcel west of Moulton Parkway on El Toro Road (adjacent to Home Depot center).	Open Space/COMMERCIAL (31,000 sq. ft. retail)
6	2	Vacant parcel with frontage on Moulton Parkway south of Campo Verde.	Employment/COMMERCIAL (26,000 sq. ft. office)
7	23	Located south of Campo Verde west of Moulton Parkway; undeveloped and used for Leisure World compost production.	Open Space/MEDIUM DENSITY RESIDENTIAL (299 dwellings @ 13 per acre)
9	20.7	Leisure World maintenance garages and offices, Garden Plot 2, R.V. Storage Lot "B", and PCM employee parking lot located at Campo Verde.	Open Space/COMMERCIAL (174,000 square feet retail)
Total	73		414 dwellings 363,000 sq. ft. retail/131,000 sq. ft. office

Map 4.0-5: Potential Development Sites



LEGEND

 POTENTIAL DEVELOPMENT SITES

Southern California Association of Governments Regional Comprehensive Plan and Guide (RCPG)

The RCPG includes an overview of plans of various regional agencies to which local general plans must conform. These various regional plans are necessary to meet federal and state requirements relative to Transportation, Growth Management, Air Quality, Housing, Hazardous Waste, and Water Quality. Policies of the various Chapters of the Regional Comprehensive Plan and Guide applicable to the project Laguna Woods General Plan are identified in this analysis. Each applicable policy statement is accompanied by a discussion of General Plan provisions upon which the finding of consistency of the General Plan with the Regional Comprehensive Plan and Guide is based.

Growth Management Chapter

The Growth Management component of the Regional Comprehensive Plan and Guide includes policies intended to guide regional growth and mitigate potential impacts.

Policy 3.01

“The population, housing, and job forecasts, which are adopted by SCAG’s Regional Council and that reflect local plans and policies, shall be used by SCAG in all phases of implementation and review.”

The City of Laguna Woods was incorporated subsequent to adoption of the Comprehensive Regional Plan and Guide. Input and projections for population, housing, and employment for the geographic area that became Laguna Woods were included within “unincorporated County” data in the Regional Comprehensive Plan and Guide. Data specific to Laguna Woods could not be disaggregated.

For purposes of determining consistency with regional population, housing, and employment projections in the Regional Comprehensive Plan and Guide, build-

out conditions pursuant to the General Plan were compared with projections provided by the Orange County Transportation Authority (OCTA). As the County's principal lead agency for transportation planning and funding allocation, OCTA must comply with State and Federal law by conforming with SCAG's Regional Comprehensive Plan and Guide.

Approximations of OCTA projections for population, housing, and employment for Laguna Woods were assembled from data from sixteen OCTA Traffic Analysis Zones (TAZ's). The combination of TAZ's roughly conformed to the corporate boundaries of the City. Based on this review, population, housing, and employment numbers associated with build-out consistent with the General Plan were all less than those projected in the Traffic Analysis Zones for year 2025.

Population, Household, and Employment forecasts for the Orange County Council of Governments subregion, reflecting SCAG's most current forecasts, are included in the Impact Analysis sections of the EIR as the regional context within which future development, consistent with the project General Plan, will occur in Laguna Woods.

Policy 3.03

"The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies."

The project General Plan for Laguna Woods does not anticipate or facilitate development of public facilities with potential impacts of a regional nature. Development pursuant to the General Plan would be of an infill nature in areas already served by backbone infrastructure including the existing freeway system, primary and secondary arterial highways, electric and natural gas distribution lines, water and sanitary sewer systems, public safety facilities, schools, and public libraries.

The project Laguna Woods General Plan directs continued participation with and conformity to the requirements of the Orange County Transportation Authority

(OCTA) in roadway improvement projects necessary to promote the regional mobility goals of the Regional Comprehensive Plan and Guide. These include planned improvements to Moulton Parkway as a “Smart Street” in the OCTA Master Plan of Arterial Highways. The General Plan also directs coordination with the transit programs of OCTA in providing local and regional mobility options for Laguna Woods residents.

Conformity with the RCPG through participation with OCTA is provided in the following Policies and Implementation Measures of the project General Plan:

Circulation Element Implementation Measure I.A.3

Work with the Orange County Transportation Authority and the County of Orange in phased implementation of the Master Plan of Arterial Highways to meet the particular needs of the City.

Circulation Element Policy I.B

Develop strong working relationships with management and staff of Orange County Transportation Authority to highlight the needs of the City’s senior population and to enhance and coordinate transit services to the City.

Circulation Element Implementation Measure IV.A.1

Participate with the County of Orange, the Orange County Transportation Authority, Transportation Corridor Agencies, and the Southern California Association of Governments to represent the City’s position and to facilitate implementation of an integrated circulation system that meets the needs of the City of Laguna Woods.

Policy 3.05

“SCAG shall encourage patterns of development and land use which reduce costs on infrastructure construction and make better use of existing facilities.”

Policy 3.09

“SCAG shall support local jurisdictions’ efforts to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and the provision of services.”

Policy 3.13

“SCAG shall encourage local jurisdictions’ plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.”

Policy 3.16

“SCAG shall encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.”

The pattern of development for Laguna Woods, as reflected in the Land Use Plan included in the General Plan, locates all future new development near the geographic center of the City. By clustering future building intensity at the City’s center, existing backbone infrastructure including arterial highways, sanitary sewer trunk lines, water mains, and public safety facilities will service future development. Proximity to existing arterial highways includes accessibility to established transit lines including those of OCTA. Future development anticipated in the project General Plan will be in conformity with General Plan Land Use Element provisions as follow:

Land Use Element Implementation Measure II.A.6

Adopt a Zoning Ordinance provision requiring preparation of a Specific Plan for commercial properties consistent with Section II.C.2 herein, Specific Plan Concept.

Land Use Element Policy Document Section II. C. 2

Laguna Woods was developed as a “planned community” and the importance of continuing in this tradition is recognized.

Integration of uses, designs, and infrastructure on contiguous properties promotes development of greater aesthetic and economic value, enhances existing development, and minimizes adverse impacts on the environment.

Consistent with the planned community ideal and common ownership of the subject properties, development on any portion of Parcels 4, 5, 7, or 9 (Potential Development Sites, above) requires preparation of a master plan of development encompassing all three parcels. The combined parcels comprise approximately 52 acres and can accommodate up to 278,000 square feet of retail space.

In order to promote quality development that capitalizes upon site plan design options, reduces the extent of pavement, and minimizes impacts on infrastructure, existing development, and the environment, the master plan for commercial development on Parcels 4, 5, 7, and 9 will reflect:

- ☐ *Shared vehicular access points;*
- ☐ *Integrated on-site vehicular circulation and parking;*
- ☐ *Complementary orientation and massing of buildings relative to the street and to each other;*
- ☐ *Natural-appearing slope banks;*
- ☐ *Compatible scale, massing, and materials among buildings;*
- ☐ *Accommodation and integration of pedestrian and alternative vehicle use and circulation;*
- ☐ *Consistent landscape palette and theme.*

Policy 3.12

“SCAG shall encourage existing or proposed local jurisdictions’ programs aimed at designing land uses which encourage the use of transit and thus reduce the

need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.”

The Land Use, Circulation, and Conservation Elements of the project General Plan include Policies and Implementation Measures promoting use of transportation modes as alternatives to the private automobile, consistent with the RCPG, as follows:

Land Use Element Implementation Measure III.A.1

Consider adopting zoning and subdivision requirements for connecting pedestrian and golf cart trails between new and existing commercial, institutional, and residential destinations.

Land Use Element Implementation Measure III.A.2

Consider adopting zoning ordinance standards for alternative modes of transportation in commercial, institutional, and multiple family residential development.

Circulation Element Implementation Measure III.C.1

Determine the feasibility of including alternative vehicle access to a multi-purpose trail along the south side of El Toro Road between Calle Sonora and Paseo de Valencia.

Circulation Element Implementation Measure III.C.2

Investigate the feasibility of developing secure, direct access points for alternative vehicles from Leisure World to the shopping center at the intersection of El Toro Road and Moulton Parkway (Willow Tree Center) and to churches on El Toro Road, and on Moulton Parkway.

Circulation Element Implementation Measure III.C.3

Work with the City of Laguna Hills to determine the feasibility of providing off-street alternative vehicles connections to the Laguna Hills Mall and Saddleback Medical Center.

Circulation Element Implementation Measure III.C.4

Provide alternative vehicles parking areas at key commercial locations, churches, and main transit stops, where feasible.

Circulation Element Implementation Measure III.C.5

Consider adopting zoning and subdivision requirements for connecting alternative vehicle trails between new and existing commercial, institutional, and residential destinations.

Circulation Element Implementation Measure III.C.6

Consider adopting zoning ordinance standards for accommodating alternative vehicles in commercial, institutional, and multiple family residential developments.

Conservation Element Implementation Measure II.A.1

Adopt Zoning and Subdivision Ordinance provisions requiring that new development and reuse projects accommodate and promote transportation alternatives to the private automobile.

Conservation Element Implementation Measure II.A. 2

Work with local bus service providers to increase ridership by accommodating construction of bus turn-outs, transfer stations, and bus shelters.

Policy 3.18

SCAG shall encourage planned development in locations least likely to cause environmental impact.

Policy 3.20

Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.

Directives for protecting and preserving existing environmental resources, especially as these may be threatened by future development are included in the project General Plan Conservation and Open Space Elements, consistent with the RCPG, as follows:

Conservation Element Implementation Measure I.A.1

Revise the Zoning Ordinance as required to preclude establishment of land uses and construction of buildings within the flood plain of Aliso Creek that would disturb its natural state.

Conservation Element Implementation Measure I.B.1

Enlist the participation of neighboring cities in developing a strategy for ensuring that the Laguna Laurel property is preserved as permanent open space and wildlife habitat.

Conservation Element Implementation Measure I.B.2

Evaluate the feasibility of annexing the Laguna Laurel property into the City of Laguna Woods.

Conservation Element Implementation Measure I.B.3

Actively participate with other cities, governmental entities, and organizations to establish a wildlife corridor from the mountains to the ocean and including the former Marine Corps Air Station - El Toro.

Conservation Element Implementation Measure I.B.4

Revise the Zoning Ordinance to retain the Southern California Edison right-of-way at the southwesterly boundaries of the City as open space and include prohibitions on commercial uses of open space.

Conservation Element Implementation Measure III.A.1

Actively participate with surrounding cities and resource agencies in developing and implementing watershed studies and management plans to reduce pollutant levels in Aliso Creek.

Open Space Element Implementation Measure II.A.5

Adopt zoning ordinance provisions to protect and preserve the wildlife habitats on portions of the 45-acre Southern California Edison right-of-way and on the 23-acre property between Via Campo Verde and the Aliso Viejo Golf Course.

Policy 3.21

SCAG shall encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.

Future development in accordance with the proposed General Plan is located in an area known to contain archaeological resources and the area has the potential to yield significant paleontological resources. No historical resources are located within the City. The implementation of the proposed General Plan as well as past, present, and reasonably anticipated future projects could potentially result in significant cumulative impacts to archaeological and paleontological resources. However, with the implementation of the mitigation measures provided below, the potential cumulative impacts to archaeological and paleontological resources could be reduced to less than significant. Furthermore, the implementation of the proposed General Plan would not contribute to any cumulative impacts to historical resources.

Policy 3.23

SCAG shall encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans.

Provisions of the Noise, Conservation, Open Space, and Safety Elements of the project General Plan conform to the RCPG policies as follows:

Noise Element Implementation Measure I.A.1

Request the inclusion of soundwalls, earthen berms, or other acoustical barriers as part of any Caltrans, OCTA or County roadway project, where transportation noise exceeds acceptable standards.

Noise Element Implementation Measure I.A.2

Participate in the planning and environmental review process for any road widenings or road extensions to ensure that appropriate noise mitigation measures are included in the design of the project.

Noise Element Implementation Measure I.A.3

Investigate funding opportunities to reduce transportation noise impacts to residential areas that are presently exposed to noise levels exceeding the City's noise standards.

Noise Element Implementation Measure II.B.1

Review proposed projects to ensure noise/land use compatibility with the projected noise environment as a guide for future planning and development.

Noise Element Implementation Measure II.B.3

Require new residential developments located in proximity to existing roadways and commercial operations to control residential interior noise levels as a condition of approval through mitigation measures such as double-paned windows, noise walls, and barriers, etc.

Noise Element Implementation Measure II.B.5

Require new commercial operations located in proximity to existing or proposed residential areas to incorporate noise mitigation into the project's design.

Conservation Element Implementation Measure I.A.1

Revise the Zoning Ordinance as required to preclude establishment of land uses and construction of buildings within the flood plain of Aliso Creek that would disturb its natural state.

Conservation Element Implementation Measure I.B.1

Enlist the participation of neighboring cities in developing a strategy for ensuring that the Laguna Laurel property is preserved as permanent open space and wildlife habitat.

Conservation Element Implementation Measure I.B.2

Evaluate the feasibility of annexing the Laguna Laurel property into the City of Laguna Woods.

Conservation Element Implementation Measure I.B.3

Actively participate with other cities, governmental entities, and organizations to establish a wildlife corridor from the mountains to the ocean and including the former Marine Corps Air Station - El Toro.

Conservation Element Implementation Measure I.B.4

Revise the Zoning Ordinance to retain the Southern California Edison right-of-way at the southwesterly boundaries of the City as open space and include prohibitions on commercial uses of open space.

Conservation Element Implementation Measure III.A.1

Actively participate with surrounding cities and resource agencies in developing and implementing watershed studies and management plans to reduce pollutant levels in Aliso Creek.

Open Space Element Implementation Measure II.A.5

Adopt zoning ordinance provisions to protect and preserve the wildlife habitats on portions of the 45-acre Southern California

Edison right-of-way and on the 23-acre property between Via Camp Verde and the Aliso Viejo Golf Course.

Safety Element Implementation Measure III.A.1

Prepare an Emergency Operations Plan including provisions for setting up an Emergency Operations Center.

Safety Element Implementation Measure III.A.2

Arrange mutual aid pacts for disaster recovery services including building and infrastructure damage assessment.

Safety Element Implementation Measure III.A.3

Inform residents and businesses about disaster preparedness and response at the local level.

Safety Element Implementation Measure III.A.4

Inform property owners of the availability of maps showing local areas particularly susceptible to seismic and flooding hazards.

Safety Element Implementation Measure III.A.5

Work with property owners in identifying measures to mitigate potential property damage from seismic and flooding hazards.

Policy 3.27

Support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.

Relative to public services within the purview of municipalities in California, the City of Laguna Woods through Implementation Measures in the project General Plan conforms to the RCPG policies as follows:

Land Use Element Implementation Measure I.A.1

Accommodate rezoning of properties consistent with Residential designations shown on the General Plan Land Use Map and with Housing Element goals for new dwelling unit construction.

Land Use Element Implementation Measure I.A.2

Approve rezoning of Open Space land to non-residential use consistent with the General Plan Land Use Map only after sufficient land is zoned for Residential use consistent with Housing Element goals for new dwelling unit construction.

Housing Element Implementation Measure I.A.3

Partner with property owners to identify and accomplish retrofitting of dwelling units and common facilities for handicapped accessibility.

Housing Element Implementation Measure II.A.2

Support non-profit organizations in efforts to secure funding sources for development of housing for households of low and moderate income.

Housing Element Implementation Measure III.A.1

Work with the County of Orange Housing Authority to secure Section 8 rental assistance for very low-income rental households and inform eligible residents.

Housing Element Implementation Measure III.A.5

Participate in the County of Orange Consolidated Plan program and in the Continuum of Care to provide housing for special needs populations.

Open Space Element Implementation Measure I.A.2

Work with surrounding cities, the County of Orange, and with public and private not-for-Profit organizations to expand affordable recreation and cultural opportunities for residents.

Safety Element Implementation Measure I.A.1

Review on an annual basis police, fire, and emergency medical response times in Laguna Woods to ensure that they meet or exceed industry standards.

Safety Element Implementation Measure II.A.1

Consider programs such as an information and referral hotline and low-cost emergency alert systems for individuals.

Safety Element Implementation Measure II.A.2

Involve the Orange County Fire Authority with the community in educational programs about emergency medical response including cardio-pulmonary resuscitations training.

Safety Element Implementation Measure II.A.3

Consider joint ventures with other organizations to provide social services to residents.

Air Quality Chapter

The Air Quality Chapter sets forth Policies consistent with SCAG's responsibility for air quality planning in light of plans and policies of regional, state and federal air quality agencies.

Policy 5.07

Determine specific programs and associated actions needed (e.g., indirect source rules, enhanced use of telecommunications, provision of community based shuttle services, provision of demand management based programs, or vehicle-miles-

traveled/emission fees) so that options to command and control regulations can be assessed.

The City of Laguna Woods, through adoption of the project General Plan, will participate with the South Coast Air Quality Management District in programs that allow evaluation of alternative measures designed to improve air quality through reduction in total vehicle emissions in the South Coast Basin:

Conservation Element Policy II.A

Cooperate with governmental agencies at the local, county, and state level in attaining established goals for air quality.

Conservation Element Implementation Program II.A.4

Implement mitigation measures in the Air Quality Management Plan of the South Coast Air Quality Management District.

Policy 5.11

Through the environmental document review process, ensure that plans at all levels of government (regional, air basin, county, subregional and local) consider air quality, land use, transportation and economic relationships to ensure consistency and minimize conflicts.

Submittal of the Notice of Preparation for the Laguna Woods General Plan EIR and response by SCAG conforms with the directive to review environmental documents and plans at the local level for consistency with Policies of the Comprehensive Regional Plan and Guide. Consistency of City of Laguna Woods General Plan measures with regional policies in the RCPG are documented in this section appropriate to SCAG's assigned role in reviewing plans of regional significance.

Water Quality Chapter

The core recommendations and policy options of the Water Quality Chapter relate to the water quality goals of restoring and maintaining the chemical, physical and

biological integrity of the nation's water, and achieving and maintaining water quality objectives that are necessary to protect all beneficial uses of all water.

Policy 11.02

SCAG shall encourage "watershed management" programs and strategies, recognizing the primary role of local governments in such efforts.

The project General Plan includes the following provision consistent the RCPG water quality initiatives:

Conservation Element Implementation Measure III.A.1

Actively participate with surrounding cities and resource agencies in developing and implementing watershed studies and management plans to reduce pollutant levels in Aliso Creek.

Policy 11.05

Support regional efforts to identify and cooperatively plan for wetlands to facilitate both sustaining the amount and quality of wetlands in the region and expediting the process for obtaining wetland permits.

The Conservation and Open Space Elements of the project General Plan conform to RCPG policies for wetland protection as follows:

Conservation Element Implementation Measure I.B.1

Enlist the participation of neighboring cities in developing a strategy for ensuring that the Laguna Laurel property is preserved as permanent open space and wildlife habitat.

Conservation Element Implementation Measure I.B.3

Actively participate with other cities, governmental entities, and organizations to establish a wildlife corridor from the mountains to the ocean and including the former Marine Corps Air Station - El Toro.

Open Space Element Implementation Measure II.A.5

Adopt zoning ordinance provisions to protect and preserve the wildlife habitats on portions of the 45-acre Southern California Edison right-of-way and on the 23-acre property between Via Camp Verde and the Aliso Viejo Golf Course.

Policy 11.07

Encourage water reclamation throughout the region where it is cost-effective, feasible, and appropriate to reduce reliance on imported water and wastewater discharges. Current administrative impediments to increased use of wastewater should be addressed

The Circulation Element of the project General Plan documents the participation of the independent El Toro Water District in water reclamation efforts. The District currently recycles ten percent of all wastewater for beneficial reuse.

Open Space Chapter

The Open Space Chapter is included in the Regional Comprehensive Plan and Guide to assist local governments in planning for local and regional open space.

Policy 9.01

Provide adequate land resources to meet the outdoor recreation needs of the present and future residents in the region and to promote tourism in the region.

Policy 9.02

Increase the accessibility to open space land for outdoor recreation.

Policy 9.03

Promote self-sustaining regional recreation resources and facilities.

Policy 9.04

Maintain open space for adequate protection of lives and properties against natural and man-made hazards.

Provisions of the project General Plan consistent with policies of the RCPG:

Conservation Element Implementation Measure I.B.1

Enlist the participation of neighboring cities in developing a strategy for ensuring that the Laguna Laurel property is preserved as permanent open space and wildlife habitat.

Conservation Element Implementation Measure I.B.3

Actively participate with other cities, governmental entities, and organizations to establish a wildlife corridor from the mountains to the ocean and including the former Marine Corps Air Station - El Toro.

Conservation Element Implementation Measure I.B.4

Revise the Zoning Ordinance to retain the Southern California Edison right-of-way at the southwesterly boundaries of the City as open space and include prohibitions on commercial uses of open space.

Open Space Element Implementation Measure I.A.2

Work with surrounding cities, the County of Orange, and with public and private not-for-Profit organizations to expand affordable recreation and cultural opportunities for residents.

Policy 9.05

Minimize potentially hazardous developments in hillsides, canyons, areas susceptible to flooding, earthquakes, wildfire and other known hazards, and areas with limited access for emergency equipment.

Policy 9.06

Minimize public expenditure for infrastructure and facilities to support urban type uses in areas where public health and safety could not be guaranteed.

The City of Laguna Woods is largely urbanized and there remain no areas of undisturbed ground forms or vegetation presenting risks of disaster associated with development in natural hillside and canyon areas. The project General Plan does not anticipate development in or adjacent to areas identified as susceptible to wildfires.

No special studies zones related to surface rupture associated with seismic events have been identified in the City. At the project General Plan level of analysis, generalized areas that may be subject to liquefaction or be areas of historic landslides are identified based on known geologic formations and included for analysis and subject to mitigation as identified in Section 4.2, *Geology/Soils*.

Policy 9.07

Maintain adequate viable resource production lands, particularly lands devoted to commercial agriculture and mining operations.

The City of Laguna Woods is urbanized and there are no agricultural or resource extraction uses located in the City.

Policy 9.08

Develop well-managed viable ecosystems or known habitats of rare, threatened and endangered species, including wetlands.

Conservation Element Implementation Measure I.A.1

Revise the Zoning Ordinance as required to preclude establishment of land uses and construction of buildings within the flood plain of Aliso Creek that would disturb its natural state.

Conservation Element Implementation Measure I.B.1

Enlist the participation of neighboring cities in developing a strategy for ensuring that the Laguna Laurel property is preserved as permanent open space and wildlife habitat.

Conservation Element Implementation Measure I.B.3

Actively participate with other cities, governmental entities, and organizations to establish a wildlife corridor from the mountains to the ocean and including the former Marine Corps Air Station - El Toro.

Southern California Association of Governments Regional Housing Needs Assessment (RHNA)

The Regional Housing Needs Assessment identifies existing and future housing needs for each political jurisdiction within the five-county SCAG region. The General Plan is consistent with the Regional Housing Needs Assessment as indicated in this section.

Because Laguna Woods is newly-incorporated, the RHNA does not include a quantified existing housing need for the City. The RHNA did include 113 units of new housing to be accommodated through designation of potential development sites within the land use regulatory structure of the City. Sixty (60) of these units are to be affordable to very low, low, and moderate income families and individuals. The balance of the 113 units (53) is to be for families and individuals at or above moderate-income levels.

The Housing Element and the Land Use Plan of the General Plan Land Use Element, and related provisions of other Elements, include and support designation of a site appropriate for high-density housing. This 3-acre property on Moulton Parkway is redesignated from current “Open Space” to “High-Density Residential” to accommodate up to 115 dwelling units in satisfaction of the entire RHNA requirement for new construction.

Redesignation from “Open Space” to “Medium Density Residential” of a twenty-three acre site in the Land Use Element anticipates future housing development of up to 299 dwellings and would accommodate the “above moderate income” RHNA requirement.

Designation in the General Plan of appropriate sites for future housing affords consistency between the General Plan and the Regional Housing Needs Assessment of the Southern California Association of Governments.

County of Orange Airport Land Use Commission Airport Environs Land Use Plan (AELUP)

Portions of Laguna Woods are included within the Airport Environs Land Use Plan planning area because of proximity to the former Marine Corps Air Station (MCAS) – El Toro. The General Plan is not consistent with the provisions of the AELUP.

The Marine Corps Air Station – El Toro was closed in 1999. The Airport Environs Land Use Plan was last revised in 1995 and does not reflect the 1999 closure of MCAS - El Toro. Development in Laguna Woods prior to closure of MCAS – El Toro was subject to deed restrictions and General Plan and Zoning Ordinance provisions intended to protect the public from noise and potential accidents associated with approaches and landings of military aircraft at the base.

The AELUP land use restrictions were associated with noise impacts and accident potential zones analyzed and described in the “Air Installations Compatible Use Zones” (AICUZ) study prepared by the Department of Defense. Restrictions pursuant to the AELUP and AICUZ documents included:

Avigation easements over private property for the benefit of the United States restricting uses and density of development under the former flight path for MCAS – El Toro;

Interim General Plan policies in the Land Use, Noise, and Safety Elements restricting development in areas located under the former flight path;

Zoning (Rossmoor Leisure World Planned Community Text) limiting the type, size, and occupancy of buildings under the former flight path.

After closure of MCAS – El Toro, the United States Department of Defense relinquished rights to the aviation easements over private properties under the former flight path. The City of Laguna Woods subsequently amended the Interim General Plan and the Zoning Ordinance deleting development restrictions related to the closed base from each of the documents. The County of Orange filed suit against the City alleging that the General Plan and Zoning Ordinance Amendments were not consistent with the AELUP and should be rescinded. As of this writing, the matter has not been settled.

On March 5, 2002, voters of Orange County passed the Orange County Central Park and Nature Preserve Initiative (Measure W). Approval of Measure W amended the Orange County General Plan so as to indicate non-aviation, mixed use of the former El Toro base, precluding future development of an airport.

On April 23, 2002, the Department of the Navy issued a Record of Decision indicating the Federal Government’s decision to dispose of the former Marine Corps Air Station “in a manner consistent with the Orange County General Plan, as recently amended by the passage of the Orange County Central Park and Nature Preserve Initiative (Measure W) on March 5, 2002, and the City of Irvine General Plan.”

Consistent with Measure W and the Navy’s Record of Decision, the Laguna Woods General Plan anticipates non-aviation use of the former MCAS – El Toro. No land use restrictions to protect current and future residents from impacts associated with aircraft overflight are included. The Airport Environs Land Use Plan has not yet been amended to reflect changed circumstances through deletion

of MCAS – El Toro from its planning area. Until the County of Orange Airport Land Use Commission amends the AELUP, the Laguna Woods General Plan will be inconsistent with the Airport Environs Land Use Plan.

Compatibility of Future Land Uses Accommodated in the Project General Plan with Existing Land Uses in the Vicinity

Adoption and implementation of the General Plan will not, in itself, have direct physical effects on the environment. The land use designations for some properties, however, would be changed upon adoption of the proposed General Plan. Subsequent development and occupancy of uses consistent with the General Plan could result in incompatibilities with existing uses. Of concern are parcels designated for future commercial development in proximity to residential uses, and parcels designated for medium and high density residential uses which abut existing residential development of lower density or existing commercial development.

Incompatibilities of new uses with existing development may be manifest as the intrusion of excessive noise, light and glare, fugitive dust, and traffic during construction into previously developed, nearby areas. Noise, light and glare, and traffic impacts may continue as a result of use and occupancy of new buildings. Each of these indirect impacts is addressed in greater detail in the respective areas of impact analysis in this EIR (Noise, Air Quality, Transportation/Circulation, Noise).

Incompatibilities of new uses may also be a consequence of size and bulk of new buildings, and their placement on-site, so as to overpower and visually dominate existing, smaller scale development nearby. Conversely, new small-scale, low-density residential development may be incompatible with existing, high-density residential or large-scale commercial structures. Shadows cast on substantial portions of adjacent properties for extended periods, or obstruction of views from adjacent properties, may also be impacts of new development.

The compatibility of future commercial buildings with existing development will be affected by general limitations on building intensity included in the General Plan. The Land Use Element of the General Plan includes a limitation on development of commercial sites expressed as a maximum permissible Floor Area Ratio (FAR) of 0.3. The FAR limits new building floor area as a function of the area of the site on which it is constructed i.e. FAR of 0.30 allows three (3) square feet of building to be developed for each ten (10) square foot of site area ($3 \div 10 = 0.30$).

The FAR of 0.30 included in the General Plan limits new commercial buildings to maximum site coverage of 30%, and less than 30% if constructed as multi-story buildings. Building site coverage of 30% or less may allow flexibility in location of a commercial building on site and maximum horizontal separation may be maintained from existing development to minimize impacts associated with visual dominance or shadows.

A FAR of 0.3 is generally consistent with the intensity of existing commercial development in Laguna Woods. This ratio will be incorporated into a revised Zoning Ordinance for the City reflecting development intensities set forth in the Land Use Plan of the General Plan. The General Plan does not indicate future development of greater bulk, scale, or intensity than that of existing development and the revised Zoning Ordinance, consistent with the General Plan, will reflect this intent.

Future development consistent with the General Plan will occur in the general area of the intersection of Moulton Parkway and El Toro Road near the geographic center of Laguna Woods. Potential commercial development sites (Table 4.0-5) are identified as Parcels 2, 3, 4, 5, 6, 8 and 9. These sites are situated within the existing commercial corridor extending along El Toro Road both east and west of Moulton Parkway. Parcels 1 and 7 are designated for future residential development and are along the Moulton Parkway corridor north and south, respectively, of El Toro Road.

Parcel 1

Potential high-density residential development site Parcel 1 is located on the east side of Moulton Parkway at the intersection of Santa Maria Avenue and abuts open space use on the north, south, and east, and is located across Moulton Parkway from open space uses in Laguna Woods and commercial uses in the City of Laguna Hills.

Construction of high-density residential dwellings on this site consistent with the General Plan will not result in impacts on nearby, existing development. Physical separation by the 100-foot wide Moulton Parkway right-of-way from open space use (plant nursery) in Laguna Woods and commercial shopping center in Laguna Hills minimizes the potential visual dominance or shadow impacts. No views from private dwellings would be affected. The Leisure World golf course adjoining Parcel 1 on the north, south, and east does not include any habitable buildings that could be affected by development on this site.

Parcels 2, 3, and 8

Potential commercial development sites Parcels 2, 3, and 8 are located north of El Toro Road and east of Calle Sonora adjoined by existing, low-density residential development to the west that could be affected by future development. These sites abut the south side of the Leisure World tennis courts and golf driving range facility, Moulton Parkway to the east, and the existing Town Center commercial development to the south.

These sites are separated from residential development in Leisure World by Calle Sonora and the existing golf cart trail extending from Leisure World Gate 7 to the tennis courts and golf driving range. The building pad on Parcel 2 is significantly below the elevations of the nearest dwelling units. This horizontal and vertical separation will minimize potential visual domination of the setting by new development.

Development of Parcel 2 would not affect views from dwellings due to pad elevations significantly below those of existing residences. Commercial developments on Parcel 3 and 8 could affect views from a limited number of residential units in the Leisure World community. Views to the east from dwellings near Leisure World Gate 7 west of Calle Sonora could be partially blocked by construction of buildings on these sites facilitated by their re-designation for commercial use in the General Plan.

Implementation Measure II.A.2 of the Land Use Element of the General Plan directs revision of the Zoning Ordinance so as to include view considerations as a means to ensuring compatibility of non-residential development with nearby residential uses. Shadows of commercial structures would be cast in directions away from residences.

Development of Parcels 2, 3, and 8 consistent with the General Plan will conform to comparable standards for building height, bulk, intensity, and setbacks as regulated existing Town Center commercial development. Buildings on Parcels 2, 3 and 8 will be of similar scale and character as existing Town Center commercial development that includes a multi-story hotel and office buildings.

Pad elevations on Parcels 3 and 8 are significantly above the Leisure World tennis courts and golf driving range. Construction of commercial buildings subject to the current 65-foot height limitation of the Zoning Ordinance could result in structures visually dominating this setting.

Parcels 4, 5, 6, and 9

Potential commercial development sites identified as Parcels 4, 5, and 6 are located south of El Toro Road and west of Moulton Parkway and have frontages on El Toro Road or Moulton Parkway, and adjoin sites developed with commercial or institutional uses. Existing commercial development is located opposite these parcels across El Toro Road and across Moulton Parkway.

The Home Depot commercial center is situated to the west of Parcel 5; Parcel 4 is adjacent to and east of Parcel 5 and is currently developed as the Leisure World Equestrian Center at the southwesterly corner of El Toro Road and Moulton Parkway. A commercial office building property abuts Parcel No. 4 on the southeast along Moulton Parkway. Parcel 6 has roadway frontage on Moulton Parkway to the southeast of Via Campo Verde. A commercial building is located on the adjacent property to the northwest of Parcel 6 and a parking lot and church building on adjacent property to the southeast.

Parcel 9 is located south of El Toro Road and west of Moulton Parkway, has vehicular access from Via Campo Verde, and abuts the existing Home Depot commercial center, future commercial development Parcels 4 and 5, and medium-density residential development Parcel 7. Parcel 9 is currently developed with Leisure World facilities including a community garden plot, maintenance offices, bus garage, maintenance building, and employee parking lot. The southerly boundary of Parcel 9 abuts the Aliso Viejo Golf Course in the City of Aliso Viejo.

Development on Parcels 4, 5, 6, and 9 consistent with the General Plan will house uses similar to those of existing development. Pursuant to the General Plan, a revised zoning ordinance will be prepared and will retain standards regulating building bulk, height, intensity, and setbacks substantially consistent with those that applied to previous development in the City. Accordingly, development on Parcels 4, 5, 6, and 9 is expected to be substantially similar in size, scale, and use as existing commercial structures. Commercial development on Parcel 6 will be buffered from the adjacent church building by the church parking lot that separates the two by a horizontal distance of 100 feet.

Development on Parcels 4, 5, 6, and 9 will be at pad elevations substantially lower than the nearest residences with views across the site. This difference in elevation will preclude view obstruction by future development on these parcels.

The Aliso Viejo Golf Course adjoining Parcel 9 includes a maintenance building and yard that provides a visual barrier and horizontal separation between the actual golf course and much of Parcel 9. The remaining length of the common boundary between the two sites is characterized by an increase in the elevation of

the golf course parcel above that of Parcel 9 such that development would occur on pad elevations below and shielded from view from significant portions of the golf course.

Parcel 7

Potential medium-density residential development site Parcel 7 is located south of El Toro Road and west of Moulton Parkway and has vehicular access from Via Campo Verde. Parcel 7 abuts proposed commercial sites in Laguna Woods, and existing open space and residential uses in the City of Aliso Viejo.

Residential development of Parcel 7 is anticipated at medium-densities of up to 13 units per acre. This is consistent with existing multiple-family development adjacent to this site in the City of Aliso Viejo developed pursuant to the County of Orange General Plan Land Use Category of “Suburban Residential” at densities of up to eighteen (18) units per acre. Existing Zoning Ordinance height restrictions of 40 feet will be maintained consistent with this General Plan designation and will limit the overall bulk and height of residential development to a scale that will not visually overwhelm the adjacent Iglesia Park in Aliso Viejo.

Southern California Edison Right-of-Way

The General Plan Land Use Plan changes the land use designation for portions of the Southern California Edison transmission towers easement along the southwesterly flank of the City of Laguna Woods from “Suburban Residential” to “Open Space”. As a result, the entire right-of-way within the municipal boundary of Laguna Woods will be “Open Space” and restricted to non-commercial uses consistent with the current use and designation. Consequently, no incompatibilities between future land use and existing, adjacent residential and open space uses in the City of Laguna Beach or in unincorporated Orange County are anticipated.

4.0.5 MITIGATION MEASURES

LU-1 *Consistency with Southern California Association of Governments
Regional Comprehensive Plan and Guide*

Conformity with the Regional Comprehensive Plan and Guide is achieved through Policies and Implementation Measures of the project General Plan with the exception of Policy 3.21 of the Growth Management chapter relative to preservation and protection of recorded and unrecorded cultural resources and archaeological sites. Conformity is achieved through Mitigation Measure CR-1 included in Section 4.11.5, *Mitigation Measures, Archaeological Resources*, herein.

LU-2 *Conflict between General Plan provisions and those of the Airport
Environs Land Use Plan*

Amend the Airport Environs Land Use Plan (AELUP) so as to delete the former Marine Corps Air Station – El Toro from the planning area of the Airport Land Use Commission for Orange County.

LU-3 *Potential View Impacts*

Revise the Zoning Ordinance so as to include as part of the discretionary project approval process consideration of impacts to views from existing residential units that may result from building construction on potential development sites identified in the General Plan Land Use Element.

LU-4 *Potential Incompatibility of New Development with Existing Development*

Revise the Zoning Ordinance so as to include consideration of compatibility of building scale, bulk, and height as part of the discretionary project approval process for construction on potential development sites identified in the General Plan Land Use Element.

4.0.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Consistency with Southern California Association of Governments Regional Comprehensive Plan and Guide - Less than Significant Impact

With the exception of the Growth Management chapter relative to preservation and protection of recorded and unrecorded cultural resources and archaeological sites, consistency/conformity is achieved with the *Regional Comprehensive Plan and Guide* and impacts are reduced to a level that is less than significant. Impacts to cultural resources and archaeological sites will be mitigated below a level of significance by implementation of Mitigation Measure CR-1 in Section 4.11.5.

Conflict between General Plan provisions and those of the Airport Environs Land Use Plan –Significant Unavoidable Impact

The conflict between provisions of the Laguna Woods General Plan and the Airport Environs Land Use Plan is considered a significant unavoidable impact. The proposed Mitigation Measure, amendment of the Airport Environs Land Use Plan to delete Marine Corps Air Station – El Toro from the AELUP planning area, is not within the purview or authority of the City of Laguna Woods. The Airport Land Use Plan should be amended by action of the Airport Land Use Commission of the County of Orange, but until it is amended, the conflict between the provisions of the Laguna Woods General Plan and the Airport Environs Land Use Plan will be a significant unavoidable impact.

Potential View Impacts – Less than Significant Impact

Revision of the Zoning Ordinance to incorporate consideration of view impacts as part of the discretionary project review and approval process will facilitate new development that is designed and sited so as to reduce view impacts to a less than significant level.

Potential Incompatibility of New Development with Existing Development – Less than Significant Impact

Revision of the Zoning Ordinance to incorporate consideration of building scale, bulk, and height as part of the discretionary project approval process on potential

development sites identified in the General Plan Land Use Element will reduce the potential incompatibility impact to a less than significant level.

4.1 POPULATION AND HOUSING

4.1.1 EXISTING CONDITIONS

The population of the City of Laguna Woods, according to the 2000 United States Census, is 16,507. The population of Orange County is 2,846,289. All existing residential uses in Laguna Woods are age-restricted for adults aged 55 years and older. The median age of Laguna Woods' residents is 78, contrasted with a countywide median age of 33.3 years.

Of the 13,252 dwelling units in Laguna Woods, 12,736 are located in the gated community of Leisure World. Countywide, a total of 969,484 dwelling units are indicated in the 2000 Census. The average household size in Laguna Woods is 1.4 persons contrasted with an average for Orange County of three persons per household.

4.1.2 REGIONAL PLANS

Southern California Association of Governments Regional Comprehensive Plan and Guide (RCPG)

Projects of regional significance, including General Plans, are subject to review by the Southern California Association of Governments (SCAG) as to conformity with the Regional Comprehensive Plan and Guide. Conformity of the proposed General Plan with provisions of the Regional Comprehensive Plan and Guide is evaluated.

Southern California Association of Governments Regional Housing Needs Assessment (RHNA)

The Regional Housing Needs Assessment is prepared as required by Section 65584 of the California Government Code and quantifies existing and future housing needs, see page 80.

4.1.3 THRESHOLDS OF SIGNIFICANCE

Population and housing impacts could be deemed significant if adoption and implementation of the General Plan would induce substantial population growth.

4.1.4 PROJECT AND CUMULATIVE IMPACTS

Adoption and implementation of the General Plan will not accommodate or result in extension of backbone infrastructure such as roadways and water and sewer mains that would allow or promote development of land not otherwise suitable for development, or extend development outside the geographic limits of existing urbanized land uses.

Adoption and implementation of the General Plan will change the land use designations of approximately twenty-three (23) acres of underdeveloped land from “Open Space” to “Medium Density Residential” use and approximately three (3) acres from “Open Space” to “High Density Residential”.

Population increase in Laguna Woods indirectly attributable to adoption of the General Plan is projected to range between 580 and 1,245 new residents by the year 2015 as construction of new dwelling units occurs. The actual population increase will depend upon the number of new dwelling units actually constructed, and the average size of new households. Total City population could reach 17,752, a 7.5% increase. This contrasts with projected (SCAG) countywide population growth of over the same period of 314,000, or 10.9%. Population increase attributable to adoption and implementation of the project General Plan will be less than 0.4% of projected countywide growth. A population increase of this magnitude is small both in relative and absolute terms and is not considered significant.

Implementation of the General Plan will result in land use designation changes for approximately forty-five (45) acres of underdeveloped and undeveloped land from “Open Space” to “Commercial” use. An additional three acres of undeveloped property is already zoned for commercial use and retains that

designation in the General Plan. Total potential future development facilitated in the General Plan includes up to 494,000 square feet of retail and office commercial building area, and up to 115 high-density and 299 medium-density dwelling units. Additional, permanent employment opportunities will accompany new commercial land uses accommodated in the General Plan. Allowing for variations in employment intensity among uses within the larger commercial land use category, additional future employment was attributed at the rate of three (3) employees per 1,000 square feet of commercial building area. Over its fifteen-year planning period, the General Plan could indirectly facilitate an increase of approximately 1,500 employment opportunities in Laguna Woods, with total City-wide employment reaching 3,200.

Increased employment in advance of development of suitable housing opportunities for employees may be considered growth-inducing. The City of Laguna Woods, however, is “housing rich” reflected in a jobs-housing ratio of 0.13 i.e. 0.13 jobs for each dwelling unit in the City. This compares with the Southern California Association of Governments target ratio range of 1.0 to 1.29 jobs per dwelling unit. The addition of up to 414 new dwelling units and approximately 1,500 jobs in the City of Laguna Woods over the planning period of the General Plan would improve the jobs/housing ratio to 0.24. In these circumstances jobs creation accompanying implementation of the General Plan is not considered a growth-inducing impact inasmuch as new employment opportunities in this housing-rich area provide opportunities for existing residents, and reduce the numbers of local residents commuting to more distant employment centers. As new jobs associated with the project are likely to be filled by existing residents, additional housing demand is not expected to accompany employment growth in Laguna Woods. Accordingly, jobs creation in this instance is not considered growth-inducing.

4.1.5 MITIGATION MEASURES

None Required.

4.1.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Less than Significant.

4.2 GEOLOGY AND SEISMICITY

4.2.1 EXISTING CONDITIONS

Regional Geologic Setting

The City of Laguna Woods is located at the southeastern edge of the central structural block of the Los Angeles basin, along the northern flank of the San Joaquin Hills. Regionally, local basement rocks are overlain by a thick sequence of marine and non-marine sedimentary rocks dating from the Cretaceous to the Quaternary; some volcanic rocks are also present.

As the result of tectonic activity, the basin deepened rapidly in the Miocene, resulting in deposition of the Monterey and Capistrano Formations. Eustatic regression due to tectonic uplift and basin filling began in the early Pliocene, as evidenced transitional Niguel Formation exposed in the southernmost part of the large spur that extends south from El Toro Road. The basin finally emerged in the Pleistocene. Uplift later in the Quaternary elevated stream terrace deposits, such as those located in Laguna Woods near the San Diego (I-5) Freeway. Streams during the late Pleistocene “Ice Age” effectively eroded the landscape and deposited alluvium in the valleys. The process continued at a slower rate in the drier climate of the Holocene.

Local Geologic Setting

The City of Laguna Woods is underlain by four Tertiary bedrock formations that are partially covered by unconsolidated Quaternary sediments. Most of the bedrock exposed in the western part of the City is the deltaic Sepes Formation. The eastern part of the City is characterized by marine rocks of the Monterey, Capistrano, and Niguel Formations. Terrestrial Quaternary deposits obscure much of the bedrock in low-lying areas, particularly in the central part of the City (Map 4.2-1).

Faulting/Ground Rupture

The closest faults likely to produce large earthquakes are the San Andreas, San Jacinto, Elsinore-Whittier, and Newport-Inglewood. Locally, there are several less-significant faults: the Christianitos fault to the northeast is suggested to be active; the Shady Canyon fault and Laguna Canyon fault zone are located to the west, and the east-trending Temple Hill fault terminates near Aliso Creek. There is no strong evidence for Holocene offset along any of these local faults.

Seismicity

As is the case for most locations in Southern California, the City is located in a region that is characterized by moderate to high seismic activity. The areas within the City have experienced moderately strong ground shaking due to earthquakes on a number of occasions in historic time.

Groundwater and Liquefaction

Ground failure can occur due to liquefaction. Liquefaction occurs when three conditions are met. The first condition is strong ground shaking of relatively long duration. The second condition is loose or unconsolidated, recently deposited sediments consisting primarily of silty sand and sand. The third condition is saturated sediments. Depending on seasonal rainfall, groundwater levels in the City fluctuate. Generally, groundwater levels of 30 feet or closer to the surface could contribute to liquefaction impacts.

Tsunami

In the remote possibility sea-floor earthquake generates a tsunami that reaches the coast of southern California, the City is not at risk because of its inland location (approximately 5 miles from the coast) and elevation above sea level (approximately 340 feet).

Seiche

If an earthquake generates a sudden landslide into large mountain lake or reservoir, or a coastal fiord, adjacent and down-slope areas could be devastated by flooding and muddy debris flows. Fortunately, the City is not situated in an area that is not at risk from this geologic phenomenon.

Slope Stability

Severe shaking from a strong earthquake could trigger bedrock failures, including rock falls in steep areas. Areas underlain by the expansive mudstones of the Monterey and Capistrano Formations are the most prone to slumping. Intense rainfall could also result in mud-debris flows, mainly at the heads of steep canyons. These sudden and rapid landslides are common in Sepses and Monterey Formations, but the hazard is greatest in the Oso Member of the Capistrano Formation.

Erosion

Units highly susceptible to rilling, ravelling, and wind erosion are the sand facies of the Niguel Formation and friable interbeds in the Oso Member of the Capistrano Formation. Capistrano Formation siltstones are particularly prone to piping (development of subsurface open drainage passages along joints and fractures). Furthermore, many of the soil units that are located within the areas of the proposed developments are characterized as having moderate to high erosion susceptibility.

Soils

There are three-soil associations that occur in the project area. These include the Sorrento-Mocho, Alo Bossanko, and Friant-Cieneba-Exchequer. The Sorrento-Mocho includes well-drained sandy loams, loams, or clay loams on alluvial fans and flood plains. This soil occurs in southeastern part of Laguna Woods along Aliso Creek. The Alo Bossanko soils include well-drained calys on coastal foothills. This soil association is the most common throughout the City and covers

approximately 90 percent of the study area. The Friant-Cienaba-Exchequer soils are excessively drained and well-drained sand loams, loams, caly loams, gravelly loames, and cobbly loams on coast foothill. This soil association occurs in the middle of the eastern edge of Laguna Woods.

4.2.2 AGENCY JURISDICTION AND REGULATIONS

This information is based upon the California Division of Mines and Geology reports on the San Juan Capistrano Quadrangle (Morton et al., 1974) and on the Laguna Beach Quadrangle (Tan and Edgington, 1976).

4.2.3 THRESHOLDS OF SIGNIFICANCE

In assessing whether implementation of the proposed project would represent a significant impact, the following thresholds of significance were applied. A significant impact would occur if the project would expose people or structures to:

- ☐ Rupture of a known earthquake fault.
- ☐ Strong seismic ground shaking.
- ☐ Seismic-related ground failure, including liquefaction.
- ☐ Substantial soil erosion.

4.2.4 PROJECT AND CUMULATIVE IMPACTS

Faulting/Ground Rupture

Ground Ruptures cause surface displacement beneath structures and can result in severe structural damage. However, due to the lack of strong evidence for Holocene offset along the local faults in the vicinity of the City, no ground rupture impacts are expected to occur.

Seismicity

Since the major and local faults are not located within the City, the strong ground motion risks posed by the regional fault systems are not considered to be greater within the City compared to the surrounding areas. As new structures are proposed, they will be required to be structurally designed in accordance with the 1997 Uniform Building Code (UBC). The design requirements in the UBC would reduce potential seismic ground shaking impacts to less than significant.

Groundwater and Liquefaction

Implementation of the proposed General Plan could result in future developments within the City to be exposed to liquefaction impacts if the groundwater level is within 30 feet from the surface. This potential impact is considered significant.

Tsunami

Since the City is located approximately 5 miles from the ocean and approximately 340 feet above mean sea level, the City will not experience an impact from a potential tsunami.

Seiche

Since the City is not located near a large mountain lake or reservoir that could experience a seiche, the City will not experience an impact from a potential seiche.

Slope Stability

Since the proposed development areas are relatively flat and adjoining manufactured slopes have been graded for existing development, risks from landslides and mudflows are not expected to occur.

Erosion

Since the potential development areas are relatively flat and adjoining manufactured slopes have been graded for existing development, such that risk

associate with erosion are expected to be less than significant erosion and landslide impacts.

Soils

The soil units that are located in the areas of proposed development under the General Plan are characterized as having rapid runoff potential. Since the proposed development areas are relatively flat, the potential for impacts associated with rapid runoff potential is considered less than significant.

Cumulative Impacts

Implementation of the proposed General Plan will result in the build-out of approximately 73 acres within the City. This potential development along with future development that is anticipated in the surrounding jurisdictions/cities, are not expected to result in cumulative impacts because geology and soils impacts are site-specific. Therefore, the future development within the City is not expected to contribute to cumulative geology and soils impacts.

4.2.5 MITIGATION MEASURES

- GS-1 The City shall require developers to prepare detailed foundation investigations for potentially unstable ground areas so that structures that are built are not subject to ground movement effects such as liquefaction.
- GS-2 The City shall continue to incorporate the most recent seismic safety practices into City codes and project review processes.

4.2.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of the mitigation measures described above would ensure that build-out under the proposed General Plan would result in less than significant geology and soil impacts.

4.3 HYDROLOGY AND WATER QUALITY

4.3.1 EXISTING CONDITIONS

Surface Water

The study area is located in the foothills of the San Joaquin Hills. Hills and valleys formed by the San Joaquin range characterize the topography of the project study area and the direction of drainage. The City of Laguna Woods straddles two primary watersheds, the Newport Bay/San Diego Creek watershed and the Aliso Creek watershed. A third watershed, Laguna Canyon Creek, drains the western most portion of Laguna Woods. This watershed, however, is unaffected by future development consistent with the project General Plan. Both San Diego Creek and Aliso Creek flow perennially as a result of storm and urban runoff from surrounding cities. Laguna Canyon Creek is ephemeral.

The Newport Bay/San Diego Creek (NB/SDC) watershed is located in Central Orange County in the southwest corner of the Santa Ana River Basin. Newport Bay is a combination of two distinct water bodies - Lower and Upper Newport Bay, with areas of 752 and 1,000 acres, respectively. Upper Newport Bay (UNB) is primarily an estuary with fresh water inflows from tributaries and drainage channels. It is home to six federally and state listed threatened and endangered species (five bird species and one plant specie) and is designated as an Ecological Reserve by the State of California.

The primary source of freshwater flowing into UNB is San Diego Creek. The Newport Bay/San Diego Creek watershed generally drains the northern portion of the City of Laguna Woods through a series of local and regional storm drain facilities that connect to Moulton Parkway north of the city limits. The Newport Bay/San Diego Creek watershed drains approximately 154 square miles that includes the cities of Irvine, Newport Beach, Tustin, Orange, Laguna Hills, and Lake Forest before it outlets to Newport Bay, in Newport Beach. The San Diego Creek is located north of Laguna Woods, outside of the proposed development area.

Aliso Creek runs through the southeastern portion of the City and outlets to the Pacific Ocean. It drains a regional area of approximately 35 square miles that include Lake Forest, Mission Viejo, Laguna Hills, Aliso Viejo, and Laguna Niguel. In the City of Laguna Woods, this effluent is conveyed to the creek through a series of storm drains. Dairy Fork is a major regional storm drain in the City of Laguna Woods that drains Lake Forest and Laguna Hills before entering Laguna Woods. The confluence of Dairy Fork and Aliso Creek is immediately south of Laguna Woods in the vicinity of the Laguna Hills Drive/Moulton Parkway intersection, in Aliso Viejo.

Potential development sites in Laguna Woods are located along Moulton Parkway and El Toro Road. These development areas do not drain into Aliso Creek. Rather, drainage from the proposed development areas is conveyed to the Newport Bay/San Diego Creek watershed.

Existing maintained storm drain facilities in the proposed development areas include those within the south side of Ridge Route Drive and in Moulton Parkway; Santa Maria Avenue (excluding the portion within the City of Laguna Hills), and El Toro Road. Runoff from the development areas currently sheet flows into respective storm drain facilities within Ridge Route Drive, Moulton Parkway, and El Toro Road.

Water Quality

Water quality in the natural receiving waters downstream of the potential development sites is currently affected by discharges of stormwater runoff from surrounding urban development. Current uses on these sites include vacant land (Parcels 2, 3, 5, and 6), garden plots (Parcels 1 and 9), a composting facility (Parcel 7), and tennis courts with parking lot (Parcel 8). These uses likely contribute some limited agricultural (garden and compost) non-point source discharges as well as minor nuisance flow to the San Diego Creek watershed. The primary pollutants of concern in agricultural (garden and compost) runoff include fine suspended solids, pesticides, herbicides, and nutrients, notably nitrogen and phosphorous compounds. Throughout the year, the tennis courts and parking lot contribute a share of nuisance flows, such as that from pavement cleaning,

irrigation loss, and vehicle oil and grease. Nuisance flows consist of ambient water quality ranging from nearly being drinking water quality to highly contaminated quality with oil and grease, surfactants, and pesticides. However, no monitoring data is available for the study area.

The California State Water Resources Control Board (SWRCB) sets objectives and criteria for the protection of water quality in various California water. These water quality objectives are intended for the reasonable protection of the present and probable beneficial uses of California inland water bodies, including bays, estuaries, and groundwater.

Laguna Woods lies within two primary watersheds, San Diego Creek and Aliso Creek watersheds, as previously described. San Diego Creek falls under the jurisdiction of the Santa Ana Regional Water Quality Control Board (SARWQCB), while Aliso Creek lies within the jurisdictional region of the San Diego Regional Water Quality Control Board (SDRWQCB). Therefore, as a matter of course, SARWQCB sets water quality objectives in the Water Quality Control Plan for the San Diego Creek watershed, as does SDRWQCB for Aliso Creek. Likewise, each watershed is assigned particular beneficial uses for the benefit of people and wildlife. Water quality objectives are intended to protect those uses. The water quality objectives and beneficial uses for San Diego Creek and Aliso Creek are identified Appendix F.

Surface water quality in the San Diego Creek watershed is poor. Upper Newport Bay/San Diego Creek Watershed 205(j) Water Quality Planning Grant Final Report (May 2001) reported four categories of water quality problems in the Newport Bay and San Diego Creek watershed: sedimentation, bacteriological contamination, eutrophication, and toxic contamination – and the watershed is listed on the Section 303(d) list of the 1972 Clean Water Act for these problems. The 2002, 303(d) California List and Total Maximum Daily Load (TMDL) Schedule lists high concentrations of metals, pesticides, and priority organics in the watershed.

Surface water quality in the Aliso Creek Watershed is marginal and generally declines toward the ocean. There is no direct evidence of poor water quality associated with the City of Laguna Woods, as no documented water quality

studies have been performed within city boundaries, to date. However, bacterial investigations by the County of Orange in 1998-1999, pursuant to the County's Aliso Creek 205(j) Water Quality Planning Study (1998), revealed consistently high levels of E. coli at the confluence of the Dairy Fork drain with Aliso Creek. This confluence is located immediately downstream from Laguna Woods, in the City of Aliso Viejo. Reasons for the high E. coli counts are not yet known, though the County of Orange and cities that use the drain are actively seeking a better understanding of the issues. During the time of the study, the El Toro Water District, which provides water and sewer service to the City of Laguna Woods, did not find any indication of cracks or seepage, indicating that other factors may be at work in influencing Creek water quality. Additional surface water quality pollutants in Aliso Creek include, pesticides, priority organics, and chemical toxicity.

Groundwater

The Aliso Creek groundwater basin underlies the eastern portion of Laguna Woods, and the proposed development areas lie outside of the basin. Available groundwater data indicates compliance with levels of allowable fluoride, sodium, manganese, and boron. However, concentrations of sulfates, total dissolved solids, iron, and turbidity are often in excess of compliance standards, indicating Aliso Creek groundwater basin is not ideal for potable groundwater production. The San Diego groundwater basin is located under San Diego Creek, outside of Laguna Woods. Perched (shallow) groundwater within the basin is of poor quality due to the presence of high concentrations of nutrients (e.g. nitrates) and selenium, which occurs naturally in the soil.

Flooding

According to the Federal Emergency Flood Agency's Flood Insurance Rate Maps (FIRM), Panels 57 and 64 of FIRM 81, for the City of Laguna Woods, County of Orange, flood potential within the City of Laguna Woods is generally low. The majority of the City lies outside the 100- or 500-year flood zones with the exception of Aliso Creek, and the western boundary of Laguna Woods approximately 1,000 feet northeast of Laguna Lake in Laguna Coast Wilderness Park.

Along its approximately 0.45 mile course through the City, Aliso Creek is an improved, concrete-lined soft bottom channel surrounded by residential developments. It is designated as a special flood hazard area inundated by 100-year flood event. The floodplain width reaches 60 feet where the City's southern boundary crosses the Creek, at the north side of Laguna Hills Drive, and to 100 feet, at the City's northern boundary, the south side of Avenida de la Carlota. The average elevation for flooding along this portion of the reach is 288.5 feet above mean sea level. A 500-year recurrence interval flood will inundate the area where the City's northern boundary crosses the Creek. In this area, the floodway reaches a width of 700 feet.

The west side of Laguna Woods, at Bahia Blanca south of the intersection with Calle Azul, is subject to a 100-year flood inundation, with a floodway width of roughly 60 feet. The base flood elevation is undetermined. Homes at 3458-3466, 3459-3465, 3445-3457, and 3446-3456 Bahia Blanca would be subject to flooding. Floodwaters would tend downward towards Laguna Lake, to the southwest. The project proposed development areas are outside of the 100-year flood zone.

4.3.2 THRESHOLDS OF SIGNIFICANCE

Surface Water

Impacts to water quality resulting from adoption of the General Plan could be deemed significant if this action would result in:

- ☐ Changes in absorption rates, drainage patterns, or the rate and amount of surface run-off in excess of the capacity of existing or planned stormwater drainage systems.
- ☐ Changes in the amount of surface water in any body of water.

Water Quality

Impacts to water quality resulting from adoption of the General Plan could be deemed significant if this action would result in:

- ☐ A violation of any water quality standards or waste discharge requirements.

Groundwater

Impacts to groundwater resulting from adoption of the General Plan could be deemed significant if this action would result in:

- ☐ Changes in absorption rates, drainage patterns, or the rate and amount of surface run-off in excess of the capacity of existing or planned stormwater drainage system.

Flooding

With an increase in impervious surfaces and consequent increase in stormwater runoff from future development under the proposed General Plan, there would also be the potential for an increase in pollutants from new land uses. However, this increase in impervious surfaces is not expected to affect groundwater because no groundwater recharge areas are located in or in the immediate vicinity of a groundwater recharge area.

4.3.3 PROJECT AND CUMULATIVE IMPACTS

Surface Water

Development consistent with the General Plan will increase total impervious surface area in Laguna Woods, thereby increasing storm and urban runoff. The parcels indicated for future development in the Land Use Element of the project general Plan, generally drain northwesterly, towards San Diego Creek, through a street/gutter system and local storm drain facilities. Parcel 1 drains east through

an existing culvert where it then connects to a storm drain in Ridge Route Drive and outlets into Veeh Reservoir in Laguna Hills.

Parcels 2, 3, and 8 drain southeast down the west side of Moulton Parkway via the curb and gutter system and into a 42-inch reinforced concrete pipe (storm drain) on El Toro Road at the southeastern corner of the Moulton Parkway and El Toro Road intersection. The storm drain runs east on El Toro Road and connects with a larger 72-inch reinforced concrete pipe just before Sevilla Avenue. The 72-inch storm drain travels north to Ridge Route Drive, crosses under Ridge Route Drive, outlets into Veeh reservoir in Laguna Hills, within the San Diego Creek watershed.

Storm water in Parcels 4, 5, 6, 7, and 9 drain east via a culvert under Moulton Parkway which connects to a storm drain in Avenue Carmel, then travels north where it connects to the drain in El Toro Road and continues north to the Veeh Reservoir. Due to capacity problems downstream in El Toro Road and the storm drain system that leads to Veeh Reservoir, Parcel 5 serves as a retention basin for adjacent parcels to the west. This allows for water to be retained until such time that the capacity of the storm drain allows water to flow into the reservoir.

Stormwater runoff associated with development pursuant to the project General Plan is expected to exceed the capacity of the current stormwater drainage system. Implementation of the proposed General Plan could contribute a substantial amount of stormwater runoff north of the City. The increase in stormwater runoff from future development within the General Plan area would combine with runoff from additional development that is expected to occur north of the City. The stormwater runoff from the proposed General Plan would significantly contribute to cumulative stormwater runoff and result in a significant cumulative impact on existing drainage facilities outside of the City.

Water Quality

Adoption and implementation of the proposed General Plan would result in the development of approximately 73 acres of urban land uses. The addition of impervious surfaces on the approximately 73 acres could substantially increase the potential storm water runoff from the proposed development areas.

Grading activities associated with the implementation of the proposed General Plan will result in cut and/or fill activities for the future land uses. These activities could convey a substantial amount of sediment and construction vehicle constituents into existing natural drainage courses. These activities could result in significant short-term water quality impacts. Development projects that encompass areas that are greater than one acre will be required to comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) and related General Construction Activity Storm Water Permit. This includes submittal of a Notice of Intent and the preparation of a Storm Water Pollution Prevention Plan (SWPPP) with Best Management Practices (BMP) to control potential erosion, sedimentation, and turbidity, and reduce other pollutants both during and after construction activities.

With a potential substantial increase in storm water runoff from the implementation of land uses on the proposed development areas (approximately 73 acres), decreases in surface water quality within the Newport Bay/San Diego Creek watershed may occur. This potential decrease in surface water quality could be significant.

Groundwater

With an increase in impervious surfaces and consequent increase in stormwater runoff from future development under the proposed General Plan, there would also be the potential for an increase in pollutants from new land uses. However, this increase in impervious surfaces is not expected to affect groundwater because no groundwater recharge areas are located in or in the immediate vicinity of a groundwater recharge area.

Flooding

Adoption and implementation of the project General Plan will not result in any flooding impacts because no proposed development areas are located within a 100 or 500- year floodplain. The nearest flood plain is located along Aliso Creek.

4.3.4 MITIGATION MEASURES

Surface Water

Increased surface water runoff will occur due to new development that is consistent with the proposed General Plan. The increased development will potentially affect a variety of facilities, including downstream storm drain facilities and bodies of water. To adequately provide for surface water runoff, the City of Laguna Woods will need to undertake the following:

- HD-1 The City of Laguna Woods shall require will preparation of a master drainage plan to accommodate run-off associated with a 100-year storm prior to approval of a development project on any potential development site indicated in the General Plan Land Use Element.
- HD-2 Application for discretionary project approval on potential development sites shown in the Land Use Element must be accompanied by appropriate hydrology study indicating means by which stormwater run-off will be handled consistent with local, state and federal laws.
- HD-3 Storm water drainage facilities will be constructed and/or appropriate development impact fees paid to ensure adequate facilities will exist to meet the surface water runoff generated by new development.

Water Quality

The increased development occurring consistent with the General Plan Update will potentially affect surface water quality. To adequately protect surface quality, the City of Laguna Woods will undertake the following:

HD-4 During the construction and operation of new development, the City Laguna Woods will require the implementation of best management practices to minimize pollutant runoff. This will include, where applicable, the preparation of Storm Water Pollution Prevention Programs (SWPPPs) to control runoff from construction sites.

HD-5 The City will require water quality management plans for new long-term activities to control urban constituents entering the existing storm drain system.

Groundwater

None Required.

Flooding

None Required.

4.3.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of mitigation measures HD-1, HD-2 and HD-3 will reduce impacts associated with changes in absorption rates and increases in the rate and amount of stormwater run-off in excess of existing storm water drainage facilities, to a level of less than significant. Additionally, implementation of mitigation measures HD-4 and HD-5 will maintain water quality standards during construction and long-term operation of development to reduce impact levels to less than significant.

4.4 AIR QUALITY

4.4.1 EXISTING CONDITIONS

The Laguna Woods study area is located in the South Coast Air Basin (SCAB). Rainfall within the basin is distinctly seasonal, occurring mostly between the months of November through April. Average wind speeds are light and show little variation, with the predominant daily wind pattern originating from the Pacific Ocean and blowing toward the mountains. As a result, the SCAB climate and air quality results from its meteorological and topographic influences.

The primary meteorological influence is a semi-permanent high pressure cell that hovers over Southern California. During the late spring, summer, and early fall, descending warm air derived from this area of high pressure blankets a layer of air that is cooler and closer to the ground. This weather occurrence, coupled with stable air temperatures, limits the vertical rise and dispersion of air pollutants. These pollutants are then trapped within the basin created by the mountains ranges as the ocean breezes push eastward from the Pacific Ocean.

Recognition of retirement communities and the fact that fewer emissions are generated from them, is an assumption built into the computer model, *URBEMIS7G Emissions Estimation for Land Use Development Projects*. The land area that encompasses the Leisure World retirement community, combined with the open space acreage in the City, represents almost ninety percent of the total land area, and makes Laguna Woods unique among cities. The following factors support URBEMIS assumptions:

- ☐ There is existing interconnectivity between residential units, recreation facilities and mixed use developments;
- ☐ Use of electric vehicles including golf cart are not uncommon, and the residents are strong candidates for use of other alternative fuel/on-street vehicles now on the market;
- ☐ Both private shuttle systems and public transportation services are available;

- ☐ The majority of residents no longer travel to jobs, and if they do, are not inclined to travel outside the community;
- ☐ An abundance of land is dedicated to landscape areas and recreational uses.

4.4.2 AGENCY JURISDICTION AND REGULATIONS

Federal Clean Air Act

In November 1990, Congress enacted a series of amendments to the federal Clean Air Act (CAA) intended to intensify air pollution control efforts across the nation. The primary goal of these amendments was an overhaul of the provisions for areas not meeting National Ambient Air Quality Standards. The amendments identify specific emission reduction goals, require a demonstration of reasonable further progress and attainment through Federal Attainment Plans, and incorporate more stringent sanctions for basins that fail to attain or meet standards. The United States Environmental Protection Agency is responsible for establishing and enforcing the national standards.

The Clean Air Act also requires States to develop State Implementation Plans (SIP) that set forth the goals and objectives for achieving CAA requirements. SIPs are a compilation of new and previously developed plans, programs, district rules, State regulations, and federal controls. Many of California's SIPs rely on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations and limits on emissions from consumer products. The California Air Resources Board is the lead agency in the development of a SIP, and the US EPA has the ultimate approval authority.

Transportation and Federal Clean Air Act Conformity

To be in compliance with the Transportation Equity Act of the 21st Century (TEA-21) and the EPA's Transportation Conformity Rule, the Southern California Association of Governments (SCAG) is required to develop a twenty year Regional Transportation Plan (RTP), and a Regional Transportation

Implementation Plan (RTIP) that includes a conformity analysis. This means the regional transportation plans, programs and projects must comply with the Clean Air Act requirements and meet specific attainment objectives established for the South Coast Air Basin. Conformity requirements and findings developed in compliance with federal regulations can be found in the Final 2001 RTIP – Technical Appendix Section I Conformity requirements and findings, August 2001.

Additionally, the RTP identifies existing and projected demographic trends within the sub regions of the basin. According to the SCAG forecast, the Orange County sub region had a jobs/housing ratio of 1.49 in 1990 and is projected to have a ratio of 1.77 by the year 2015. This ratio refers to the number of jobs in the sub region compared to the number of residential units, and is an indicator of traffic patterns, and thus carbon monoxide and other mobile source emissions. The jobs/ housing ratio in Laguna Woods is 0.13.

Table 4.4- 1: Jobs Housing Ratio

	1990	2000	2010	2015
Population	2,411,000	2,868,000	3,108,000	3,182,000
Housing	875,000	1,005,000	1,092,000	1,130,000
Employment	1,301,000	1,558,000	1,886,000	2,006,000
Jobs/Housing	1.49	1.55	1.73	1.77

Source: SCAG Regional Comprehensive Guide 1996

Transportation improvements found in the RTP are also part of the 1997 AQMP, and include infrastructure improvements, transit system expansion, HOV lanes, traffic signal synchronization, and traffic pattern optimization. According to the RTP, one significant project to occur in Laguna Woods is the development of Moulton Parkway as a Smart Street.

California Clean Air Act

Established in 1988 the California Clean Air act requires regulations and other control measures to achieve and maintain the State's air quality standards for ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide. The Act directs the districts to focus on reducing emissions from operational sources such as

motor vehicles, and area sources such as air conditioners, restaurants, and industrial facilities. Under the California Clean Air Act (CCAA), air quality management plans are required to achieve a five percent annual reduction in the emissions of each non-attainment pollutant or its precursors. The California Air Resources Board (CARB) is responsible for ensuring implementation of the California Clean Air Act, and attainment of federal standards, in particular the State Implementation Plan(s).

State of California requirements for air quality management are incorporated into the SIP for those pollutants stipulated in the federal Clean Air Act. The development of a SIP is typically a joint effort by the South Coast Air Quality Management District (SCAQMD) and the Air Resources Board working with federal, State, and local agencies. The SIPs set forth the goals and objectives for achieving federal CAA air quality standards, and then regional air quality management plans are prepared to implement control measures necessary to comply with the federal and State requirements.

Regional Air Quality Management

Laguna Woods is located in the South Coast Air Basin, which is under the jurisdiction of ARB and the South Coast Air Quality Management District (SCAQMD). The 1977 Lewis Air Quality Act, renamed in 1988 as the Lewis-Presley Air Quality Management Act, created the South Coast Air Quality Management District. The act merged four air pollution agencies into one regional district and designated it as the principal agency responsible for air pollution control in the Southern California basin. Laguna Woods is one of many cities within the 10,743 square mile area monitored by the SCAQMD. The South Coast Air Basin is a sub region of the SCAQMD, and covers an area of 6,745 square miles, and includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. Table 4.4-2 lists agencies and their principal responsibilities related to improving air quality.

Table 4.4- 2: Agencies Responsible for Implementation of the 1997 AQMP

Agency	Principal responsibilities
EPA	<ul style="list-style-type: none">• Forty-nine State mobile vehicle emission standards;• Airplanes, trains, and ships;• Mobile-operating construction & farm equipment below 175 hp; and,• Off-shore oil development
ARB	<ul style="list-style-type: none">• On-road/Off-road vehicles;• Motor vehicle fuels; and,• Consumer products
SCAQMD	<ul style="list-style-type: none">• Stationary (industry/commerce) & area sources;• Some mobile sources
SCAG	<ul style="list-style-type: none">• AQMP conformity assessment;• Regional Transportation Improvement Program
LOCAL GOVERNMENTS	<ul style="list-style-type: none">• Transportation and local government actions;• Transportation facilities

Source: 1997 Air Quality Management Plan

1997 Air Quality Management Plan

The 1997 Air Quality Management Plan (AQMP) provides the framework for attainment of federal and State air quality standards in the South Coast Air Basin. The management plan includes input from all member agencies in the district boundaries, and it reflects the combined technical and policy inputs of the U.S. EPA, the State Air Resources Board, SCAQMD, and the Southern California Association of Governments (SCAG).

As required by federal law, the 1997 AQMP is the first plan required to demonstrate attainment of federal standards for suspended particulates, and updates attainment goals and strategies for ozone and carbon monoxide. Additionally, now that the South Coast Air Basin qualifies for attainment of the federal standard for Nitrogen Dioxide, the 1997 AQMP includes a maintenance plan to this pollutant below the federal limits.

The revised 1997 plan also addresses several State and federal requirements to incorporate new scientific data, primarily in the form of updated emissions inventories, ambient measurements, and new models. The 1997 plan is consistent with the approaches taken in the 1994 AQMP for the attainment of the federal ozone air quality standard, and demonstrates that with refinements to the 1994 AQMP control strategy, adequate emission reductions will be achieved to meet all federal criteria pollutant standards within the time frames imposed by the federal Clean Air Act.

Attainment Strategy

The attainment strategy for this AQMP is designed to meet applicable State and federal requirements, including attainment of ambient air quality standards. Similar to the 1994 AQMP, the 1997 version provides two tiers of emission reduction measures:

Tier I

Near term and intermediate term measures (Appendix C) utilize the application of available technologies and management practices between 1997 and the present, and are primarily transportation improvements contained in the Regional Transportation Plan produced by SCAG.

Tier II

Long-term measures (Appendix C) rely on the advancement of technologies and control methods that can reasonably be expected to occur between 2000 and 2015. These long-term measures rely on further development and refinement of known low and zero emission control technologies in addition to technological breakthroughs.

In order to achieve the federal and State ambient air quality standards, the 1997 AQMP outlines a variety of control measures that can be implemented by local agencies in conjunction with other regulatory agencies. A list of those measures is provided below.

Table 4.4- 3: 1997 AQMP Local Agency Control Measures

Control Measure No.	Control Measure	Implementing Agency	Adoption Date	Implementation Period
Fugitive Dust				
BCM-01	Emission Reductions from Paved Roads (Rule 403) (PM ₁₀)	SCAQMD, Local Government, CalTrans	1997	1997
BCM-03	Further Emission Reductions from Unpaved Roads, Unpaved Parking Lots and Staging Areas (Rule 403) (PM ₁₀)	SCAQMD, Local Government	1997	1997-2006
Miscellaneous Sources				
MSC-01	Promotion of Lighter Color Roofing and Road Materials and Tree Planting Programs (All Pollutants)	SCAQMD, Local Government	1999	2000
Advanced Transportation Technology Incentive Measures				
ATT-01	Telecommunications	SCAQMD, SCAG, Local Gov't	TBD	TBD
ATT-02	Advanced Shuttle Transit	SCAQMD, SCAG, Local Gov't	TBD	TBD
ATT-03	Zero-Emission Vehicles/Infrastructure	SCAQMD, SCAG, Local Gov't	TBD	1997-2010
ATT-04	Alternative Fuel Vehicles/Infrastructure	SCAQMD, SCAG, Local Gov't	TBD	1997-2010
ATT-05	Intelligent Vehicle Highway Systems (IVHS)	SCAQMD, SCAG, Local Gov't	TBD	TBD

Control Measure No.	Control Measure	Implementing Agency	Adoption Date	Implementation Period
FSS-02	Market-Based Transportation Pricing	State or Local Agencies	TBD	TBD

Source: 1997 AQMP Table 7-3

4.4.3 THRESHOLDS OF SIGNIFICANCE

Criteria for determining the significance of air quality impacts are based on federal, State and local pollution standards and regulations. The City considers impacts significant if project emissions meet any of the following criteria:

- ☐ Project emissions interfere with the attainment of federal or State ambient air quality standards or are inconsistent with the 1997 Air Quality Management Plan.
- ☐ The project results in an increase in daily emissions that exceed thresholds established for criteria pollutants.

Table 4.4- 4: Pollutant Threshold Criteria

Criteria Pollutants	Threshold Criteria
Reactive Organic Compounds (ROC)	55 lbs/day
Nitrogen Dioxide (NO ²)	55lbs/day
Fine Particulate Matter (PM10)	150 lbs/day
Sulfur Dioxide (SO ₂)	150 lbs/day
Carbon Monoxide (CO)	550 lbs/day

Source: SCAQMD CEQA Air Quality Handbook, November 1993

4.4.4 PROJECT AND CUMULATIVE IMPACTS

An air quality impacts analysis of the General Plan is provided in Appendix C, Air Quality. The following information summarizes the Project General Plan air

quality impacts, and provides a discussion of the projects consistency with the 1997 AQMP.

The General Plan will not result in direct short-term impacts. Because the U.S. Environmental Protection Agency and California Air Resources Board have designated the South Coast Air Basin as a non-attainment area for ozone, carbon monoxide, and PM₁₀, the effect of the Project General Plan on attainment of Federal and State air quality standards was evaluated for long term and/or cumulative impacts. General Plan Implementation Measures will aid in reducing pollutant emissions; however two of five criteria pollutants, Carbon Monoxide and Reactive Organic Gases, would exceed the suggested SCAQMD threshold criteria, and therefore are potentially significant. The emissions data is summarized below in Table 4.4-5.

Table 4.4- 5: Pollutant Emissions – The “Project” vs. Alternative 1

THE PROJECT POST - 2015	ROG	NOx	CO	PM₁₀	Sox
Area & Operational Sources	2,118.05	1,456.58	5,351.42	766.78	0.01
NO PROJECT POST - 2015	ROG	NOx	CO	PM₁₀	SOx
Area & Operational Sources	1,992.94	1,453.17	4,636.18	666.19	0.01
Difference Between the “Project” and Alternative 1	ROG	NOx	CO	PM₁₀	SOx
	125.11	3.41	715.24	100.59	0
SCAQMD Threshold Criteria	55	55	550	150	150

In light of these potential impacts, with the control strategies outlined in the 1997 AQMP, it is important to recognize that attainment of State and federal standards for criteria pollutants is expected by 2006, and the estimated build-out of the Project General Plan through the year 2015 may not have a significant impact on the basin’s non-attainment status.

1997 AQMP Consistency

The AQMD CEQA Air Quality Handbook provides that two key indicators be used to evaluate General Plans for consistency with the 1997 AQMP:

1. Whether or not the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards established by the 1997AQMP;
2. Whether the project will exceed the assumptions in the AQMP for 2015.

By exceeding the pounds per day significance thresholds established for ozone forming Reactive Organic Gases (ROG) and Carbon Monoxide (CO), the Project General Plan may result in emissions that interfere with attainment of the 1997 AQMP air quality standards.

To address item number two above, AQMD Guidelines indicate the units of analyses are population, job locations, and housing. The 1997 AQMP was developed in conjunction with the Southern California Association of Governments' (SCAG) Regional Transportation Plan (RTP). The RTP is driven by the number of jobs located within a region in relation to the number of housing units supporting them. The jobs-housing balance in Laguna Woods is 0.13, a "housing-rich" community. According to SCAG a jobs to housing ratio of 1.27 jobs per dwelling unit is considered "balanced". Implementation of the General Plan may lead to an approximate 1,500 future jobs from development of retail and office facilities. As a result, development associated with the General Plan would likely result in a more "balanced" jobs/housing ratio. Additionally, because the bulk of the City land area is a retirement community, the majority of residents no longer travel to jobs, and if they do, they are not inclined to travel far and will likely work within the community.

Construction Impacts

Adoption and implementation of the General Plan will not result in direct short-term impacts, nor does it guarantee that development will occur. Since estimates

of construction emissions are highly dependent on the size, location, schedule and type of project, any attempt to quantify construction emissions would be speculative and could result in invalid data and conclusions regarding the significance of such future impacts.

Objectives, Policies and Implementation Measures for air quality are included in the project General Plan, and all future development projects must be evaluated and implemented with mitigation measures to reduce potential emissions during construction.

Cumulative Impacts

In accordance with CEQA, actions that have impacts that are individually limited, but cumulatively considerable, may be significant. Although there is no standard directly applicable to adoption and implementation of the General Plan, cumulative emissions resulting from development associated with the General Plan will contribute criteria pollutants to the South Coast Air Basin, which is currently a non-attainment area, and in violation of air quality standards. As a result implementation of the General Plan will result in cumulative and significant impacts.

4.4.5 MITIGATION MEASURES

Prior to development project approvals the City of Laguna Woods will require that project proponents incorporate specific site design and traffic reducing measures aimed to lower criteria pollutant emissions. In addition to the air quality mitigation measures listed below, applicable Transportation/Circulation mitigation measures provided in Section 4.5 of this EIR will be an integral part of development project related air quality analysis.

AQ-1 The City shall prepare a “Development Project Review Procedure Manual” which will include development project level impact measures as follows:

- ☐ Prior to issuance of a building permit for any development project, the City will promote incorporation of site design

features that encourage use of alternative forms of energy and modes of transportation as suggested by the current Air Quality Management Plan.

- ❑ Prior to approval of any development project, the City of Laguna Woods will require that project designs include plant materials and other landscape features to promote cooling during hot periods and prevent wind chill during the cool season.
- ❑ Prior to issuance of building permits, project plans will ensure that building design and construction materials reflect State Title 24 energy conservation requirements, and current energy efficiency design to the maximum extent feasible.
- ❑ The following measures will be implemented for all development projects to reduce emissions during the construction phase:
 - Development a construction traffic management program that includes, but is not limited to, rerouting construction-related traffic off congested streets, consolidating truck deliveries, and providing temporary dedicated turn lanes for movement of construction traffic to and from the site;
 - Sweep streets at the end of the day if visible soil material is carried onto adjacent paved public roads;
 - Wash off trucks and other equipment leaving the site.
 - Replace ground cover in disturbed areas immediately after construction;
 - Keep disturbed/loose soil moist at all times;
 - Suspend grading activities when wind speeds exceed 25 miles per hour;
 - Enforce a 15 miles per hour speed limit on unpaved portions of the construction site.

4.4.6 LEVELS OF SIGNIFICANCE AFTER MITIGATION

- ❑ Project emissions interfere with the attainment of federal or State ambient air quality standards or are inconsistent with the 1997 Air Quality Management Plan.

- ❑ The project results in an increase in daily emissions that exceed thresholds established for criteria pollutants.

General Plan Implementation measures and regional air quality control strategies are anticipated to reduce concentrations of the criteria pollutants. However, emissions of ROG and Carbon Monoxide are expected to exceed the established thresholds and interfere with attainment of federal and State standards. As a result the Project General Plan would result in significant unavoidable adverse project and cumulative air quality impacts.

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4.5 TRANSPORTATION/CIRCULATION

4.5.1 EXISTING CONDITIONS

Roadway System

Two major public roadways bisect the city: Moulton Parkway and El Toro Road. Both roadways carry substantial volumes of regional traffic (that is traffic passing through the City of Laguna Woods from one part of the County to another without stopping in the city). The only other public roadways even partly within the city are Santa Maria Avenue and Ridge Route Drive, both of which carry low traffic volumes. All local surface streets in the City are private and are part of the Leisure World gated community.

Most streets within or adjacent to the City are currently built to County's Master Plan of Arterial Highway (MPAH) standards. As the City is very largely built out, there is little opportunity to widen or improve these streets without additional right-of-way needs. The roadways within the City are currently classified according to the County's MPAH. The key public roadways within the City are as follows (see Map 4.5-1):

Moulton Parkway

Moulton Parkway is classified in the MPAH as a 6-lane divided Smart Street Arterial. It is currently built as a 6-lane divided roadway for its entire length running north-south through the city. To the south, it connects to Laguna Hills, Laguna Niguel and Dana Point. To the north, Moulton Parkway connects to Laguna Hills and Irvine.

El Toro Road

The MPAH classifies El Toro Road as a 6-lane divided Major Arterial. It is also County Road S18. El Toro Road runs east-west through the City, and is currently a 6-lane divided road for most of its length except for two short locations. Between Calle Sonora and Calle Corte the roadway is undivided with a painted central left turn lane, and west of Calle Corte it is three lanes northbound and two lanes southbound with a divided median. El Toro Road continues west to connect to Laguna Canyon Road, and extends east to Laguna Hills, an interchange with the I-5 freeway, and into Lake Forest.

Santa Maria Avenue

This roadway is classified as a 4-lane undivided Secondary Arterial in the MPAH. It extends from Moulton Parkway west to the City Limit and is currently a 4-lane undivided street. A short section west of Via Vista is located in the City of Laguna Hills.

Ridge Route Drive

Ridge Route Road runs between Moulton Parkway and Avenida de la Carlota (Carlota). The south half of the right of way is in the City of Laguna Woods and the north half is in the City of Laguna Hills. This roadway is classified in the MPAH as a 4-lane divided Primary Arterial. It is currently an undivided 2-lane road, the paved surface being located in the City of Laguna Hills. That portion of the right of way in the City of Laguna is currently unimproved. Ridge Route

terminates at Carlota and currently does not extend over the I-5 freeway. This road extends west of Moulton Parkway to the Laguna Hills City limit.

Regional/Freeway Access

Regional access to the City of Laguna Woods is provided by the I-5 San Diego Freeway and the SR-73 San Joaquin Hills Toll Road, although there is no direct freeway access within the City. Primary access is provided by an interchange with I-5 at El Toro Road, which provides a southbound on-ramp, and two northbound on-ramps one each from eastbound and westbound El Toro Road. This interchange is located in the cities of Laguna Hills and Lake Forest. In addition southbound off and on ramps are also provided at the intersection of Carlota and Valencia, just north of El Toro Road. This interchange is in the City of Laguna Hills. Access to SR-73 is provided at an interchange with El Toro Road to the south of the City of Laguna Woods, in the City of Laguna Beach.

Roadway System Performance

Current daily traffic volumes on key roadways are shown in Map 4.5.2. These data were collected in May of 2001. Traffic volumes are expressed as average daily traffic (ADT), which is the total number of vehicles traveling in both directions on a street over a 24-hour period. The highest traffic volumes occur on Moulton parkway, which carries between 39,400 and 45,800 ADT. Traffic volumes on El Toro Road are in the range of 20,700 to 24,200 ADT west of Calle Sonora, and between 34,400 and 35,900 ADT between Calle Sonora and Paseo De Valencia. Within Laguna Woods, Santa Maria Avenue carries approximately 5,800 ADT, while Ridge Route Drive carries approximately 7,400 ADT.

Map 4.5-2: Key Roadways Daily Traffic Volumes

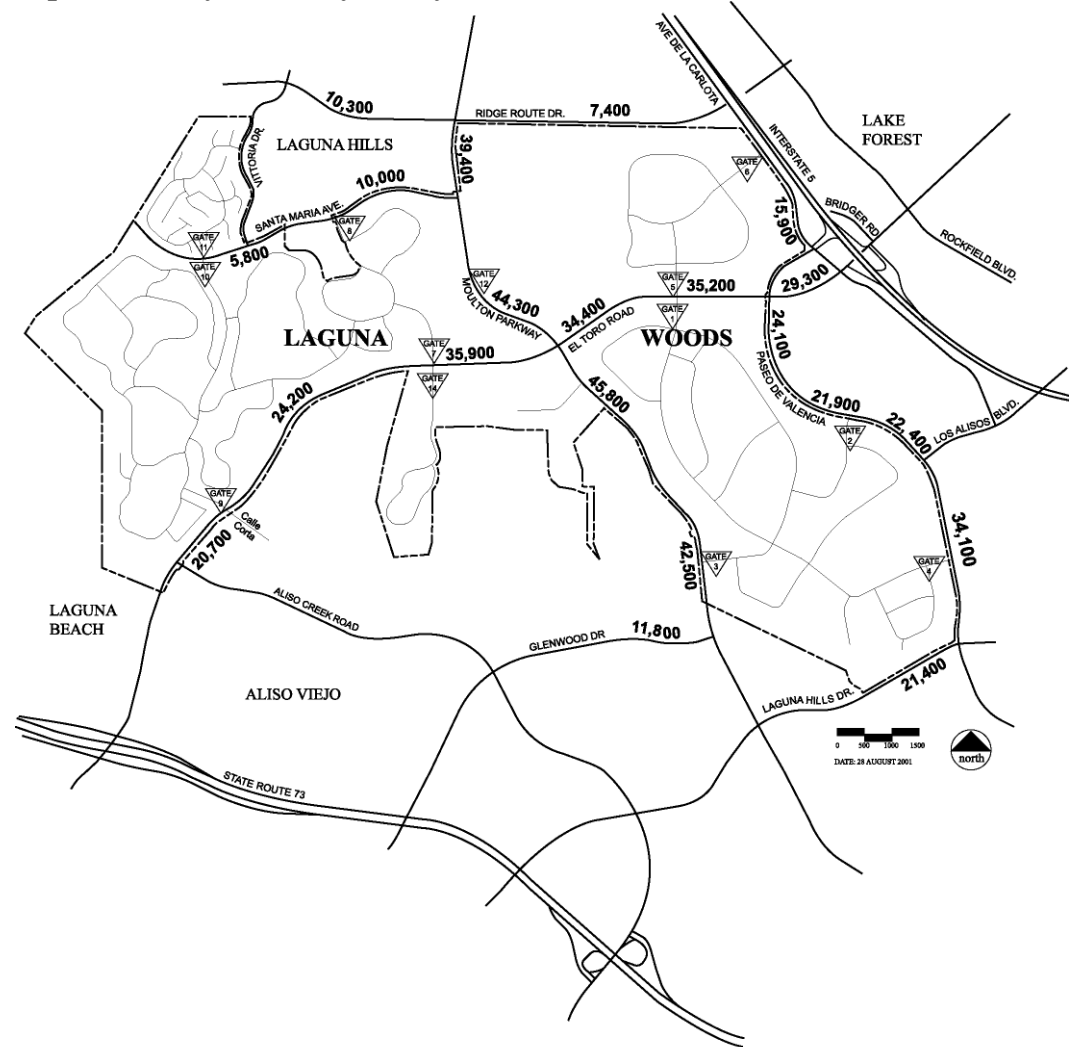


Table 4.5-1 lists the key roadway segments in the City of Laguna Woods. For each roadway segment the table indicates the jurisdiction, the MPAH classification, the number of lanes and the current daily volume. Table 4.5-1 also lists the current roadway capacities based on the County MPAH for specific roadway types and number of lanes. Traffic conditions on roadways are described by comparing the daily volume to daily capacity to obtain a volume to capacity (V/C) ratio and a corresponding level of service. The levels of service (LOS) range from LOS A (which represents free flow conditions) to LOS F (which represents severe traffic congestion). Table 4.5-2 illustrates the roadway capacities set by the MPAH for each roadway type, while Table 4.5-3 shows descriptions of traffic flow, along with the V/C ratio ranges that correspond to the different levels of service.

All roadways in and adjacent to the city are currently operating at satisfactory levels of service within the County standard daily highway capacities for Level of Service D. Current traffic volumes in the City are such that on a daily basis, most all roadways in the City operate at LOS C or better with many roadway segments operating at LOS A or LOS B. Only one roadway segment in the city operates at LOS D this being Moulton Parkway between El Toro Road and Calle Cortez. There are currently no roadway segments within the city operating at LOS E or LOS F.

Table 4.5- 1: Existing Conditions - Roadway Analysis - Daily 2-Way Total

Link No.	Arterial	Location	Jurisdiction	MPAH Designation	Total				
					Daily Volume	Current No. of Lanes ¹	Daily ² Capacity	V/C	LOS
2	Moulton Pkwy	Gate 12 - El Toro Rd	LW	Smartstreet 6 Lane Divided	44,300	6 D	56,300	0.787	C
3	Moulton Pkwy	El Toro Rd - Calle Cortez	LW	Smartstreet 6 Lane Divided	45,800	6 D	56,300	0.813	D
4	Moulton Pkwy	Via Iglesia - City Limits	LW	Smartstreet 6 Lane Divided	42,500	6 D	56,300	0.755	C
5	El Toro Rd	Aliso Creek Rd - Calle Corta	LW	Major 6 Lane Divided	20,700	5 D	46,900	0.441	A
6	El Toro Rd	Calle Corta - Calle Sonora	LW	Major 6 Lane Divided	24,200	6 UT	56,300	0.430	A
7	El Toro Rd	Calle Sonora - Moulton Pkwy	LW	Major 6 Lane Divided	35,900	6 D	56,300	0.638	B
8	El Toro Rd	Moulton Pkwy - Avd Sevilla	LW	Major 6 Lane Divided	34,400	6 D	56,300	0.611	B
9	El Toro Rd	Avd Sevilla - Paseo De Valencia	LW	Major 6 Lane Divided	35,200	6 D	56,300	0.625	B
13	Santa Maria Ave	Avd Sosiega - Santa Vittoria	LW	Secondary 4 Lane Undivided	5,800	4 U	25,000	0.232	A

¹ D = Divided, U = Undivided, UT = Undivided Central Turn Median

² Capacities based on MPAH designations and current number of lanes

Table 4.5- 2: Roadway Levels of Service

Level of Service	V/C Value	Traffic Conditions
A	.00 - .60	Primarily free-flow operations at average travel speeds, usually about 90 percent of free flow speed. Vehicles can maneuver unimpeded within the traffic stream. Delay at signalized intersections is minimal.
B	.61 - .70	Reasonable unimpeded operations at average travel speeds, usually about 70 percent of the free flow speed. Ability to maneuver is only slightly restricted and delays at signalized intersections are not significant.
C	.71 - .80	Stable operations; however, ability to maneuver and change lanes in mid-block locations may be more restricted. Longer queues, adverse signal coordination, or both may contribute to lower average speeds of about 50 percent of the free flow speed.
D	.81 - .90	Borders on a range in which small increases in flow may cause substantial increases in delay and decreases in travel speed. LOS D may be due to adverse signal progression, inappropriate signal timing, high volumes, or a combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections, and inappropriate signal timing.
E	.91 – 1.00	Characterized by significant delays and average travel speeds of 33 percent or less of the free flow speed. Such operations are caused by a combination of high volumes, high number of traffic signals, and lack of signal coordination. Extensive delays at critical intersections, and inappropriate signal timing.
F	Above 1.00	Characterized by urban street flow at extremely low speeds, typically one third to one fourth of the free flow speed. Intersection congestion is likely at critical signalized locations, with high delay, high volumes, and extensive queuing.

Source: Highway Capacity Manual 2000, Transportation Research Board, Washington, D.C.

Table 4.5- 3: Daily Traffic Capacities by Roadway Type

Roadway Type	Daily Traffic Volume Capacity (ADT)
Major Highway – 6-Lane Divided	56,300
Primary Highway – 4-Lane Divided	37,500
Secondary Highway – 4-Lane Undivided	25,000

Source: Guidance for Administration of the Orange County Master Plan of Arterial Highways, OCTA, April 1998.

Existing Transit Services

This section presents information on transit services operating in and around the City of Laguna Woods. Much of the information in this section was taken from the *City of Laguna Woods Transit Needs Assessment, Draft Final Report, March 2001*. There are four types of transit service providers in the city:

- ❑ General Public Transportation
- ❑ Leisure World Residents' Transportation
- ❑ Specialized Transportation
- ❑ Other Transportation Providers

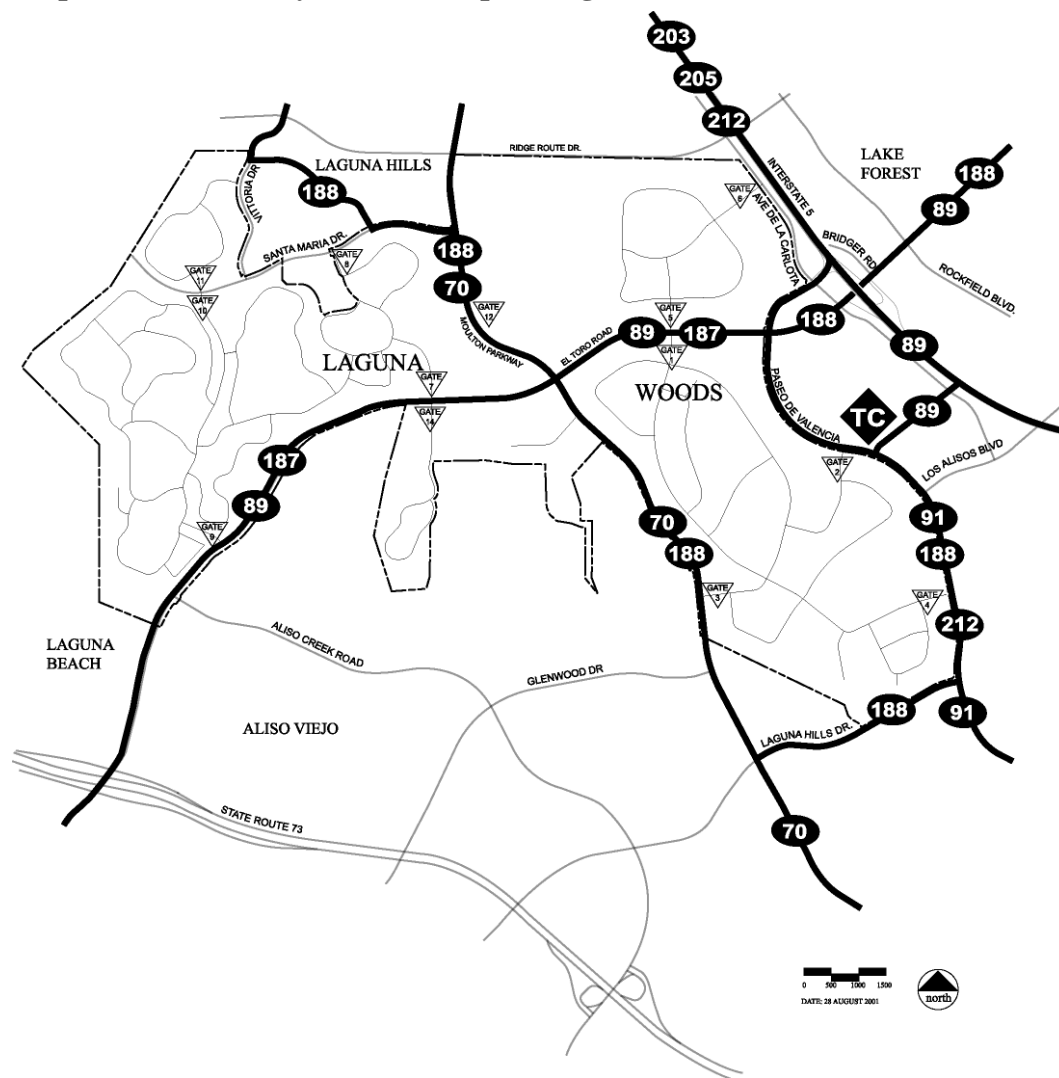
Transit service providers in each of these categories are summarized below.

General Public Transportation



Orange County Transportation Authority (OCTA) is the transportation provider for the general public. They provide fixed route and para-transit throughout the County including Laguna Woods, and into parts of Los Angeles County. The following sections provide descriptions of the fixed route and para-transit services offered to the general public in Laguna Woods.

Map 4.5-3 provides a summary of OCTA operating routes. OCTA para-transit services include ACCESS ADA Service, Group Service, Medical Back-up Service, and Special Agency Services.

Map 4.5-3: Summary of OCTA Operating Routes



LEGEND

-  EXISTING OCTA BUS ROUTES
-  LAGUNA HILLS TRANSPORTATION CENTER

Source: Transit Needs Assessment, Draft Report, March 2001

Leisure World Residents' Transportation

Leisure World is a private, gated community in the City of Laguna Woods. Leisure World provides three types of transportation services to its residents and their guests. These are a fixed route service, a demand responsive service, and service with specially equipped lifts. Services are funded through the monthly maintenance assessments paid by Leisure World residents, and no fares are collected.

Specialized Transportation

There are specialized transportation services available for clients of social service agencies or medical services. Specialized transportation services are also provided to customers of select commercial establishments. These services are generally provided as an “added benefit” for the convenience of a client or customer. Specialized transportation services have specific eligibility criteria and consequently are not available to the general public.

Other Transportation Providers

Other transportation services are available to the general public in Laguna Woods and the surrounding area. These include Metrolink, Amtrak, private taxis, airport shuttles, and home care providers.

Overall a significant amount of transit service is provided to the residents of Laguna Woods by a variety of operators servicing a wide range of destinations. OCTA and Leisure World Transportation Services operate the most service and carry the most number of passengers of all the services in Laguna Woods, and serve a wide variety of key destinations.

Alternative Transportation and Multi-Purpose Facilities

Facilities are also currently provided for a number of other transportation modes within the City of Laguna Woods. These modes provide alternatives to the automobile, and along with transit play a significant role given the unique

transportation needs of the Laguna Woods community. These other transportation modes are described in the following sections.

Bicycle System

Existing bicycle routes within the city of Laguna Woods are shown in Map 4.5-4. These facilities are striped bike lanes on public streets. Within the city of Laguna Woods bike lanes are currently provided on Moulton Parkway between El Toro Road and the southern city limits, and on El Toro Road between Aliso Creek Road and Moulton Parkway. Roadways adjacent to the city providing bike lanes include Moulton Parkway north of Ridge Route Drive and south of El Toro Road. They are also provided on Paseo de Valencia from Carlotta to south of Laguna Hills Drive, on Laguna Hills between Valencia and Moulton Parkway and Los Alisos Boulevard east of Valencia.

Horse Trails

Within the city of Laguna Woods there are two principal horse trails as shown in Map 4.5-4. From the equestrian center on the southwest corner of Moulton Parkway and El Toro Road, a horse trail extends southward and then splits into two trails. The first heads east under Moulton Parkway, and then turns south, running inside Leisure World on the east side of Moulton Parkway down to the area of Gate 3 at Calle Aragon. The second trail continues south adjacent to the Aliso Viejo Golf course before heading east to Moulton Parkway close to the southerly city limit. This trail then continues south of the City along the west side of Moulton Parkway to join the Aliso Creek trail. This trail continues south along Aliso Creek and to the east along the north side of Laguna Hills Drive, the east side of Paseo de Valencia, and then northerly on Aliso Creek.

Golf Cart Facilities

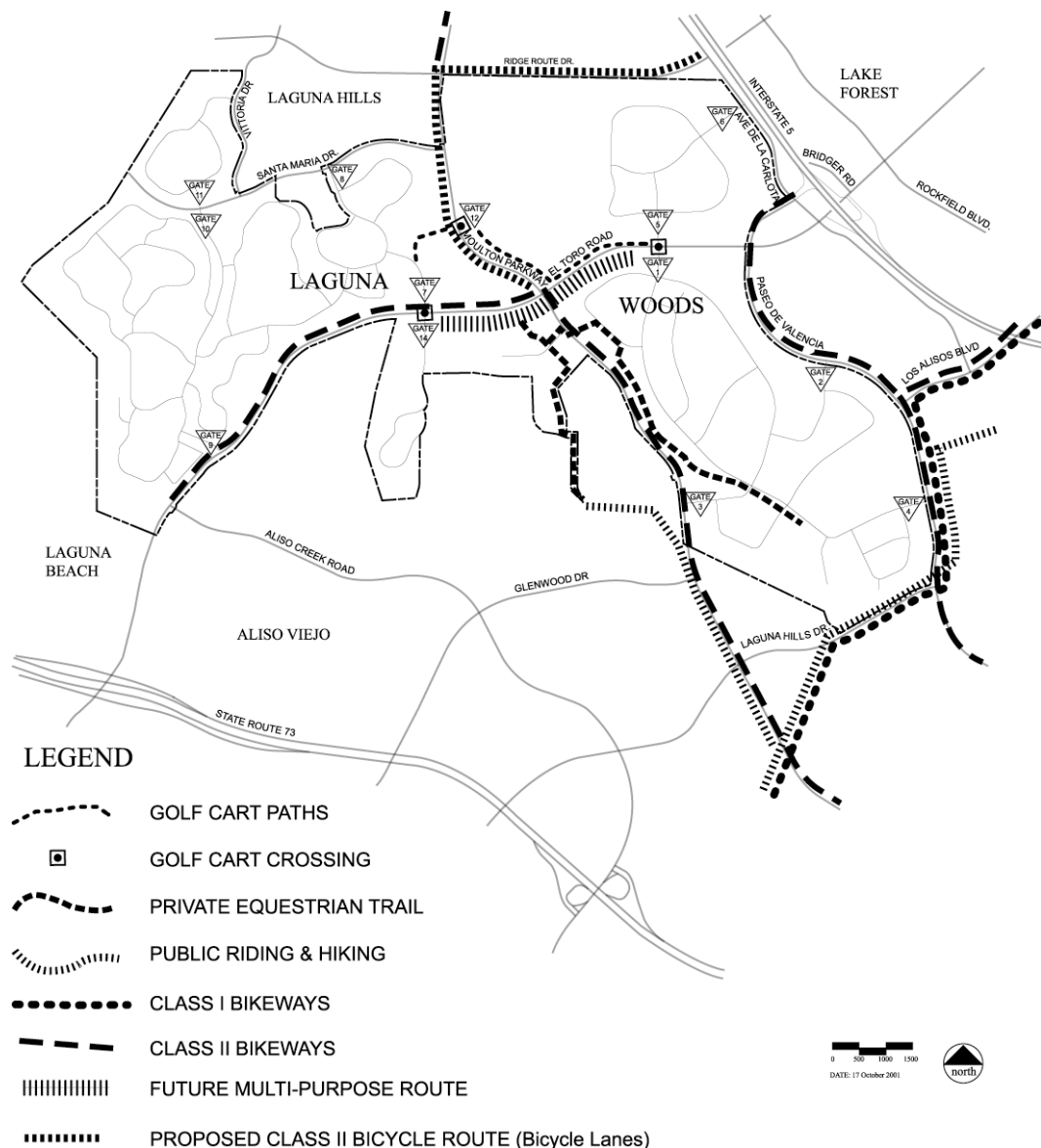
Several Leisure World residents own golf carts that are used primarily for recreational golf purposes. There are currently three signed golf cart crossings at public roadways at the following locations:

- Across El Toro Road at Calle Sonora (Gates 7 and 14)

- ❑ Across El Toro Road at Avenida Sevilla (Gates 1 and 5)
- ❑ Across Moulton Parkway at Gate 12 (golf course entrance)

There is also a short golf cart path running directly from Gate 7 at Calle Sonora down the hill to the golf range on the west side of Moulton Parkway and continuing to the intersection of Moulton Parkway at Gate 12. This golf cart path is within the Leisure World Community.

Map 4.5-4: Multi-Purpose Routes and Trails



4.5.2 EXISTING PLANS

County of Orange Master Plan of Arterial Highways (MPAH)

The Master Plan of Arterial Highways defines the arterial highway system throughout Orange County. The Circulation Elements of cities within the County are expected to be consistent with the Master Plan of Arterial Highways in order to be eligible for funding improvements on MPAH roadways.

County of Orange Measure M Growth Management Program

Measure M, approved by the voters of Orange County in 1990, authorized the collection of one-half percent sales tax to fund needed transportation improvements in the County. To be eligible to receive funding, cities must adopt a Circulation Element consistent with the County's MPAH, adopt a Growth Management Plan, and adopt a seven-year capital improvement program including transportation projects proposed for funding under Measure M.

County of Orange Congestion Management Plan (CMP)

Proposition 111, approved by California voters in 1990, requires urbanized areas such as Orange County to adopt and implement a Congestion Management Plan. The CMP is intended to reduce traffic congestion and provide for coordination between development projects and transportation improvements. The Orange county Transportation Authority (OCTA) administers the Congestion Management Plan.

Southern California Association of Governments Regional Transportation Plan (RTP)

SCAG's Regional Transportation Plan includes regional level goals, objectives and policies pertaining to overall transportation in the southern California region. The City of Laguna Woods is virtually built out, with relatively little growth and accompanying vehicle trips anticipated. The City is also comprised primarily of the Leisure World gated retirement community that provides residents with access

to an extensive transit system, and consequently, a significant reduction in private automobile trips than might otherwise be expected.

The SCAG RTP performance indicators apply to regional transportation characteristics and cannot be evaluated at the local level in the project General Plan. Nevertheless, the project General Plan is broadly consistent with and supportive of the policies contained in the RTP. The project General Plan fosters economic development particularly, community oriented retail shopping that will reduce trip lengths. The project General Plan promotes transportation-friendly development patterns through infill development geographically central to existing developed areas. Transit improvements anticipated in the project General Plan will expand alternatives to private automobile use for trips to destinations both within and outside the City.

4.5.3 THRESHOLDS OF SIGNIFICANCE

Impacts to transportation and circulation resulting from adoption and implementation of the General Plan could be deemed significant if this action would:

- ❑ Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system;
- ❑ Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for the designated roads or highways.

4.5.4 PROJECT AND CUMULATIVE IMPACTS

The traffic impact analysis was conducted in order to determine if roadway capacity represented in the General Plan is sufficient to accommodate increases in vehicular traffic associated with anticipated future development. The analysis focuses on the cumulative impacts on roadways in the City of traffic generated from within the City of Laguna Woods, adjacent cities, and the Orange County region.

The project General Plan is a policy document. Potential transportation impacts associated with development projects that may be accommodated by this policy document will be addressed in subsequent analyses at the time of application for entitlements. The project General Plan includes mechanisms to ensure that the circulation impacts of future development are evaluated and mitigated to the extent feasible.

Forecasts of future traffic volumes associated with physical development consistent with the project General Plan were developed using the countywide forecasts prepared by OCTA in the OCTAM (Orange County Transportation Analysis Model) Model. The latest available forecasts were utilized (OCTAM Version 3.1 - June, 2001). The OCTAM Model projects Year 2025 traffic volumes for the MPAH network in the County based on socioeconomic projections of population and employment.

The OCTAM forecasts included projections for some growth in Laguna Woods. In order to obtain a baseline analysis of future conditions without any growth in Laguna Woods, local growth and associated trip-generation was backed out of the 2025 forecasts.

The project General Plan build-out year is anticipated to be the year 2015. OCTAM traffic forecast conditions are for year 2025. Use of year 2025 traffic forecast data represents a worst-case scenario for roadway conditions at build-out consistent with the project General Plan in year 2015

The OCTAM Model produces estimates of daily traffic volumes on roadway links. These estimates were used directly in the General Plan analysis, adjusted as described above. Land use forecasts for the General Plan were then converted into trip generation estimates, and added incrementally to the future baseline forecasts through use of the TRAFFIX local area traffic model, to obtain traffic volume forecasts for future land use scenarios.

Roadway Plan

Like the City's built environment, the road system is virtually built out. A hierarchy of roadway types that are differentiated by function, size, and capacity defines the surface roadway system in the City of Laguna Woods. The following roadway classifications are defined in the Roadway Plan of the Circulation Element of the project General Plan:

- ❑ Major Arterial is a six-lane divided roadway
- ❑ Primary Arterial is a four-lane divided roadway
- ❑ Secondary Arterial is a four-lane undivided (no median) roadway
- ❑ Smart Street Arterial is a Major Arterial with an enhanced traffic-carrying capacity

The Roadway Plan is shown in Map 4.5-1, including the location and classification of arterial roadways. These roadway designations and standards are consistent with those found in the County's Master Plan of Arterial Highways (MPAH). The Roadway Plan does not involve any reclassification or widening of City streets beyond levels already identified in the County MPAH. As the City of Laguna Woods roadways are currently largely built to the classifications and standards shown in the plan, no changes to existing roadways are anticipated by the Circulation Plan, except for the following that are consistent with the MPAH:

- ❑ Re-stripe southbound directions of El Toro Road between Calle Cortez and Aliso Creek Road from two lanes to three lanes;
- ❑ Build additional two lanes and raised median of Ridge Route Drive between Moulton Parkway and Avenida de la Carlota.

A planned roadway improvement consistent with Smart Street designation in the MPAH to be implemented by the County will add bicycle lanes and sidewalks along Moulton Parkway between Via Campo Verde and Santa Maria, but will not increase roadway capacity. This project will also improve the intersection of Moulton Parkway and El Toro Road (additional turn lanes).

With the exception of these improvements, the City's street system is complete with little, if any, ability to provide additional capacity. Future land use growth in the City of Laguna Woods will be extremely limited as the City is largely built-out. Future growth in traffic volumes on the City's arterial roadways will be largely due to land use growth in other cities and the region. This growth cannot be accommodated by building new roads or expanding existing ones, with the exception of certain intersection improvements, which require acquisition of rights-of-way that would require condemnation of significant existing development that render such improvements financially infeasible for the foreseeable future. Alternative regional policies, such as the greater use of transit and other non-auto alternatives will have to be aggressively explored and pursued.

The County MPAH also identifies three roadway extension projects in areas adjacent to the City of Laguna Woods, which are assumed in the traffic forecast analysis:

- ❑ The MPAH, and the City of Irvine General Plan, call for Ridge Route Drive to be extended northwesterly as a 4-lane undivided Secondary Arterial from its current terminus at the western Laguna Hills City limit, to intersect with the westerly extension of Bake Parkway in the City of Irvine. Bake Parkway will then connect with Laguna Canyon Road;
- ❑ The MPAH, the City of Lake Forest General Plan, and the City of Laguna Hills General Plan, call for a new I-5 over-crossing to connect Ridge Route Drive west of I-5 (in Laguna Woods/Laguna Hills) to Ridge Route Drive east of I-5 (in Lake Forest);
- ❑ The MPAH calls for Santa Maria Avenue to be extended west as a 4-lane divided Primary Arterial from the current Laguna Woods City limit to also connect to Laguna Canyon Road;
- ❑ The City of Laguna Hills, as part of its General Plan, will improve southbound Paseo de Valencia from Calle de la Plata to Laguna Hills Drive from two-lanes to three lanes, to match the northbound three lanes and meet the County MPAH requirements.

In order to gauge the operation of the roadway system, performance criteria must be defined. The City of Laguna Woods has established Level of Service “D” (LOS D) in the project General Plan Circulation Element as the service standard for public roadways within the City, except for Moulton Parkway. Moulton Parkway, which is a Smart Street on the County’s MPAH, will be subject to LOS E.

The LOS is determined by calculating V/C ratios using daily traffic volumes and the daily roadway capacities shown in Table 1 of Appendix D. These capacities are intended as general rather than absolute guidelines for estimating LOS and for servicing the roadway system, because of the generalized nature of ADT capacities. Subsequent, more detailed, evaluation of peak hour operating conditions at intersections will be carried out, for individual development and/or improvement projects as they are submitted for discretionary approvals, to supplement this General Plan analysis and evaluate and respond to traffic conditions at specific intersections.

LOS D and LOS E are common standards adopted by many municipal jurisdictions. By comparison, the Orange County Growth Management Program (GMP) has also established LOS D (V/C ratio less than or equal to 0.90) as the standard of acceptable operating conditions, while the Congestion Management Plan (CMP) for Orange County specifies LOS E (V/C ratio less than or equal to 1.00) as the operating standard for CMP roadways on the CMP System.

In order to evaluate the impacts of the proposed General Plan land uses in the circulation system, trip generation estimates were obtained by applying Institute of Transportation Engineers (ITE) trip rates to the land uses projected for the General Plan. It is estimated that the growth in land use projected in the General Plan would generate approximately an additional 17,350 daily vehicle trips. The trip generation estimates are shown in Appendix D. Traffic volume forecasts on key roadways for the General Plan scenario are shown in Map 4.5-5.

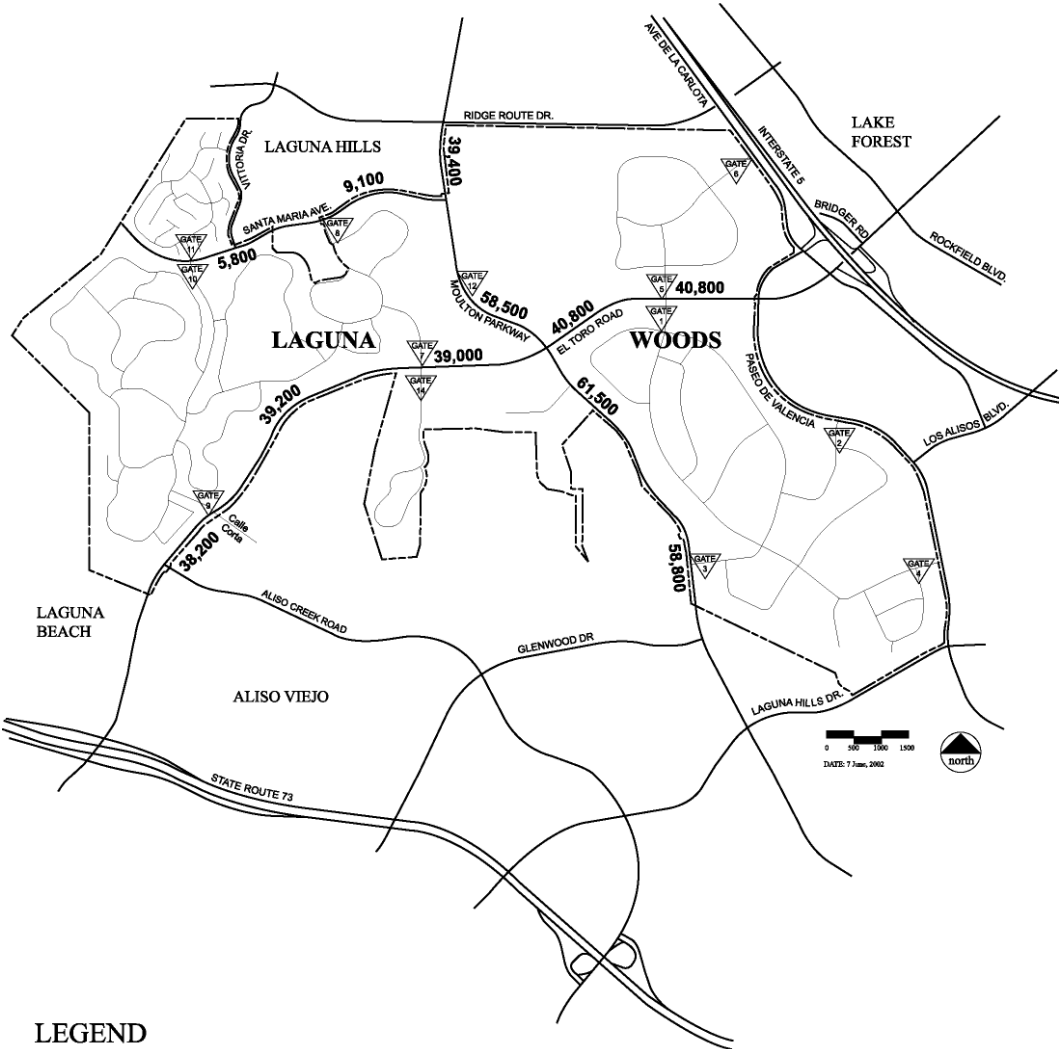
Based on the performance standards contained in the General Plan Circulation Element described earlier, a significant impact would occur if the roadway level of service exceeded LOS D in general, or exceeded LOS E on Moulton Parkway.

Roadway conditions projected as indirect, long term impacts associated with adoption and implementation of the project General Plan are shown in Table 6 Appendix D. The majority of roadway segments would operate at LOS C or better, except for Moulton Parkway which would operate at LOS F throughout the City. The V/C ratios indicate that forecast traffic volumes will be between 4% and 9% over the roadway capacity.

The analysis indicates that parts of the roadway system could not support the General Plan land uses. There would thus be significant traffic impacts at three locations: Moulton Parkway between Gate 12 and El Toro Road, Moulton Parkway between El Toro Road and Calle Cortez, and Moulton Parkway between Via Iglesia and the south City limits, as shown in Table A 6 in Appendix D.

These significant impacts could not be mitigated by measures under the control of the City of Laguna Woods, except for the widening of Moulton Parkway that is not considered feasible due to the lack of available right-of-way and the financial infeasibility of acquiring additional right-of-way.

Map 4.5-5: Key Traffic Volume Forecast



LEGEND

- LAGUNA WOODS CITY BOUNDARY
- DAILY TRAFFIC VOLUME (2-way vehicles)

SOURCE: Traffic Counts, May 2001

Transit Plan

The Circulation Element of the project General Plan makes recommendations for improving transit services within the City. Recommendations include involvement of public agencies such as OCTA and private transit providers. Potential improvements include:

- ❑ Improving service to key destinations not currently well served by transit
- ❑ Improving coordination between different transit providers
- ❑ Improving on call service
- ❑ Improving information systems
- ❑ Enhancing ride-matching programs.

Future enhancements and improvements to transit service will require efforts by the Orange County Transportation Authority as the regional service provider, by Leisure World as the provider of service for its residents, and by the City as a coordinator and facilitator between service providers.

Specific improvements to transit service will be implemented when feasible and as funds become available. Because these measures will improve transit service and tend to reduce automobile trips, but not by a quantifiable amount, the impact is expected to be less than significant.

Alternative Transportation Modes

The Circulation Element of the project General Plan includes improvement of facilities for alternative transportation modes to the automobile. These facilities provide the opportunity to travel within the City without using a vehicle, thereby reducing traffic volumes. The Circulation Element addresses provisions for bicycle, pedestrian, equestrian, and multi-purpose trails.

The bicycle plan identifies a system that will meet local needs, connect with facilities in adjacent cities, and are consistent with the County's Commuter Bikeways Strategic Plan, adopted in August 2001. Two types of bicycle facilities are identified in the Bicycle Plan.

Class I Bikeway (Bicycle Path)

A Class I bicycle path is a paved facility that is physically separated from a roadway and designated for the use of bicyclists and pedestrians. Bicycle paths typically serve corridors not served by roadways, or where sufficient right-of-way exists parallel to a roadway. The Bicycle Plan also identifies one new Class I bicycle path as part of a potential off-street multi-purpose trail along the south side of El Toro Road between Calle Sonora and Paseo De Valencia (see Multi-Purpose Trails below).

An existing regional Class I bicycle path adjoins Laguna Woods in the City of Laguna Hills. This Class I path extends along the east side of Paseo De Valencia and the south side of Laguna Hills Drive.

Class II Bikeway (Bicycle Lane)

A Class II bicycle lane is a striped lane on a roadway designated for use by bicycles. It is located along the edge of the paved roadway adjacent to the curb and outside of the vehicle travel lanes. Bicycle lanes should be a minimum of five feet wide and may typically be up to eight feet wide.

The Bicycle Plan, shown Map 4.5-6, is based largely on Class II bicycle lanes arterial roadways, which exist today. Class II bicycle lanes are proposed on Moulton Parkway between El Toro Road and Ridge Route Drive.

Multi-Purpose Routes

Multi-purpose trails are paved, off-street paths that provide for pedestrians, bicycles, horses and golf carts. Horse trails are typically unpaved while paths for pedestrians, bicycles and golf carts are typically paved. The Multi-Purpose Trail Plan, shown in Map 4.5-4, identifies the planned trails in the City, which will accommodate these modes of travel and recreational use. The key focus of this component of the plan is to facilitate the use of golf carts as a means of travel within the City, although not on public roadways. Currently there is one short golf-cart path and a number of designated golf-cart crossings of arterial roadways in the City.

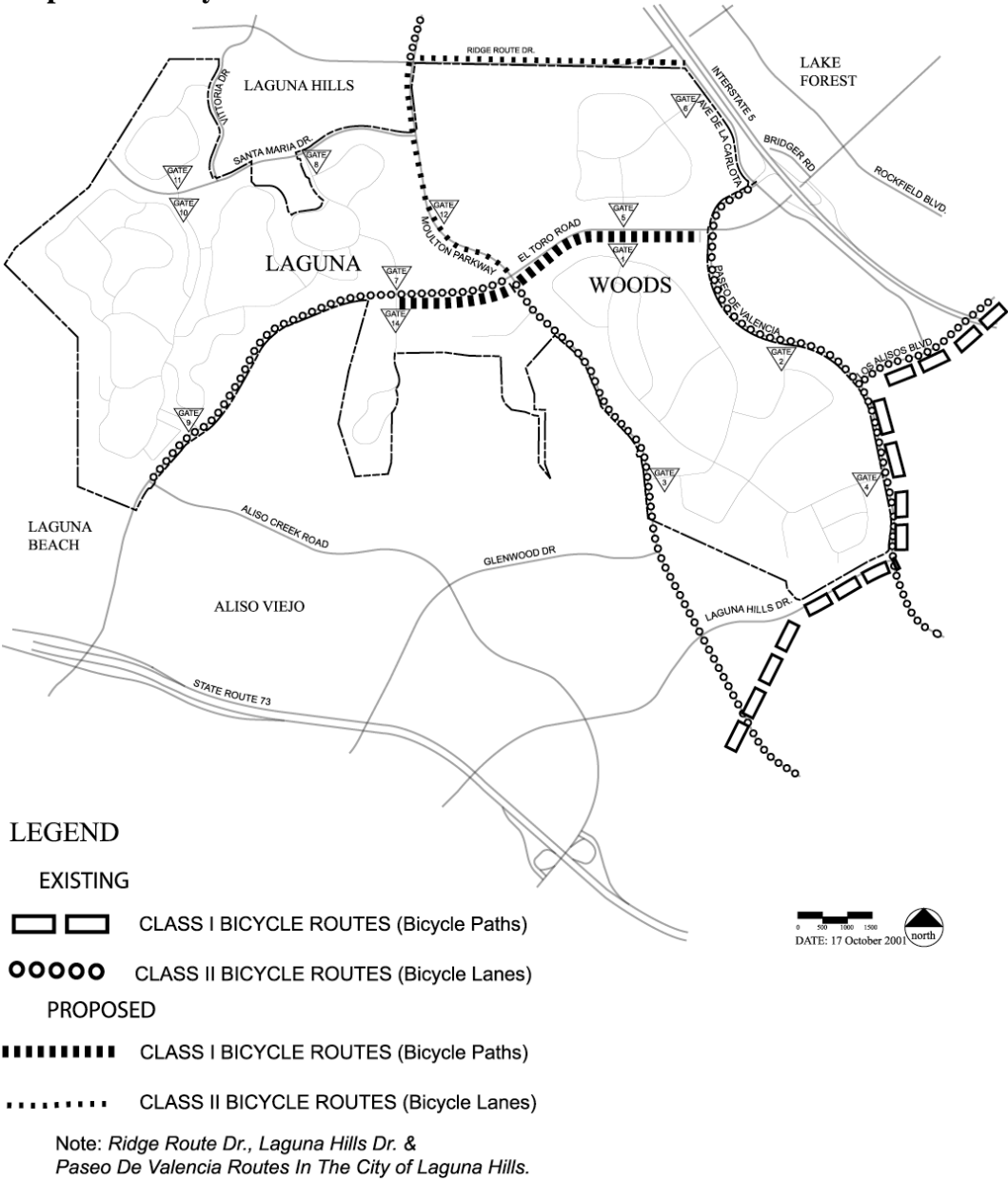
The intent of the Multi-Purpose Routes Plan is that a backbone network of (off-street) golf cart paths be developed to facilitate the use of golf carts. The majority of golf cart usage will continue to occur on the private streets within Leisure World. A key component will be a potential off-street multi-purpose path along the south side of El Toro Road between Calle Sonora and Paseo de Valencia that will be paved for golf carts, bicycles and pedestrians. This will connect Gate 7, Gate 1 and Gate 5, to the numerous commercial and institutional uses along El Toro Road thereby providing a key spine route for golf cart circulation. To help further facilitate the use of golf carts, they should also be allowed to use the proposed pedestrian gates between Leisure World and the Willow Tree Shopping Center and adjacent uses.

Specific improvements will be implemented without reducing the roadway capacities defined in the Roadway Plan. Because these measures will improve alternative transportation modes to the automobile and potentially reduce automobile trips, though by an amount that cannot be quantified, impacts associated with alternative transportation improvements are positive and less than significant.

Horse Trails

The horse trail system currently exists and no changes are planned.

Map 4.5-6: Bicycle Plan



4.5.5 MITIGATION MEASURES

None.

4.5.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

An increase in traffic on Moulton Parkway which is substantial in relation to the existing traffic load and capacity of Moulton Parkway – Significant Unavoidable Impact

An increase in traffic on Moulton Parkway resulting in Level of Service of “F”, falling below the minimum Level of Service “E” in the County of Orange Congestion Management Plan – Significant Unavoidable Impact.

An increase in traffic on Moulton Parkway would accompany development consistent with adoption and implementation of the project General Plan. Consistent with the Orange County Congestion Management Plan, a Volume/Capacity ratio greater than “1” is an indication that traffic exceeds roadway capacity. The Volume/Capacity ratio is projected to exceed “1” for segments of Moulton Parkway between Leisure World Gate 12 and El Toro Road, between El Toro Road and Calle Cortez, and between Via Iglesia and the south City limits even with planned Smart Street improvements.

The County of Orange Congestion Management Plan establishes Level of Service “E” as the minimum for arterial highways. The Level of Service is expected to fall to “F” on segments of Moulton Parkway between Leisure World Gate 12 and El Toro Road, between El Toro Road and Calle Cortez, and between Via Iglesia and the south City limits even with planned Smart Street improvements.

Expansion of Moulton Parkway through-traffic capacity would require acquisition of right-of-way beyond that included in Smart Street improvements. Displacement of existing commercial properties and businesses would result from right-of-way acquisition to accommodate construction of this additional roadway capacity. This action would be contrary to the project objective of

accommodating maintenance and expansion of commercial uses that will generate municipal revenues.

The expense of rights-of-way acquisition for Smart Street improvements initially planned for Moulton Parkway was determined to be financially infeasible and the extent of roadway improvements reduced accordingly. Based on this experience, additional right-of-way acquisition necessary to accommodate cumulative traffic volumes indicated in the project General Plan is deemed to be financially infeasible.

Potential reduction in automobile trips resulting from future improvements to alternative transportation modes – Less than Significant Beneficial Impact

Actions consistent with the project General Plan for improving access to alternative modes of transportation may reduce automobile trips, though by an amount that cannot be quantified.

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4.6 BIOLOGICAL RESOURCES

4.6.1 EXISTING CONDITIONS

This section describes the results of an assessment of the existing biological resources within the Planning Area. Specifically it addresses existing conditions of natural communities, plant species, wildlife species, potential occurrences of sensitive species, jurisdictional areas, and wildlife corridors within specific emphasis on the proposed development areas.

The City of Laguna Woods is a developed area dominated by residential and commercial buildings, roads, golf courses and other human made features. Within these areas there are extensive non-native landscape plantings. There are four areas of native vegetation within the City: an area of coastal sage scrub, detention basin/pond, an unnamed drainage and Aliso Creek.

Historically this area was likely covered with coastal scrub and native grassland plant communities with small drainage features scattered throughout the area. Over time these areas were modified into the current state of development. Many of the original ecological habitats in the study area, including all within the city limits, have undergone considerable modification.

Natural Communities

There are four vegetation communities in Laguna Woods: urban/developed, coastal sage scrub as defined by Holland (1986), riparian, and freshwater marsh. The vegetation communities of the City form the basis of the wildlife habitats of the project area. They provide the primary plant productivity upon which wildlife depends, along with nesting and denning sites, escape cover and protection from adverse weather. In general, more complex plant communities, with more vegetation layers and more plant species, provide higher value wildlife habitat than less complex vegetation communities. More complex plant communities have more niches for wildlife and usually support more animal species than less complex communities. Although simple plant communities may support few wildlife species, they may provide habitat for great numbers of those few species. Habitat descriptions follow Holland (1986 and 1992 update) as appropriate.

Urban/Development

Although most of the land within the City limits supported coastal sage and native grasslands at one time, much of the land today is either developed or has been modified or impacted by human activity in the past. Development includes any form of human disturbances, especially in cases of permanent impacts to natural communities. Developed areas would include pavement, concrete, buildings and structures, bridges, golf courses, and permanent flood control measures. In developed areas, native species may have been replaced by landscaping or a variety of annual grasses and weedy forbes.

Urban/Developed is the dominant vegetation community, covering approximately 98% (2,050 acres) of the City. This vegetation community is composed of landscaped plantings with scattered tall trees, little understory, grass, and flowers in the herbaceous layer. The vegetation is artificially manicured and irrigated as is typical of suburban residential landscapes. This type of community is sporadic due to the occurrence of associated buildings and roads. Golf courses conversely provide areas of more continuous vegetative cover. Urban/Developed areas of the City provide low value habitat for wildlife. They contain a low percent cover of vegetation, and are subject to noise and disturbance from traffic and other human activities. The majority of the proposed development areas occur within this vegetation community.

Coastal Sage Scrub

Coastal sage scrub (CSS) ranges throughout southern California south into Baja California. Typically this low, open shrub occurs on dry sites such as steep slopes, severely drained soils, or clays that release stored moisture slowly. This community consists of drought-deciduous low shrubs, averaging two to three feet in height, and a herbaceous understory.

A very small area (approximately 30 acres) of native coastal sage scrub vegetation occurs in the southwest corner of the city. Plant species occurring in this vegetation community are those typically found in coastal sage scrub. The understory is dominated by non-native grasses and forbes with elements of native

herbaceous vegetation. This sage scrub community is contiguous with extensive sage scrub habitat in the Laguna Coast Wilderness to the west of Laguna Woods. A complete description of this plant community can be found in the Appendix F.

Riparian

Riparian habitat is a broad description that includes a number of different vegetation communities as described in Holland 1986. There are two riparian areas in the City, one along Aliso Creek, and another along an unnamed drainage near the central portion of the City. Riparian vegetation is described as the vegetation canopy and associated under-story specifically associated with an active drainage system. A complete description of the riparian vegetation communities can be found in Appendix for Biology. Riparian vegetation occurs in one of the potential development areas.

Freshwater Marsh

Freshwater marsh areas are those typically described as wetlands and contain hydrophytic vegetation, hydric soils, and wetland hydrology. These areas are typically associated with a permanent or near permanent source of water. The vegetation is commonly perennial and often form completely closed canopies.

There is a freshwater marsh along the edges of the El Toro Water District detention basin east of Moulton Parkway and south of Ridge Route Drive. The marsh contains hydrophytic vegetation that borders an open water pond. The freshwater marsh and the open water pond would be considered sensitive habitats by regulatory agencies due to their wildlife resource value and their jurisdictional status. A complete description of the freshwater marsh can be found in Appendix F.

Plant Species

Due to the developed nature of most of the City, the vegetation is dominated by nonnative landscape vegetation. The urban/developed areas typically contain several different tree species and a variety of ornamental shrubs. Common tree species found throughout the City include Eucalyptus, pine, and Peruvian pepper trees. Typical landscape shrubs include pink Indian Hawthorne, boxwood, acacia, and oleander.

Plant species such as California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), deerweed (*Lotus scoparius*), prickly pear cactus (*Opuntia littoralis*), and white sage (*Salvia apiana*) occur in coastal sage scrub vegetation community. The understory within coastal sage scrub consists of nonnative grasses, mustard (*Brassica* spp.), filaree (*Erodium* spp.), and the native common fiddleneck (*Amsinckia intermedia*).

The freshwater marsh within the City has native plant species such as cattails, bullrush, and mulefat. The drainage features typically have more shrubs and trees such as willows, sycamores, and mulefat.

Wildlife Species

The four different vegetation communities have different types of associated wildlife species. The vegetation communities of the City form the basis of the wildlife habitats of the project area. They provide the primary plant productivity upon which wildlife depends, along with nesting and denning sites, and escape cover and protection from adverse weather.

The urban/developed portion of the City is highly disturbed and contains small pockets of vegetation cover. Species found in these areas are tolerant of human activity and are generally very common in the region. Some reptiles have adapted to urban habitats such as western fence lizards (*Sceloporous occidentalis*) and southern alligator lizards (*Gerrhonotus mulitcarinatus*). Several mammal species such as striped skunks (*Mephitis mephitis*), raccoons (*Procyon lotor*), possums (*Didelphis marsupialis*), and coyotes (*Canis latrans*) have also adapted to this

type of habitat for foraging purposes but often require some open habitat for shelter. Pest species such as Norway rat and house mouse are expected in this habitat. The most common avian species are house finch, American crow, western kingbird, Northern mockingbird, Anna's hummingbird, scrub jay, song sparrow, and house sparrow. On occasion, American kestrels, Cooper's hawks, and sharp-shinned hawks will forage in these habitats.

Coastal sage scrub habitat in the City provides suitable habitat for a number of reptile species including side-blotched lizard, coast horned lizard, western whiptail, gopher snake, Pacific rattlesnake, and California kingsnake. Common resident birds in coastal sage scrub include California quail (*Callipepla californica*), Anna's hummingbird (*Calypte anna*), bushtit (*Psaltiriparus minimus*), California towhee (*Pipilo crissalis*), and white-crowned sparrow (*Zonotrichia leucophrys*). Deer mice (*Peromyscus maniculatus*), California mouse (*Peromyscus californicus*), and western harvest mouse (*Reithrodontomys megalotis*) are among the small mammals expected to use the sage scrub. Other large mammals expected to occur include raccoon, coyote, and bobcat (*Lynx rufus*).

Aliso Creek provides a water source and a potential movement corridor for wildlife. The riparian area is important as wildlife habitat providing a source of diversity for surrounding areas. Because of the variety of niches found in riparian zones, they often support a greater abundance and diversity of wildlife than other habitats. The riparian habitat provides potential habitat for western toad (*Bufo boreas*) and Pacific tree frog (*Hyla regilla*), which are expected to be the most abundant amphibians. Reptile species that potentially occur within the riparian areas include western fence lizard, southern alligator lizard, and gopher snake.

Many songbird species are expected to use the riparian area throughout the year. These include red-shouldered hawk (*Buteo lineatus*), Great-horned owl (*Bubo virginianus*), Nuttall's woodpecker (*Picoides nuttallii*), northern flicker (*Colaptes auratus*), and common yellow-throat (*Geothlypis trichas*).

The freshwater marsh and associated open water pond provide habitat for great blue heron (*Ardea herodias*), ducks (*Anas* spp.), and red-winged blackbird

(*Agelaius phoeniceus*). The area also provides potential habitat for western toad and Pacific chorus frog. A complete description of wildlife species observed or expected to occur within the project site can be found in Appendix F.

4.6.2 AGENCY JURISDICTION AND REGULATIONS

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, or rare. The California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups like the California Native Plant Society (CNPS) maintain watch lists of such resources. Listed below are species identified by the California Natural Diversity Database (CNDDB) as occurring in the vicinity of the project site along with their classification.

Sensitive Species Classifications

Federal Protection and Classifications

The Federal Endangered Species Act of 1973 (FESA) defines an endangered species as “any species, which is in danger of extinction throughout all or a significant portion of its range...” Threatened species are defined as “any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to “take” any listed species. “Take” is defined as follows in Section 3(18) of the Act: “... harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Further, the USFWS, through regulation, has interpreted the terms “harm” and “harass” to include certain types of habitat modification as forms of “take”. These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency

are required to consult with USFWS. Section 9(a)(2)(b) of the federal Endangered Species Act addresses the protections afforded to listed plants.

State of California Protection and Classifications

California's Endangered Species Act (CESA) defines an endangered species as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.” The State defines a threatened species as “... a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species.” Candidate species are defined as “ a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list.” Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike FESA, CESA does not include listing provisions for invertebrate species.

Under the California Endangered Species Act, “take” is defined as “ ...hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Exceptions authorized by the state to allow “take” require “... permits or memorandums of understanding...” and can be authorized for “... endangered species, threatened species, or candidate species for Scientific, educational, or management purposes.” Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

California Native Plant Society (CNPS)

The California Native Plant Society is a California resource conservation organization that has developed an inventory of California's sensitive plant species (Skinner and Pavlik 1994). This inventory is the summary of information on the distribution, rarity, and endangerment of California's vascular plants.

Sensitive Plant Communities

Sensitive plant communities that occur within the vicinity of the project site include freshwater marsh and coastal sage scrub. These plant communities can be found in two locations within the City limits and contain approximately 31 acres. The sensitive plant communities are located in designated open space areas and are not contained within any of the proposed development areas. There are no sensitive plant communities located within any of the proposed development areas.

Sensitive Plant Species Occurring in the Vicinity of the Project Site

Table 4.6-1 lists three plant species identified by the CNDDDB and a literature review as occurring in the vicinity of the City. The classifications of all species are also provided. Furthermore, a brief discussion of each species potential to occur on the site is provided. A complete description of the sensitive plant species potentially occurring within the City can be found in Appendix F.

Sensitive Wildlife Species Occurring in the Vicinity of the Project Site

Table 4.6-2 lists six species identified by the CNDDDB and a literature review as occurring in the vicinity of the City. The classifications of all species are also provided. Furthermore, a brief discussion of each species potential to occur on the site is provided. A complete description of the sensitive wildlife species potentially occurring within the City can be found in Appendix F.

Table 4.6- 1: Sensitive Plan Species Potentially in the Planning Area

Species		Status			Life Form	Blooming Period	Preferred Habitat	Known Presence/Potential Habitat /Potential on Site
Scientific Name	Common Name	USFWS	CDFG	CNPS				
<i>Dudleya multicaulis</i>	Many-stemmed dudleya	FSC	--	1B	Perennial herb	May-July	Clay soils in chaparral, grasslands, and coastal sage scrub.	No recorded occurrences within the vicinity. No suitable habitat present; not likely to occur.
<i>Dudleya stolonifera</i>	Laguna beach dudleya	FT	ST	1B	Perennial herb	May-July	Chaparral, cismontane woodland, coastal scrub, grassland, in sandstone cliffs.	No recorded occurrences within the vicinity. No suitable habitat present; not likely to occur.
<i>alochortus weedii var intermedius</i>	Intermediate mariposa lily	--	--	1B	Perennial herb	May-July	Coastal scrub, chaparral, grassland on rocky, open slopes.	No recorded occurrences within the vicinity. No suitable habitat present; not likely to occur.
U.S. Fish and Wildlife Service FE Federal Endangered FT Federal Threatened PE Proposed Endangered PT Proposed Threatened FC Federal Candidate FSC Species of Concern California Department of Fish and Game CE California Endangered CT California Threatened CR California Rare		California Native Plant Society 1A Plants presumed extinct in California. 1B Plants rare, threatened, or endangered in California and elsewhere. 2 Plants rare, threatened, or endangered in California, but more common elsewhere. Plants about which we need more information. Plants of limited distribution.						

Table 4.6- 2: Sensitive Species Potentially In The Planning Area

Species		Status		Suitable Habitat	Known Presence/Potential Habitat/Potential on Site
Common Name	Scientific Name	USFWS	CDFG		
<u>BIRDS</u>					
<i>Campylorhynchus brunneicapillus couesi</i>	Coastal cactus wren	--	CSC	Resident in southern California coastal sage scrub. Requires tall cactus.	Known recorded occurrence within the vicinity of the site. Suitable habitat present; High potential to occur.
<i>Vireo bellii pusillus</i>	Least Bell's vireo	FE MNBMC	SE	Riparian or dry river bottom usually containing willows.	Known recorded occurrence within the vicinity of the site. Marginal habitat present; Moderate potential to occur.
<i>Poliophtila californica californica</i>	Coastal California gnatcatcher	FT	--	Obligate resident of coastal sage scrub.	Known recorded occurrence within the vicinity of the site. Suitable habitat present; High potential to occur.
<i>Icteria virens</i>	Yellow breasted chat	MNBMC	CSC	Riparian or dry river bottom usually containing willows.	Known recorded occurrence within the vicinity of the site. Marginal habitat present; Moderate potential to occur.
<u>REPTILES</u>					
<i>Cnemidophorus hyperythrus</i>	Orange-throated whiptail	--	CSC	Coastal sage scrub, chaparral, and hardwood with sandy areas.	Known recorded occurrence within the vicinity of the site. Suitable habitat present; High potential to occur.
<i>Crotalus ruber ruber</i>	Northern red-diamond rattlesnake	--	CSC	Chaparral, woodland, grassland in rocky areas and dense vegetation.	Known recorded occurrence within the vicinity of the site. Suitable habitat present; High potential to occur.
<div> <div>U.S. Fish and Wildlife Service</div> <div> <div>FE</div> <div>FT</div> <div>PE</div> <div>PT</div> <div>FC</div> <div>FSC</div> <div>MNBMC</div> </div> <div> <div>Federal Endangered</div> <div>Federal Threatened</div> <div>Proposed Endangered</div> <div>Proposed Threatened</div> <div>Federal Candidate</div> <div>Species of Concern</div> <div>Migratory Nongame Birds of Management Concern</div> </div> </div> <div> <div>California Department of Fish and Game</div> <div> <div>SE</div> <div>ST</div> <div>SR</div> </div> <div> <div>State Endangered</div> <div>State Threatened</div> <div>State Rare</div> </div> </div> <div> <div>Bureau of Land Management</div> <div>BS</div> <div>BLM Sensitive</div> </div>					

Jurisdictional Areas

There are areas within the City determined to be “Waters of the U.S.” and areas of wetlands. Both of these areas fall under the jurisdiction of the United States Army Corps of Engineers (USACE). Additionally, areas of CDFG jurisdictional riparian resources also occur within the project site. The main drainage feature within the City limits is Aliso Creek. There are also several small tributaries within the City. There are two small drainage features within two areas proposed for development under the General Plan.. These areas contain a definable bed and bank system but do not contain any associated habitat or vegetation.

Regional Connectivity/Wildlife Movement Corridor Assessment

Historically, the City provided open space with free movement in all directions. Aliso Creek is a moderate size drainage system and provides suitable cover for species movement. Most of the land has currently been converted from open space areas to commercial, industrial, residential, and recreational uses. Wildlife movement on a regional basis has ceased due the development of the City. There are two areas within the City that may still be considered a movement corridor, Ailso Creek and the coastal sage scrub habitat located in the western portion of the City. The proposed development areas do not contain any wildlife movement corridors on a regional basis.

4.6.3 THRESHOLDS OF SIGNIFICANCE

The impacts to biological resources are assessed using impact significance criteria, which implement the policy statement contained in Section 21001(c) of the Public Resources Code (CEQA Statutes). This section reflects that the legislature has established it to be the policy of the State to “Prevent the elimination of fish or wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self perpetuating levels, and preserve for future generations representations of all plant and animal communities...”

The following definitions are used in establishing the significance criteria for biological resources:

“Endangered” means that the species is listed as endangered under state or federal law.

“Threatened” means that the species is listed as threatened under state or federal law.

“Sensitive habitat” refers to habitat for plants and animals (1) which plays a special role in perpetuating species using the habitat on the project site, and (2) without which there would be substantial danger that the population of that species would drop below self-perpetuating levels.

“Substantial effect” means significant loss or harm of a magnitude which, based on current scientific data and knowledge, (1) would cause a species or a native plant or animal community to drop below self-perpetuating levels on a statewide or regional basis or (2) would cause a species to become threatened or endangered.

An impact would be significant if it:

- ❑ Affected an endangered, threatened, or rare species or their habitat or migratory patterns;
- ❑ Affected wetland habitat

4.6.4 PROJECT AND CUMULATIVE IMPACTS

Implementation of the General Plan will result in the future development of 9 sites.

Impacts to Natural Communities

The proposed development under the City of Laguna Woods General Plan will have minimal impacts on local biological resources. Natural vegetation communities occurring within the proposed development sites are limited to urban/developed and riparian. Parcel 1 contains numerous garden plots that are

artificially irrigated and maintained by the Laguna Woods residents. Parcels 2, 3, and 6 contain highly disturbed areas with early successional weedy species. Parcels 4, 5, and 9 consist of artificially irrigated nonnative landscape species. Parcel 7 consists of a drainage feature with associated riparian vegetation. These plant communities are not considered to be rare and do not provide suitable habitat for special status species, therefore, impacts to natural communities within the “potential development” parcels is considered less than significant.

Impacts to Plant Species

The major impacts to common plant species in the proposed development areas involve the elimination of nonnative weedy and ornamental vegetation cover and a few native riparian species. Project implementation may result in the direct loss of common plant species typically associated with disturbed habitats. These species are commonly abundant on a regional basis. The loss of common plant species is considered to be adverse but not a significant impact.

Impacts to Wildlife Species

The major impacts to wildlife in the proposed development areas involve the elimination of disturbed open space and nonnative vegetation cover. Small mammals and birds that occupy the disturbed areas will be forced to migrate to other suitable habitat. Project implementation may result in the direct loss of common wildlife species typically associated with disturbed habitats. These species are commonly abundant on a regional basis. The loss of common wildlife species is considered to be adverse but not a significant impact. Displaced wildlife species will likely find shelter in adjacent land areas, but will not affect the population on a regional basis.

Impacts on Sensitive Species

Impacts to Sensitive Flora

One federal- and state-listed threatened species, Laguna Dudleya, is known to occur within the vicinity of the “potential development” parcels (Table 4.0-5). There are two other plant species listed as sensitive by the CNPS that have also

been recorded within the vicinity, many-stemmed dudleya and Intermediate mariposa lily. Impacts to sensitive plant species that are considered federal or state listed threatened species or otherwise characterized, as species of concern may be considered significant. However, due to the lack of suitable habitat for the above mentioned special status species within the area, impacts to these species are considered to be less than significant.

Impacts to Sensitive Fauna

Special Status Species

There is one federal-listed endangered species and one federal-listed threatened species that have been recorded to occur within the vicinity. The least Bell's vireo is a federal-listed endangered species and the coastal California gnatcatcher is listed as threatened under FESA. There are also four wildlife species that are considered Species of Concern by the California Department of Fish and Game. FESA prohibits the "take" of a threatened or endangered species, unless otherwise permitted.

If the proposed development within the City of Laguna Woods results in direct or indirect impacts to threatened, endangered, or otherwise sensitive species or any habitat occupied by these species, than project implementation may result in potential impacts to those species. Any impacts to threatened and endangered species is considered significant under CEQA. However, there is no suitable habitat within the proposed development areas; therefore, impacts to sensitive fauna would be considered less than significant.

Nesting Birds

Raptor nests are typically found within the Eucalyptus windrows and other wooded areas within the City limits. It is likely that the raptor species are primarily foraging in open space areas within or adjacent to the City of Laguna Woods. The City of Laguna Woods generally exhibits poor foraging habitat due to the extensive development.

Breeding season of raptors and other migratory birds typically runs from February through late June. Disturbing or destroying active raptor and/or migratory bird nests is a violation of the Migratory Bird Treaty Act. Potential impacts to raptor nests and breeding migratory birds are considered significant.

Jurisdictional Areas

There are three potential jurisdictional areas within the proposed development areas (Parcel 5, 6 and 7 table 4.0-5). The drainage features in parcels 5 and 6 are small urban run-off features that flow in soft bottom drainages with little to no vegetation.

The drainage feature in parcel 7 contains disturbed riparian vegetation. Potential future development within these three areas may impact Waters of the United States and associated riparian habitat. These potential impacts are considered significant Regional Connectivity/Wildlife Movement Corridors.

Potential wildlife movement through the City of Laguna Woods would likely occur through open space areas. The only areas with regional connectivity to adjacent habitats occur along Aliso Creek and the coastal sage scrub habitat in the western part of the City. Impacts to regional wildlife movement corridors are considered significant under current FESA regulations. Parcels 2,3,4 and 5 are surrounded by development and would not be considered part of a regional wildlife movement corridor. Parcel 1 contains active garden plots and is not considered to be a movement corridor. Parcels 6 and 7 are within an active drainage system. Although the drainage allows for movement beneath Moulton Parkway, there is no regional connectivity, and therefore, would not be considered a regional movement corridor. The potential development of the identified parcels would not affect regional wildlife movement corridors.

Cumulative Impacts

Per the provisions of CEQA, actions, which have impacts that are individually limited, but cumulatively considerable, may be considered significant and adverse. Potential cumulative impacts on biological resources are primarily

related to both the regional and local loss of existing plant communities and habitat that support wildlife species. As described above, the potential development of the subject parcels would not result in significant affects to natural communities, plant species, or regional wildlife movement corridors. Furthermore, the proposed project would not contribute substantially to cumulative effects associated with natural communities, plant species, and regional wildlife movement corridors. The potential future development could result in impacts to nesting birds and jurisdictional areas that may contribute to significant cumulative impacts.

4.6.5 MITIGATION MEASURES

BR-1 Migratory birds and raptor nests are protected under the federal Migratory Bird Treaty Act and California Fish and Game Code. Mitigation for the taking of active nests may be accomplished in two ways. First, prior to the commencement of tree removal during the nesting season (February-July), all suitable habitats should be thoroughly surveyed for the presence of nesting birds by a qualified biologist. If any active nests are detected, the area should be flagged and avoided until the nesting cycle is complete. Tree removal and grading could be delayed until after the breeding season (August-January). This could ensure that no active nests would be disturbed. Implementation of appropriate measures would result in less than significant impacts.

BR-2 Proposed development in the riparian corridors should be restricted and permitted only after a site investigation has assessed potential disturbance to plant and animal resources. All permitted development should contain measures wherever possible to offset any impacts. The General Plan encourages developers to use native plant material for landscaping whenever feasible. Building and road construction will be planned to minimize disturbance to plants and animals by site planning and noise, dust and soil erosion control practices. The USACE and CDFG should be consulted with respect to any project containing jurisdictional areas.

- BR-3 It is anticipated that small projects may be processed through the United States Army Corps of Engineers (USACE) utilizing the Nationwide Permit program. Some projects may involve more extensive encroachment and/or filling of jurisdictional areas. It is anticipated that development of these areas may require USACE authorization through the Individual Permit process. Further refinement of the project and avoidance, minimization and mitigation measures may result in a lessening of potential impacts to USACE jurisdictional areas.
- BR-4 In connection with notification to the USACE under Section 404 of the Clean Water Act, pursuant to 33 CFR Part 330, Appendix A, a written request for Section 401 water quality certification must be submitted to the Regional Water Quality Control Board (RWQCB) to ensure that no degradation of water quality will result from project implementation. RWQCB certification must be issued prior to commencement of any activity that might affect quality (i.e., project grading). RWQCB processing of a certification request generally takes 45-60 days. The project proponent is also required to submit a Storm water Pollution Prevention Plan (SWPPP) to the RWQCB prior to site grading.
- BR-5 A CDFG Section 1603 agreement would be required prior to any alteration of a streambed or riparian habitat within CDFG jurisdiction. The 1603 permit will be obtained utilizing the project's approved Environmental Impact Report. To ensure rapid and favorable action on a 1603 notification, mitigation measures (e.g., minimization of disturbance to existing onsite riparian habitat and enhancement and creation of riparian habitat with the project site) should be submitted with the notification package. CDFG processing of the 1603 agreement usually takes 30 days after receipt of a complete notification package.

4.6.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The implementation of the above mitigation measures will reduce impacts to biological resources to a level that is less than significant.

4.7 ENERGY RESOURCES

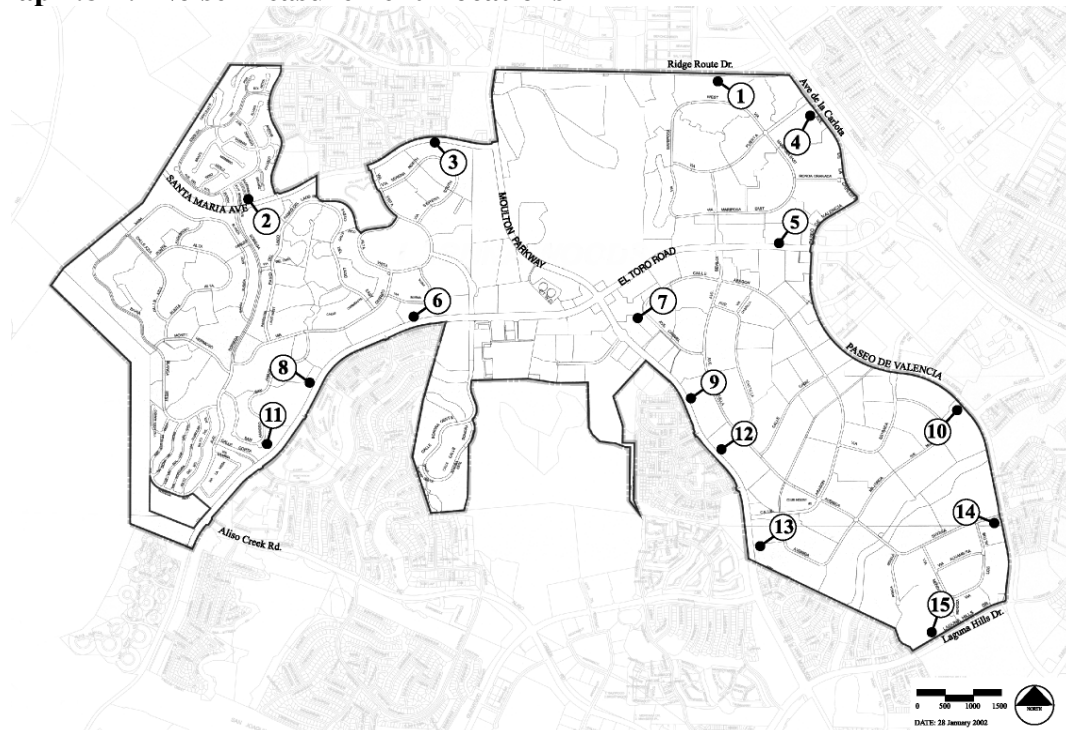
Analysis of potential impacts related to energy is included in Section 4.10, *Utilities and Service Systems*.

4.8 NOISE

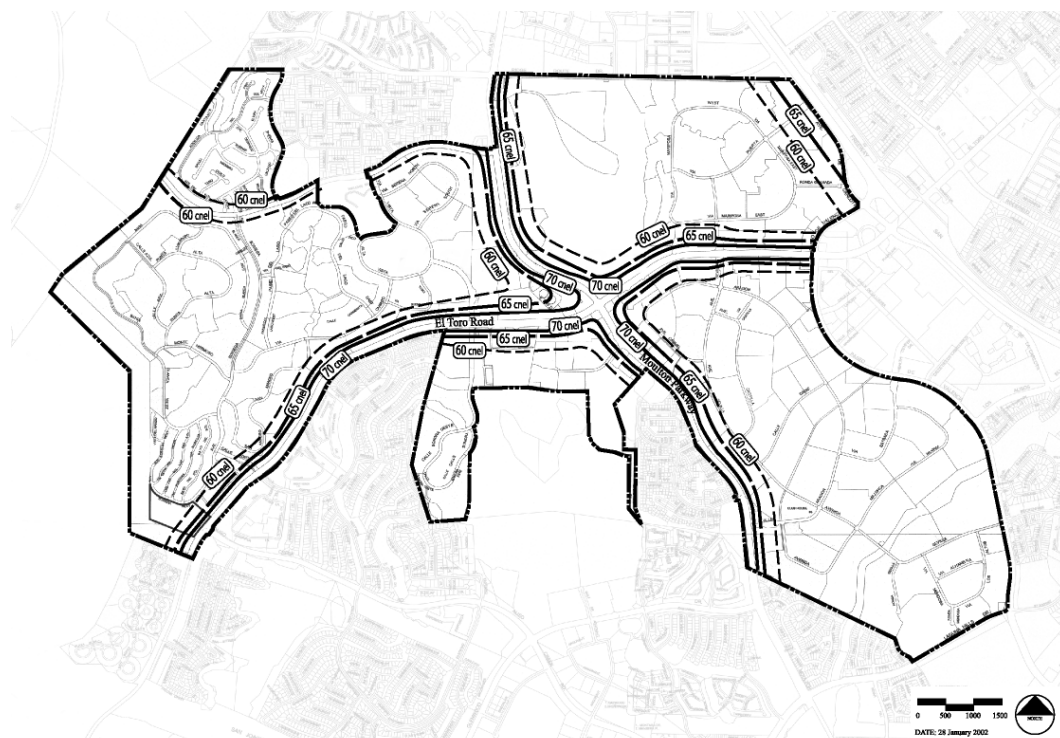
This section is an analysis of the existing and future noise environment within the City associated with future development consistent with the General Plan. The technical report includes noise level measurements at 15 different locations necessary to characterize the existing noise environment with both stationary and mobile noise sources. All data was obtained by use of sound level meters. The primary source of noise in Laguna Woods is that of vehicular traffic.

Using both existing and projected traffic volumes and noise measurement results, an analysis was performed to project future noise levels consistent with the traffic noise model developed by the Federal Highway Administration (FHWA-RD-77-108). Maps 4.8-1 through 4.8-3 identify, for each segment of arterial studied in the City, the location of the noise contours relative to the arterial's centerline.

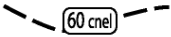
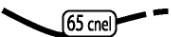
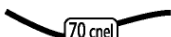
Map 4.8-1: Noise Measurement Locations



Map 4.8-2: Existing Noise Environment



Legend

-  60 CNEL
-  65 CNEL
-  70 CNEL

Map 4.8-3: Future Noise Environment, Year 2025

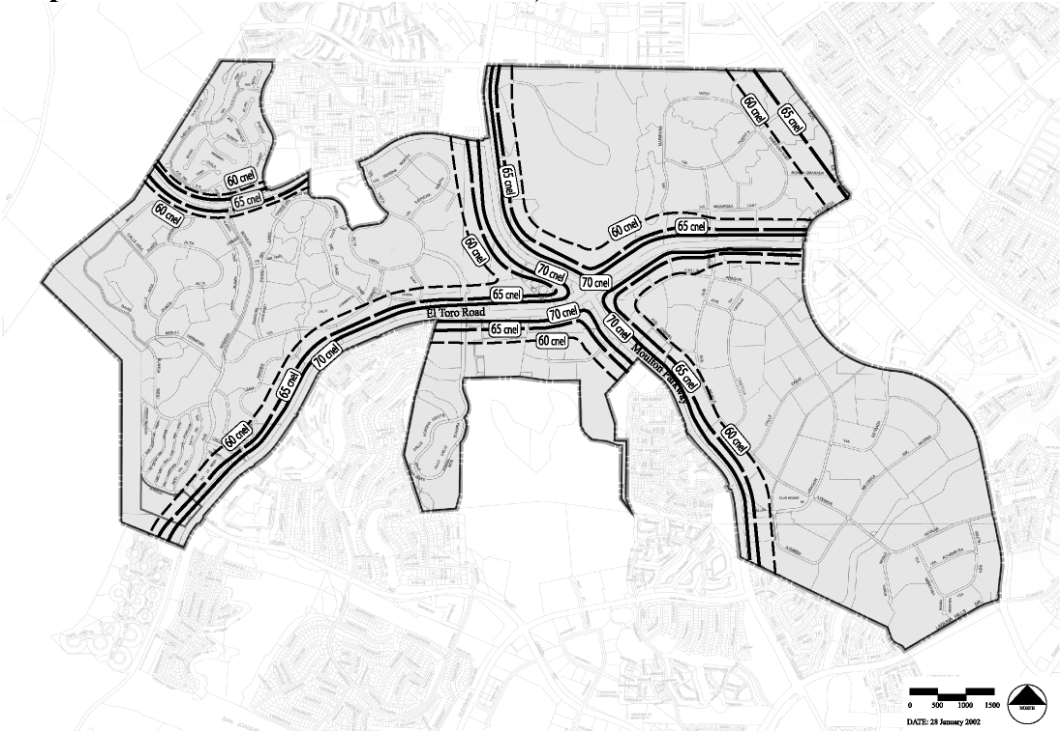


Table 4.8- 1: Common Noise Sources and A – Weighted Noise Levels

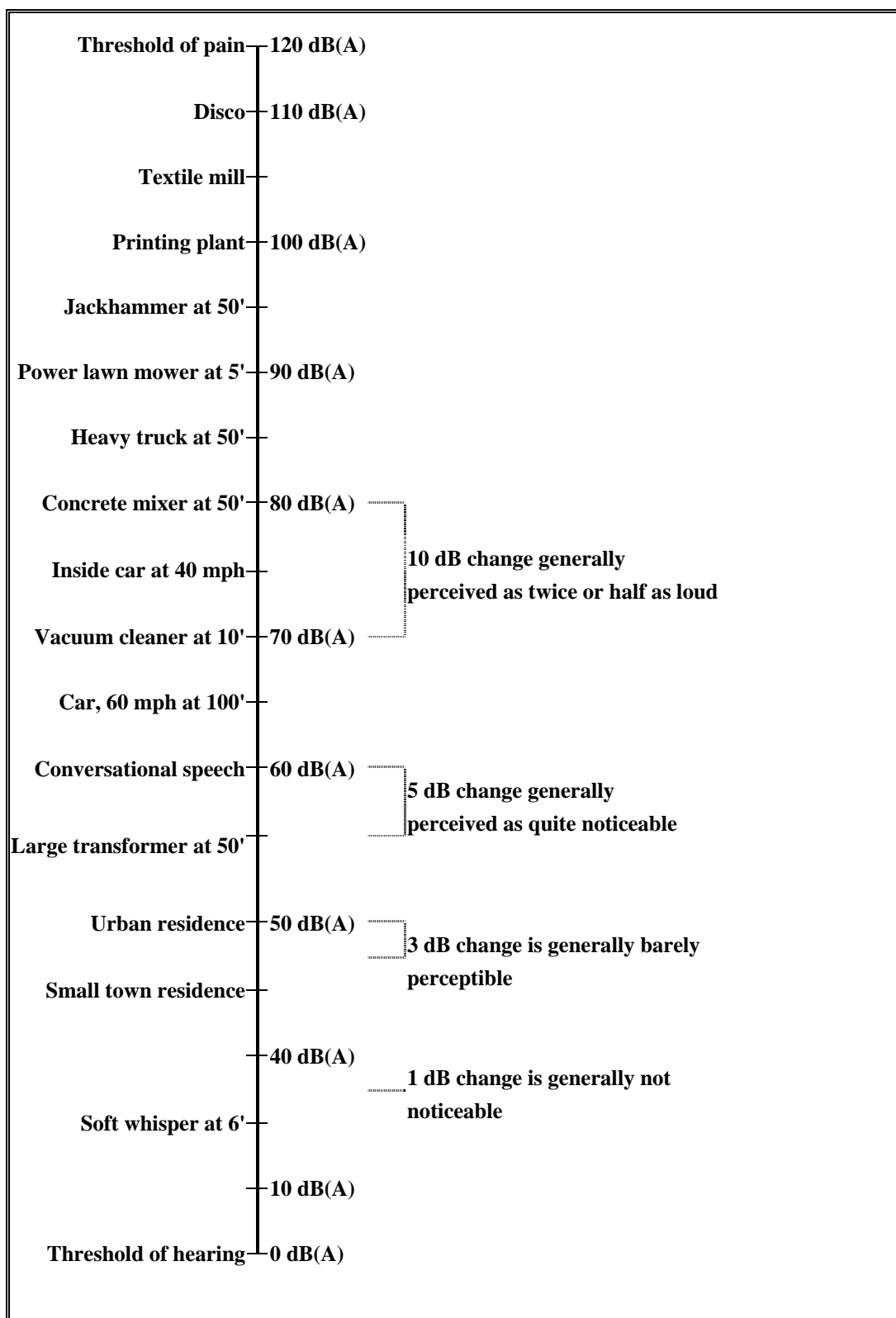
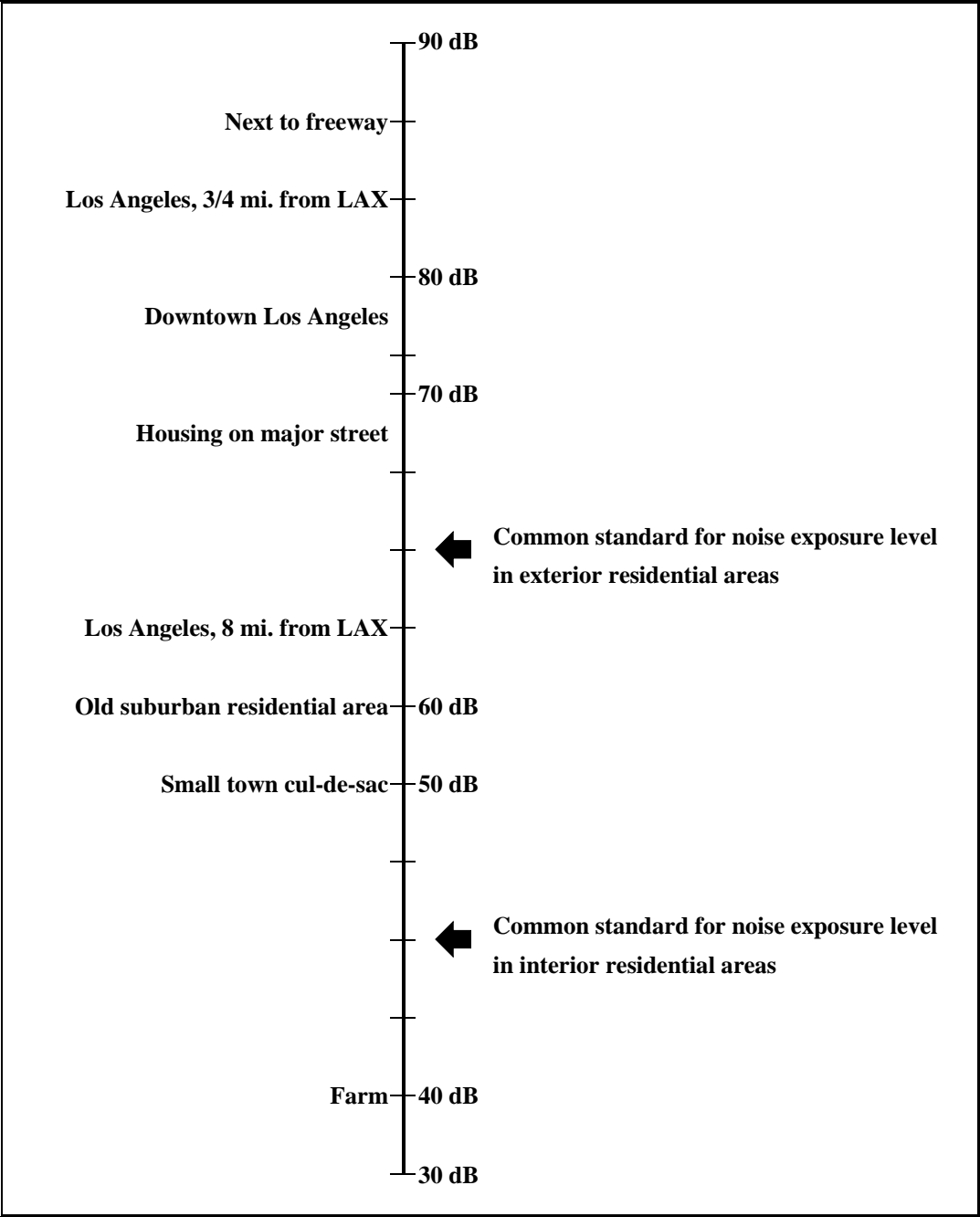


Table 4.8- 2: Common CNEL Noise Exposure



4.8.1 NOISE EVALUATION AND MEASUREMENT METHODOLOGY

A description of the character of a particular noise requires the following:

- The amplitude and amplitude variation of the acoustical wave
- The frequency (pitch) content of the noise
- The duration of the noise

The A-weighted sound pressure level [identified as dB(A)] is the scale of measurement that is most useful in community noise measurement. The scale is used to approximate the sensitivity of the human ear to various frequencies.

To establish the A-weighted sound level, an acoustical signal is detected by a microphone and then filtered to emphasize those portions of the noise that are most annoying to individuals. This weighting of sound energy corresponds approximately to the relative annoyance experienced by humans from noises at various frequencies. The sound levels of a few typical sources of noise that may be routinely experienced by people within Laguna Woods are listed in Table 4.8-1. Map 4.8-2 indicates the outdoor CNEL at typical locations throughout the Southern California area.

Community Noise Equivalent Level (CNEL) and Contours

It is recognized that a given level of noise may be more or less tolerable depending on the duration of exposure and the time of day during which the noise is experienced. There are several measures of noise exposure that consider not only the variation of noise level but also the timeframe of when it occurs. Of these, the State Division of Aeronautics and the California Department of Housing and Community Development have adopted the Community Noise Equivalent Level (CNEL). This measure weights the average noise level for the evening hours (from 7:00 p.m. to 10:00 p.m.) by 5 dB, and the late evening and early morning hours (from 10:00 p.m. to 7:00 a.m.) by 10 dB. The weighting for CNEL from 7:00 p.m. to 7:00 a.m. is due to increased human sensitivity to noise outside daytime hours. The un-weighted daytime noise levels are combined with these weighted levels and averaged to obtain a CNEL value.

The noise environment for Laguna Woods can be described using noise contours developed for the major noise sources within the City. The noise contours should be used as a guide for planning. Noise contours represent lines of equal noise exposure, just as the contour lines on a topographic map are lines of equal elevation. The contours shown on the maps are the 60, 65 and 70 dB CNEL contours for traffic, stationary and airport noise, which demonstrate the existing and future noise environments in the City. The distances from sources to contour lines are shown in tabulated format in the full report included in the Appendix E - Noise.

Within the 60 and 65 dB CNEL contours, any proposed or expanded noise sensitive land use (i.e., residential, churches, etc.) should be evaluated on a project-specific basis at the planning stage. A project may be permitted only if appropriate mitigation measures can meet City guidelines and/or State (Title 24) standards.

Within the 70 dB CNEL contour, noise sensitive developments are normally unacceptable and discouraged. However, developments may occur with a detailed analysis meeting the noise reduction requirements through noise insulation features included in the design.

The CNEL contours for the roadways within the City and I-5 were developed utilizing a methodology based on a simplified version of the Federal Highway Administration's Traffic Noise Model (FHWA-RD-77-108) and traffic data obtained from Caltrans and the Mobility Group. The CNEL contours for flight operations at the proposed international airport at the former MCAS—El Toro were developed by Mestre-Greve Associates for the Environmental Impact Report prepared by Orange County. The assumptions, methods and noise level data used to develop the contours are explained in detail in the Appendix for Section 4.8.

4.8.2 NOISE STANDARDS AND COMPATIBILITY

Noise standards and criteria shown in Table 4.8-3 specify acceptable limits of noise for various land uses throughout the City. These standards and criteria are incorporated into the land use planning process to reduce future noise and land

use incompatibilities. Table 4.8-4 also presents criteria used to assess the acceptability of proposed land uses with the noise environment. These criteria were used to develop the specific Noise Standards presented in Table 4.8-2 and are the basis for City policies related to land uses and acceptable noise levels. These tables are the primary tools that allow the City to ensure integrated planning for compatibility between land uses and outdoor noise. The matrix is used to evaluate the compatibility at the discretionary development project level.

Table 4.8- 3: Interior and Exterior Noise Standards

Land Use	CNEL	
	Interior ¹	Exterior ²
Residential - Single family, multifamily, duplex, mobile home	45 dB	55 dB
Residential - Transient lodging, hotels, motels, nursing homes, hospitals	45 dB	55 dB
Private offices, church sanctuaries, libraries, board rooms, conference rooms, theaters, auditoriums, concert halls, meeting halls, etc.	45 dB	---
Schools	45 dB	65 dB
General offices, reception, clerical, etc.	50 dB	---
Bank lobby, retail store, restaurant, typing pool, etc.	55 dB	---
Manufacturing, kitchen, warehousing, etc.	65 dB	---
Parks, playgrounds	---	65 dB
Golf courses, outdoor spectator sports, amusement parks	---	65 dB

¹ Standard applies to all habitable interior areas. Standard to be achieved with windows and doors closed. Mechanical ventilation shall be provided as required by the Uniform Building Code.

² Standard applies to all habitable exterior living areas including: private yards, private patios and balconies, common recreation areas, school playgrounds, etc.

Using the compatibility matrix in Table 4.8-4, a project within Zone A or Zone B is considered compatible with the noise environment. Zone A implies that no mitigation will be needed. Zone B implies that minor soundproofing of the structure may be needed and should be engineered prior to issuance of building permits. Zone C indicates that substantial noise mitigation will be necessary, such as construction of noise barriers and substantial building sound insulation. However, a project in Zone C can be successfully mitigated despite the “normally

unacceptable” ranking. The project may be approved for land use with conditions requiring adequate mitigation to achieve City standards (Table 4.8-3) prior to issuance of grading permits, building permits, or other appropriate milestones. Noise impact considerations will be considered in all future land use planning decisions.

Table 4.8- 4: Noise/ Land Use Compatibility Matrix

Land Use Category

CNEL, dB

Legend

	55	60	65	70	75	80	
Residential - Single family, Multi-family, duplex	A	A	B	C	C		A NORMALLY ACCEPTABLE Specified land use is satisfactory based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Residential - Mobile homes	A	A	B	C	C		
Transient Lodging - Motels, hotels	A	A	B	B	C	C	
Schools, Libraries, Churches, Hospitals, Nursing Homes	A	A	B	C	C		B CONDITIONALLY ACCEPTABLE New construction or development should be undertaken only after a detailed analysis of the noise requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice
Auditoriums, Concert Halls, Amphitheaters, Meeting Halls	B	B	C	C			
Sports Arenas, Outdoor Spectator Sports, Amusement Parks	A	A	A	B	B		
Playgrounds, Neighborhood Parks	A	A	A	B	C		
Golf Courses, Riding Stables, Cemeteries	A	A	A	A	B	C	C NORMALLY UNACCEPTABLE New construction or development should generally be discouraged. If it does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Office and Professional Buildings	A	A	A	B	B	C	
Commercial Retail, Banks, Restaurants, Theaters	A	A	A	A	B	B	C
Industrial, Manufacturing, Utilities, Wholesale, Service Stations	A	A	A	A	B	B	B
Agriculture	A	A	A	A	A	A	A
							Clearly UNACCEPTABLE New construction or development should generally not be undertaken

Source: Taken in part from "Aircraft Noise Impact Planning Guidelines for Local Agencies,

4.8.3 EXISTING CONDITIONS

The most predominant, noise-sensitive land use in Laguna Woods is residential. Residential land uses are considered especially noise sensitive because; 1) individuals spend a considerable amount of time at home, 2) significant activities occur outdoors, and 3) sleep disturbance is most likely to occur in a residential area. Additionally, the City of Laguna Woods has churches and recreational facilities that are considered noise sensitive. The locations of residential areas and recreational facilities are shown on the General Plan Land Use Map found in the Land Use/Planning section of the EIR.

The most significant noise-producing sources within the City of Laguna Woods are vehicular traffic. Motor vehicle noise is of concern because of the traffic volume and roadway proximity to noise sensitive areas.

The City of Laguna Woods is bisected by two major roadways and is adjacent to Interstate 5. The two major roadways are El Toro Road and Moulton Parkway. Santa Maria Avenue is an additional roadway carrying significant traffic with residential land uses directly adjacent to the roadway.

Table 4.8- 5: Significant Sound Levels in Laguna Woods

Noise Source	Range of Sound Levels
Private aircraft flyover	47 to 59 dB(A)
Traffic on City streets	59 to 79 dB(A)
Traffic on the I-5 freeway	64 to 78 dB(A)
Activities at the Von's shopping center	49 to 71 dB(A)

In general, noise from commercial land uses within the City is not considered excessive. The Von's shopping center, located at El Toro Road and Moulton Parkway, was the only stationary source in the City exceeding noise guidelines. The impact is primarily from noise generated by loading dock operations and trucks entering and leaving the area.

Using measurements at 15 different locations as shown in Map 4.8-1, noise exposure contours have been derived for the City of Laguna Woods, and noise impact areas have been identified. Noise contours are shown for all roadways

with significant noise levels where the projected 60 CNEL contour extends beyond the road right-of-way. If the 60 CNEL contour was not anticipated to extend beyond the road right-of-way, the contour was not plotted. The 60, 65 and 70 dB CNEL contour levels are shown on these maps. Full size exhibits (i.e., Scale 1" = 600') are available for inspection at the Community Development Department at the City of Laguna Woods.

The existing noise contours for the City of Laguna Woods are presented in Map 4.8-2. As shown, the existing range of sound levels for adjacent residential property exceeds the City's Noise Ordinance of 55 dB. In particular, noise levels in the area of Interstate 5 adjacent to Laguna Woods, along El Toro Road from Aliso Creek to Paseo de Valencia and adjacent to Moulton Parkway between Gate 12 south to City limits currently exceed City noise standards.

4.8.4 AGENCY JURISDICTION AND REGULATIONS

Local governments are prevented from establishing noise standards for motor vehicles. Section 21 of the Vehicle Code prohibits local authorities from adopting additional noise limitations on vehicles and makes the State and Federal agencies responsible for controlling vehicle noise emission levels. Local California Highway Patrol (CPH) and police officers are educated about California's applicable noise limits and proper standards to enforce the State regulations. Officers issue "Notice to Correct" (fix-it tickets) when vehicles are judged in violation of the noise standard.

Cities, however, may regulate noise levels of most other sources. Land use planning becomes the primary means to avoid potential noise concerns in the community at the earliest stage. Through land use decisions, cities may reduce noise impacts by separating noise generators from noise sensitive uses. Cities can also mitigate new development from transportation noise through reducing the impact of the noise on the proposed project (i.e., site design review and noise barriers). Mitigation through site planning and the design and construction of a noise barrier (wall, berm, or combination wall/berm) are the most common ways of alleviating traffic noise impacts in existing urban environments.

The most effective method to control community noise impacts from non-transportation noise sources is through application of a Noise Ordinance. The City of Laguna Woods adopted a Noise Ordinance, which controls unnecessary, excessive and annoying sounds emanating from stationary sources in the community to prevent excessive noise levels that are detrimental to the public health, welfare and safety and contrary to public interest. In the event that ambient noise levels are thought to exceed exterior and/or interior noise standards, measurements are performed using a sound level meter. Appropriate code enforcement action by the City is taken if noise level measurements exceed City standards.

4.8.5 THRESHOLDS OF SIGNIFICANCE

Impacts resulting from adoption of the project General Plan could be deemed significant if this action would result in:

- ❑ Exposure of people to or generation of noise levels in excess of standards established;
- ❑ A substantial permanent increase in ambient noise levels above levels existing with the project;
- ❑ A substantial or periodic increase of ambient noise levels in the project vicinity without the project.

4.8.6 PROJECT AND CUMULATIVE IMPACTS

For future development project sites bounded by major arterial roadways, noise exposures on portions of the project site may exceed City of Laguna Woods noise guidelines for noise sensitive land uses and could result in potential adverse impacts. However, through the design review and environmental review process, conditions will be applied to new development proposals to mitigate any anticipated impacts to a level less than significant. This will be accomplished through the development of a “procedures manual” to be prepared by the City to include standard conditions applied in project entitlement processing.

Residential development on the 3.3-acre parcel located at Moulton Parkway and El Toro Road where noise levels are greater than 65 dB would be subject to review and mitigation consistent with the procedures manual. The noise levels represent an impact of the acoustic environment on the project, and not necessarily of the project upon the environment. Consistent with standards in Table 4.8-4, residential uses are conditionally acceptable where noise is 65 dB. New construction or development should be undertaken only after a detailed analysis of the noise levels is made and appropriate noise insulation features are included in the design. The 3.3-acre parcel example will require a subsequent noise study prepared in conjunction with the submittal of plans to evaluate the extent of noise constraint, and the feasibility of mitigation to achieve City standards.

Temporary noise impacts will result from the future project construction activities anticipated by the General Plan. Construction noise from heavy equipment represents a short-term project impact on ambient noise levels. Noise generated by construction equipment and construction activities, can however, reach high levels. Appropriate mitigation measures as listed in the following section will be applied to development on a project-by-project basis to protect residents from short-term construction noise. Upon application of appropriate mitigation measures, these short-term project impacts are not expected to be significant.

Roadway Traffic Impacts

Map 4.8-3 depicts the projected noise environment for year 2025. Although the horizon year for the General Plan is 2015, the noise element represents a worst-case scenario based on projected year 2025 traffic.

The results of 24-hour measurements indicate a CNEL of about 69 dB at rear yards of dwellings in the vicinity of the Interstate 5 freeway. This existing level is higher than is considered acceptable and could compromise the welfare of residents exposed to the noise for a long period of time. However, no change from year 2001 to 2025 is projected as a consequence of the implementation of the General Plan.

Currently, the CNEL values at noise-sensitive (residential) locations directly adjacent to certain segments of roadways on El Toro Road and Moulton Parkway exceed 65 dB (see Table 4.8-6). This existing noise level condition is considered excessive.

Table 4.8- 6: Noise Environment in Excess of 65 CNEL

Roadway	Reach	Time Frame
El Toro Road	Aliso Creek to Paseo de Valencia	Existing & future
Moulton Parkway	Gate 12 south to City Limits	Existing & future
Santa Maria Avenue	Avenida Sosiega to Santa Victoria	Future

For already noisy conditions, the “measurable” threshold of significance is generally taken to be the level at which people clearly perceive a degradation in the noise environment. Empirical evidence places this perception threshold at +3 dB. Accordingly, as can be seen from Table 4.8-7, the changes in the noise environment from year 2001 to 2025 are generally insignificant, being 1 dB or less. This is particularly true for residences adjacent to the I-5 freeway, Moulton Parkway and El Toro Road, where the existing noise environment already exceeds recognized standards and will be marginally worse (i.e. 0 to 0.5 dB). Residences adjacent to Santa Maria Avenue will be exposed to a modest increase in noise level of 1.0 dB. Therefore, the incremental impacts of a project are not cumulatively considerable since they are so small that they make only a de minimis contribution to an already significant cumulative impact caused by other projects that would exist in the absence of the proposed project. A de minimis contribution means that the environmental conditions would essentially be the same whether or not the proposed project is implemented.

Table 4.8- 7: Change in the Future CNEL from Year 2001 to 2025

Arterial/Reach	Projected Change in Year 2025
Route 5 Freeway	0 dB
Moulton Parkway	
Gate 12 to El Toro	+0.5 dB
El Toro to Calle Cortez	+0.5 dB
Via Iglesia to City Limits	+0.5 dB

Arterial/Reach	Projected Change in Year 2025
El Toro Road	
Aliso Creek to Calle Corta	0 dB
Calle Corta to Calle Sonora	0 dB
Calle Sonora to Moulton	0 dB
Moulton to Ave. Sevilla	+0.5 dB
Ave. Sevilla to Paseo deValencia	+0.5 dB
Santa Maria Avenue	+1.0 dB

Cumulative Impacts

Growth attendant to adoption and implementation of the General Plan together with continued growth in the region will result in increased traffic on roadways in the City. Because local and regional traffic produces already elevated noise levels, project-related noise impacts are not cumulatively considerable since they are so small that they make only a de minimis contribution to an already significant cumulative impact. In Laguna Woods, the existing and projected noise levels would essentially be the same with or without the project.

4.8.7 MITIGATION MEASURES

Although development within the City of Laguna Woods would only have a de minimis impact on the existing noise levels, the following mitigation measure will be adopted

N-1 The City shall include conditions in permit processing to ensure that project approvals will have appropriate noise levels. The conditions will be adopted in the “Development Project Review Procedures Manual” and shall include:

- For purposes of characterizing the noise environment: Prior to the issuance of building permits, the applicant shall submit a final acoustical report consistent with requirements of Title 24 of the California Code of Regulations and the Uniform Building Code.

- For purposes of mitigating noise impacts during the development project construction phase: Prior to issuance of grading permits, the project applicant shall incorporate the requirements of the City's Noise Ordinance as a note on the grading plan cover sheet, for review and approval by the Director of Community Development.
- For purposes of mitigating noise impacts during the development project construction phase: Prior to issuance of building permits, the project applicant shall incorporate the following measures as a note on the grading plan cover sheet:
 - Construction equipment, fixed or mobile, shall be maintained in proper operating condition with approved noise mufflers.
 - Construction staging areas shall be located away from off-site receptors and occupied buildings on site during the later phases of project development.
 - Stationary equipment shall be placed such that emitted noise is directed away from residential areas to the greatest extent feasible.
 - Construction access routes shall be selected to minimize truck traffic near existing residential uses where reasonably feasible.
- For purposes of development project implementation: All development project residential lots and dwellings shall be sound attenuated against present and project noise, which shall be the sum of all noise impacting the project, so as not to exceed an exterior and interior noise standard of 55 dB CNEL. Evidence prepared under the supervision of a City-approved acoustical consultant that these standards will be satisfied in a manner consistent with Title 24 of the California Code of Regulations and the Uniform Building Code shall be submitted as follows:
 - The final acoustical report shall describe in detail the exterior noise environment and preliminary mitigation measures necessary to achieve noise standards. The report shall also describe the acoustical design features of the structures required to satisfy the exterior and interior noise standards along with satisfactory evidence, which indicates that the sound attenuation measures specified in the preliminary acoustical report, have been incorporated into the design of the project.

- Prior to the issuance of building permits, all freestanding acoustical barriers must be shown on the project plot plan illustrating height, location and construction in a manner meeting the approval of the Director of Community Development.

4.8.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

While cumulative noise level increases may be perceptible, the project's contribution to a significant cumulative impact is de minimus. The projected noise environment would essentially be the same whether or not the proposed project is implemented. This impact is therefore, considered less than significant.

4.9 PUBLIC SERVICES

4.9.1 EXISTING CONDITIONS

Police Protection

Laguna Woods contracts with the County of Orange Sheriff-Coroner Department for police services which are provided from the Aliso Viejo Sheriff's facility at 11 Journey. Sixteen (16) hours of patrol coverage and half the man-hours of an investigator are provided to Laguna Woods each day.

Private security guards patrol the Leisure World community. Sheriff response times vary by time of day and priority of the call; average response time from dispatch to on-scene arrival is eight and one-half minutes for emergency calls. The Sheriff-Coroner Department responded to approximately 750 calls in Laguna Woods during the first ten months of 2001.

Fire Protection

The Orange County Fire Authority provides fire prevention, suppression, and paramedic services to the City of Laguna Woods. The City is served by Station No. 22 at 24001 Paseo de Valencia in Laguna Woods. Each work shift includes four firemen and two paramedics.

The target response time in Laguna Woods is five minutes and is met 80% of the time. All responses are made within eight minutes. In 2000, Station No. 22 responded to 3,563 calls, of which approximately 85% (3,005) were for emergency medical services.

Schools

The Saddleback Valley Unified School District operates elementary, intermediate, and high schools serving the cities of Laguna Woods, Lake Forest, Rancho Santa Margarita, and portions of Mission Viejo. The District currently serves 35,000 students. Because of seniors-only age-restrictions applicable to all existing

residences in Laguna Woods, the existing population does not include children of elementary, intermediate, or high school ages.

Libraries

The City of Laguna Woods is provided library services through the Orange County Public Library system. Currently, residents can utilize the computer system in the lobby of the Laguna Woods City Hall which allows residents to order library materials via an online library service and have them delivered within a couple of days. In addition, residents are able to utilize the El Toro Branch Library in Lake Forest, the Aliso Viejo Library, the Heritage Park Regional Library in Irvine, and upon completion in July 2002, the Technology Branch located in the City of Laguna Hills.

City Facilities

The City of Laguna Woods operates from City Hall located at 24264 El Toro Road. This leased facility is located in a commercial center at Moulton Parkway and El Toro Road.

Roads

The City of Laguna Woods is responsible for maintenance of Moulton Parkway, a designated “Smart Street” on the Orange County Master Plan of Arterials Highways (MPAH), and El Toro Road, designated a “Principal Arterial. The City is also responsible for maintenance of portions of Santa Maria Avenue, designated a “Secondary Arterial” on the MPAH. No roadway construction is required or proposed as a result of adoption and implementation of the General Plan, or as a result of subsequent development consistent with the General Plan. The following roadway improvements within and adjacent to Laguna Woods are identified in the Circulation Element of the General Plan, but were planned prior to preparation of the General Plan:

- Restriping of El Toro Road southbound between Calle Corta and Aliso Creek Road from two lanes to three lanes;

- Installation of raised median on El Toro Road between Calle Corta and Calle Sonora;
- Proposed construction of two additional lanes and raised median on Ridge Route Drive between Moulton Parkway and Avenida de la Carlota
- Proposed extension of Ridge Route Drive northwesterly as a 4-lane undivided Secondary Arterial from its current terminus at the western Laguna Hills City limit, to intersect with the westerly extension of Bake Parkway in the City of Irvine. Bake Parkway will then connect with Laguna Canyon Road;
- Proposed construction of a new I-5 overcrossing to connect Ridge Route Drive west of I-5 (in Laguna Woods/Laguna Hills) to Ridge Route Drive east of I-5 (in Lake Forest);
- Proposed extension of Santa Maria Avenue as a 4-lane divided Primary Arterial from the current Laguna Woods City limit to also connect to Laguna Canyon Road;
- Improvement of southbound Paseo de Valencia from Calle de la Plata to Laguna Hills Drive from two-lanes to three lanes, to match the northbound three lanes and meet the County MPAH requirements.

4.9.2 THRESHOLDS OF SIGNIFICANCE

Police Protection

Impacts to police protection resulting from adoption of the General Plan could be deemed significant if this action would result in a need for new or physically altered police facilities, the construction of which could cause significant environmental impacts.

Fire Protection

Impacts to fire protection resulting from adoption of the General Plan could be deemed significant if this action would result in a need for new or physically

altered fire facilities, the construction of which could cause significant environmental impacts.

Schools

Impacts to schools resulting from adoption of the General Plan could be deemed significant if this action would result in a need for new or physically altered school facilities, the construction of which could cause significant environmental impacts.

Libraries

Impacts to the library system resulting from adoption of the General Plan could be deemed significant if this action would result in a need for new or physically altered library facilities, the construction of which could cause significant environmental impacts.

City Facilities

Impacts to City facilities resulting from adoption of the General Plan could be deemed significant if this action would result in a need for new or physically altered City facilities, the construction of which could cause significant environmental impacts.

Roads

Impacts to public roads resulting from adoption of the General Plan could be deemed significant if this action would result in a need for new or physically altered roadway system, the construction of which could cause significant environmental impacts.

4.9.3 PROJECT AND CUMULATIVE IMPACTS

Police Protection

Adoption of the General Plan will not, in itself, have direct physical effects on the environment. Changes in land use designations in the proposed General Plan,

however, would facilitate additional residential and commercial development. This development would result in increased resident population, and additional visitors and employees in Laguna Woods.

The Orange County Sheriff-Coroner Department has reviewed proposed commercial and residential build-out estimates for Laguna Woods. An additional deputy may be required during daytime hours and an additional deputy in the evening hours upon build-out. No new physical facilities would be needed to accommodate an additional deputy. Therefore, no environmental impact is anticipated.

Fire Protection

Adoption of the General Plan will not, in itself, have direct physical effects on the environment. Changes in land use designations in the proposed General Plan, however, would facilitate additional residential and commercial development. This development would result in increased resident population, and additional visitors and employees in Laguna Woods.

The Orange County Fire Authority does not anticipate a need for additional equipment or staffing associated with build-out consistent with the proposed General Plan. No need for additional water capacity to provide adequate fire flow for fire suppression is indicated.

Schools

Adoption of the General Plan will not, in itself, have direct physical effects on the environment. Changes in land use designations in the proposed General Plan, however, would facilitate additional residential and commercial development. This development would result in increased resident population, and additional visitors and employees in Laguna Woods.

Build-out of the residential component of the General Plan is projected to add as many as 415 dwelling units in Laguna Woods. Assuming that future units are not

age-restricted, the Saddleback Valley Unified School District estimates these new residences would generate the following student population:

Elementary School Students:	41
Intermediate School Students	19
High School Students:	<u>41</u>
Total	101

The Saddleback Valley Unified School District indicates that growth in the student population attributable to the new dwelling units in Laguna Woods, when taken together with growth elsewhere in the District could require additional classroom space, most likely in the form of portable classrooms, and the possible addition of school bus runs to the City.

Saddleback Valley Unified School District indicates that the cost of providing additional classroom space would be satisfied through school impact fees assessed against residential development at the rate of \$2.05 per square foot of dwelling unit. No adverse environmental impacts are associated with addition of portable classrooms on existing school campuses. The need for additional school bus trips into the City could not be definitively determined at this point and attempts to quantify resultant traffic and air quality impacts at this point would be speculative.

A portion of the City of Laguna Woods is \within the Laguna Beach Unified School District boundary; however the District did not respond to written and verbal requests for information, to the Notice of Preparation of the EIR, or to the submittal of the Draft EIR. Accordingly, information about the Laguna Beach Unified School District and potential impacts could not be determined and are presumed to be les than significant based on the lack of response from the District.

Libraries

Adoption of the General Plan will not, in itself, have direct physical effects on the environment. Changes in land use designations in the proposed General Plan,

however, would facilitate additional residential and commercial development. This development would result in increased resident population, and additional visitors and employees in Laguna Woods. However, officials at the Orange County Public Library indicate that there are adequate facilities to serve the additional population as a result of development.

City Facilities

Adoption of the General Plan will not, in itself, have direct physical effects on the environment. Changes in land use designations in the proposed General Plan, however, would facilitate additional residential and commercial development. This development would result in increased resident population, and additional visitors and employees in Laguna Woods.

The City of Laguna Woods indicates that City facilities consisting of the City Hall facility will be sufficient to serve the needs of increased employee and residential population associated with build-out of the General Plan.

Roads

Adoption of the General Plan will not, in itself, have direct physical effects on the environment. Changes in land use designations in the proposed General Plan, however, would facilitate additional residential and commercial development. This development would result in increased resident population, and additional visitors and employees in Laguna Woods.

4.9.4 MITIGATION MEASURES

Police Protection

None required.

Fire Protection

None required.

Schools

Implementation of the proposed project General Plan will increase the number of residential developments and subsequently, create a population increase of approximately 580 residents. Of the approximate 580 residents, 101 are projected to be within the student-population range. To adequately provide for adequate facilities, the City of Laguna Woods will need to undertake the following:

PS-1 Prior to the approval of a tentative tract map or site plan, the applicant shall enter into an agreement satisfactory to the Saddleback Valley Unified School District which provides full mitigation of the impact of this project and the addition of K-12 students on existing schools. Such an agreement must address the method and timing of fees including, but not limited to, Developer Fee Agreements and/or Community Facility District (Mello Roos) implementation which include both commercial and residential development.

Libraries

None required.

City Facilities

None required.

Roads

None required.

4.9.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Police Protection

Impacts associated with facilities are less than significant.

Fire Protection

Impacts associated with fire protection are less than significant.

Schools

Adoption and implementation of mitigation measure PS-1 will reduce impacts to school facilities to levels that are less than significant.

Libraries

Impacts associated with library facilities are less than significant.

City Facilities

Impacts associated with City facilities are less than significant.

Roads

Impacts associated with extension or expansion of existing roadways, or construction on new roadways, are less than significant.

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4.10 UTILITIES AND SERVICE SYSTEMS

4.10.1 EXISTING CONDITIONS

Storm Drains

The Parcels indicated for future development in the Land Use Element of the Project General Plan generally drain northwesterly, towards San Diego Creek, through a street/gutter system and the local storm drain facilities. Parcel 1 drains east through an existing culvert where it then connects to a storm drain in Ridge Route Drive and outlets into Veeh Reservoir.

Parcels 2, 3, and 8 drain through a culvert under Moulton Parkway and across the Leisure World Golf Course to Ridge Route Drive where water enters an existing storm drain that outlets into Veeh Reservoir in Laguna Hills.

Storm water from Parcels 4, 6, 7, and 9 drain east via a culvert under Moulton Parkway which connects to a storm drain in Avenue Carmel then travels north where it connects to the drain in El Toro Road and continues north to the Veeh reservoir. Due to the capacity problems downstream in El Toro Road and the storm drain system that leads to Veeh reservoir, Parcel 5 serves as a retention basin for adjacent parcels to the west. This allows for water to be retained until such time that the capacity of the storm drain allows water to flow into the reservoir.

The balance of the public storm drain system consists of a catch basin at the southeastern corner of Moulton Parkway and El Toro Road that channels stormwater into a 42-inch reinforced concrete pipe storm drain. The storm drain runs east on El Toro Road and connects with a larger 72-inch reinforced concrete pipe west of Sevilla Avenue. The 72-inch storm drain travels north to Ridge Route Drive, crosses under Ridge Route Drive and outlets into Veeh reservoir in Laguna Hills, within the San Diego Creek watershed.

Water Treatment Facilities

The El Toro Water District provides water to consumers in the City of Laguna Woods. As a constituent member of the Municipal Water District of Orange County, the El Toro Water District (ETWD) buys water from the Metropolitan Water District (MWD) which imports water from both the Colorado River and northern California. Imported water is transported by pipeline from the MWD Diemer Filtration Plant in Yorba Linda to the El Toro Water District service area, and again by pipeline into Laguna Woods. There are existing 16-inch water mains in El Toro Road, Moulton Parkway, and Ridge Route.

At present, commercial users in Laguna Woods consume 387,770 gallons of water per day, an average of 0.46 gallons per square foot of building area. Residential users in Laguna Woods consume 3,260,000 gallons per day, an average of 246 gallons per day per dwelling.

Wastewater Treatment Facilities

The El Toro Water District owns and operates sanitary sewer lines serving the City of Laguna Woods. The District operates a treatment plant in the City that recycles ten percent (10%) of all wastewater for beneficial reuse. After treatment, the effluent is discharged into the Pacific Ocean through an outfall pipe 7,900 feet offshore and southwest of the mouth of Aliso Creek. The biosolids from El Toro Water District sewers in Laguna Woods are transported by truck to the Coastal Treatment Plant of the South Orange County Wastewater Authority (SOCWA).

The ETWD estimates that sewage generation is equal to 75% of the residential water consumption and 90% of the commercial consumption. Based on water consumption numbers (Section 4.10.2), it can be estimated that commercial users generate 348,993 gallons per day, an average of 0.42 gallons per square foot of building area. Residential users generate approximately 2,445,000 gallons per day, an average of 184 gallons per day per dwelling.

Natural Gas

The Southern California Gas Company provides natural gas service to Laguna Woods via existing 4" gas mains in Ridge Route Drive, Moulton Parkway, and El Toro Road. Because most of the residential development in Laguna Woods was constructed to utilize strictly electrical energy, gas consumption in the City is relatively low. According to the Southern California Gas Company, there are 192 multi-family residential and 54 commercial gas meters within the City of Laguna Woods.

Estimated consumption rates for natural gas are based on average figures provided by the South Coast Air Quality Management District² (SCAQMD). Residential consumption is broken down into single and multi-family units. Single-family units consume, on average, 6,665 cubic feet of natural gas per unit per month while multi-family units consume 4,011.5 cubic feet per unit per month. Commercial/office consumption rates average 24 cubic feet per square foot per year and retail consumption rates average 34.8 cubic feet per square foot per year.

Using the figures provided by SCAQMD and the number of customers as provided by The Gas Company, residential units consume an estimated 770,208 cubic feet of gas per month. Commercial customers consume an estimated 9,123,624 cubic feet of gas per month.

Electricity

Southern California Edison provides electricity to the City of Laguna Woods. The City is served by electrical substations near the intersection of El Toro and Aliso Creek Roads in Laguna Beach, and at 24731 Bridger Drive in Lake Forest. Both stations step down from 66 kilovolts to 12 kilovolts for local service.

² Table A9-12-A, Appendix 9, SCAQMD CEQA Air Quality Handbook, adopted April 1993. Consumption averages are based on The Gas Company's average usage rates.

Based on average figures of consumption by building type provided by the SCAQMD³, residential units consume an estimated 5,626.5 kWh per unit per year, a total of 6,295,737 kWh per year. Offices users consume an average 12.95 kWh per square foot per year, a total of 4,922,955 kWh per year. Retail uses consume 13.55 kWh per square foot, for a total of 6,295,737 kWh per year. Total consumption in the City for all types of land use is 17,514,065 kWh per year.

Solid Waste

Solid waste collection service in Laguna Woods is provided by Waste Management of Orange County and Solag Disposal, Inc. Waste is transported to the Frank R. Bowerman Landfill, located approximately four miles north of Interstate 5 in Irvine. Green waste is transported to the Sunset Environmental site in Irvine.

The 725-acre Frank R. Bowerman Landfill opened in 1990 with 326 acres permitted for refuse disposal and is scheduled to close in approximately 2024. However, the Integrated Waste Management Department is conducting a study that may extend the life and disposal capacity of the landfill. A public park is the planned end use of the site. The landfill is open Monday through Saturday for commercial customers only. The landfill has capacity to accept up to 8,500 tons of waste on a given day; however, pursuant to a settlement agreement with the City of Irvine, the maximum that may be accepted annually is based on 7,519 tons per day beginning in 2002, and increasing each year until 2009 when the maximum will be based on an average of 8,640 tons per day.

In 2000, solid waste (disposal) generated in the City totaled 10,526.44 tons. Of this, 9,414.64 tons were generated from residences and the remaining 1,111.80 tons were commercially generated. Recyclable waste (diversion) totaled 12,212.32 tons that included 12,106.41 tons of residential recyclable waste and 1,057.36 tons of commercial recyclable waste.

³ Table A9-11-A, Appendix 9, SCAQMD CEQA Air Quality Handbook, adopted April 1993. Consumption averages are based on SCE and Los Angeles Department of Water and Power usage rates.

It is estimated that residents in Laguna Woods produce an average of 0.57 tons of waste per year per resident. Commercial waste in Laguna Woods is generated at an averaged rate of 0.46 tons of waste per acre annually.

4.10.2 EXISTING PLANS AND ORDINANCES

Grading Manual

The Grading Manual, as adopted from the County of Orange, regulates grading permits and requires the submittal of hydrology maps and hydraulic calculations to ensure that there are adequate storm drain facilities for each project.

Grading Code

The Grading Code regulates the minimum standard requirements for submitting grading plans, including erosion control plans and proposed flow-lines and site drainage structures.

Title 24 of the California Code of Regulations

Title 24 requires compliance with minimum energy conservation standards in the construction of new and substantially expanded or renovated buildings.

City of Laguna Woods Source Reduction & Recycling Element

The Source Reduction & Recycling Element provides a plan to manage solid wastes generated within the City. The plan is designated to maintain the 50% diversion rate it has currently achieved while introducing new programs that improve recycling opportunities for residents and businesses.

4.10.3 THRESHOLDS OF SIGNIFICANCE

Storm Drains

Impacts to the storm drain system resulting from adoption of the project General Plan could be deemed significant if this action would result in:

- ❑ The required construction of new, or expansion of existing stormwater drainage facilities.

Water Treatment Facilities

Impacts to the water system resulting from the implementation and adoption of the project General Plan could be deemed significant if this action would result in:

- ❑ The required construction of new, or expansion of existing water or wastewater treatment facilities.

Wastewater Treatment Facilities

Impacts to sanitary sewer system resulting from adoption of the General Plan could be deemed significant if this action would result in:

- ❑ The required construction of new, or expansion of existing water or wastewater treatment facilities.

Natural Gas

Impacts associated with natural gas distribution resulting from adoption of the General Plan could be deemed significant if this action would result in:

- ❑ The required construction of new, or expansion of existing natural gas facilities.

Electricity

Impacts related to electrical energy generation and distribution resulting from adoption of the General Plan could be deemed significant if this action would result in:

- ❑ The required construction of new, or expansion of existing electricity generating facilities.

Solid Waste

Impacts to solid waste resulting from adoption of the project General Plan could be deemed significant if this action would result in:

- ❑ A substantial increase in the amount of solid waste generated;
- ❑ An increase in the amount of solid waste in excess of permitted daily limits at local landfills.

4.10.4 PROJECT AND CUMULATIVE IMPACTS

Storm Drains

Adoption and implementation of the General Plan will not result in direct short-term impacts. The affect of the project General Plan on the City's storm drain system was evaluated for long term and/or cumulative impacts.

The addition of impervious surfaces on the approximately 73 acres could substantially increase the potential storm water runoff from the proposed development areas. The City's existing drainage system may not be able accommodate the future development in accordance with the project General Plan. As a result, the development of new residential and commercial uses may cause a significant impact on the capacity of the existing drainage system.

Development consistent with the project General Plan could exceed the maximum stormwater carrying capacity currently available in the City. The increase in

stormwater runoff from future development in the City would combine with runoff from additional development that is expected to occur north of the City. The stormwater runoff associated with future development consistent with the Project General Plan would significantly contribute to cumulative stormwater runoff and result in a significant cumulative impact on existing drainage facilities outside of the City.

Water Treatment Facilities

Adoption and implementation of the General Plan will not result in direct short-term impacts. The affect of the project General Plan on the City's water supply was evaluated for long term and/or cumulative impacts.

Future development, as indicated in the project General Plan, would increase residential water consumption by 101,844 gallons per day, or 3.1%, to 3,361,844 gallons per day. Commercial water consumption is estimated to increase 58%, from 387,770 gallons up to 615,010 gallons of water per day.

The El Toro Water District (ETWD) indicates that there is adequate supply to meet the demand of the proposed development. However, they also indicated that there is the potential for "bottlenecks" in the distribution pipelines near the development sites identified in the General Plan.

As is typical of development projects that are within the jurisdiction of ETWD, future project developers will be required to identify the use and the projected water consumption for specific projects. ETWD will review each site-specific project to determine if installation of pipelines will be necessary to relieve distribution "bottlenecks" around the project area. If necessary, new pipelines will be constructed parallel to existing pipelines within the existing public right-of-way adjacent to the project area.

New development will not require acquisition of additional water rights, or construction of new or expansion of existing water treatment facilities. No damage to the environment is anticipated with the installation of new pipelines

will only require minimal excavation within existing right-of-ways and on the project site. Therefore, no significant impacts are anticipated with implementation of the project General Plan.

Wastewater Treatment Facilities

Adoption and implementation of the General Plan will not result in direct short-term impacts. The affect of the project General Plan on the City's wastewater system was evaluated for long term and/or cumulative impacts.

Development consistent with the proposed General Plan will result in an increase in wastewater generation. Implementation of the General Plan would increase residential generation by 76, 176 gallons from 2,445,000 up to 2,521,383 per day, an increase of 3.1%. Commercial generation is estimated to increase by 204,516 gallons or 63%, from 348,993 gallons to 535,509 gallons of wastewater per day.

Although the El Toro Water District (ETWD) has indicated that the existing treatment facilities are adequate to handle the projected increase in wastewater, future development could create sewage line "bottlenecks" in potential development areas.

As is typical of development projects that are within the jurisdiction of ETWD, future development in the City will require developers to identify the use and the projected wastewater distribution for specific projects. ETWD will review each site-specific development project to determine if installation of pipelines will be necessary to relieve "bottlenecks" around the project area. If necessary, new pipelines will be constructed parallel to existing pipelines within the existing public right-of-way adjacent to the project area.

New development will not require construction of new or expansion of existing wastewater treatment facilities. No damage to the environment is anticipated with the installation of new pipelines, as it will only require minimal excavation within existing right-of-ways and on the project site. Therefore, no significant impacts are anticipated with implementation of the project General Plan.

Natural Gas

Adoption and implementation of the General Plan will not result in direct short-term impacts. The affect of the project General Plan on the City's natural gas service was evaluated for long term and/or cumulative impacts.

Future development identified in the project General Plan could facilitate build-out of an additional 414 multi-family residential units, and 494,000 square feet of commercial/office space. Based on the consumption rates provided by SCAQMD and the future development potential as provided for in the project General Plan, residential gas consumption would increase from 51,451,499 cubic feet per month up to 53,112,260 cubic feet per month, a 3.2% increase. Commercial gas consumption would rise from 9,123,624 cubic feet of gas per month up to 14,480,424 cubic feet of gas per month, an increase of 58.7%.

The Southern California Gas Company has indicated, in a *Will-Serve Letter*, that there is adequate gas supply to meet the future development demand. Although there is adequate gas supply to meet the projected increase in gas consumption, construction of gas mains and/or service lines from the existing gas mains in the City may be required in order to provide service to new development. However, the construction of gas line laterals does not have an impact on the natural gas supply or require the need for additional distribution stations. Therefore, no significant impacts are anticipated.

Electricity

Adoption and implementation of the General Plan will not result in direct short-term impacts. The affect of the project General Plan on the City's electrical service was evaluated for long term and/or cumulative impacts.

The future build-out of the project General Plan will cause an increase on the demand of electricity use in the City. The adoption of the Project General Plan could potentially provide for the development of 414 residential units and 494,000 square feet of additional retail/office/commercial space. Based on these figures,

electrical consumption for residential development could increase approximately 3.1%, up 2,329,371 kWh to 76,891,749 kWh per year. Commercial consumption would increase 58.7% up to 7,813,395 kWh per year. Retail uses would also increase consumption by 58.7%, up 272,800 kWh per year to 737,430 kWh per year.

The current Edison forecast for generation capacity and consumption extends to the year 2008. Based on review of maximum potential build-out of 73 additional acres, Southern California Edison indicated adequate capacity to serve this level of development. Therefore, no significant impacts to electrical service are anticipated.

Solid Waste

Adoption and implementation of the General Plan will not result in direct short-term impacts. The affect of the project General Plan on the City's solid waste system was evaluated for long term and/or cumulative impacts.

Future development of the project General Plan would result in an ultimate build-out of 415 new residential units with an estimated population increase of approximately 576 residents and an additional 496,000 square feet of commercial development.

Based on the potential development in the City and the existing average solid waste produced by residents in the City, residential development would create an estimated solid waste production increase of 328.3 (3.5%) tons per year. Development 494,000 square feet of commercial use, as indicated in the project General Plan, would create an increase in commercial solid waste of 5.24 (58.7%) tons per year per acre. A total combined increase of solid waste production of 62.3%.

The County of Orange Planning and Development Services has indicated that, occasionally, the Frank R. Bowerman Landfill has received refuse at rates near the maximum permitted daily limits. However, although a 62.3% annual increase

appears relatively significant, it is estimated that the daily increase from future development will be approximately 200 pounds of solid waste per day. While the daily increase of waste production will contribute to reaching the maximum daily limits of the Bowerman Landfill, according to the County of Orange Planning and Development Services Department, the County of Orange's California Integrated Waste Management Plan adopted in 1996 contained future solid waste disposal demand based on future population projections, indicated that adequate capacity for the development of the General Plan is available.

Consistent with the California Integrated Waste Management Act of 1989, the City has adopted the *City of Laguna Woods Source Reduction & Recycling Element* that lists requirements emphasizing waste reduction, reuse and recycling. With this program in effect, the amount of waste generated by new development will be significantly reduced. Therefore, it is anticipated that there will be no significant impacts to solid waste.

4.10.4 MITIGATION MEASURES

Storm Drains

Increased surface water runoff will occur due to new development that is consistent with the project General Plan. The increased development will potentially affect a variety of users and facilities, including downstream storm drain facilities. To adequately provide for surface water runoff, the City of Laguna Woods will need to undertake the mitigation measures to reduce the impact on the existing storm drain system. The mitigation measures identified in Section 4.3, Hydrology and Water, of this document are applicable to meet this requirement.

Water Treatment Facilities

None required.

Wastewater Treatment Facilities

None required.

Natural Gas

None required.

Electricity

None required.

Solid Waste

None required.

4.10.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Storm Drains

Adoption and implementation of the mitigation measures, as identified above, and compliance with the City's adopted Grading Code and Grading Manual, will reduce adverse impacts during short-term construction and long-term operation of development to levels that are less than significant.

Water Treatment Facilities

Impacts associated with water treatment facilities are less than significant.

Wastewater Treatment Facilities

Impacts associated with wastewater treatment facilities are less than significant.

Natural Gas

Impacts associated with supply and distribution of natural gas are less than significant.

Electricity

Impacts associated with supply and distributions of electricity are less than significant.

Solid Waste

Impacts related to waste disposal are less than significant.

4.11 CULTURAL RESOURCES

4.11.1 EXISTING CONDITIONS

Archaeological Resources

Aboriginal populations in southern California were basically hunter-gatherers throughout the prehistoric period. At the time of European contact, Laguna Woods was within the territory of the Luiseño people. The Luiseño, named for their association with Mission San Luis Rey de Francia in present-day Oceanside, spoke a language of the Shoshonean linguistic family. Their territory extended from eastern Orange County to southwestern Riverside County and northern San Diego County.

A records search was conducted at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton. Based on the records search, five prehistoric sites have been recorded within the City. Ten additional sites are located within one-half of a mile from the City's boundaries. To date, there have been six field investigations that included areas of the City and approximately 90 percent of the land within the City has not been surveyed for archaeological resources.

The five prehistoric sites that are located within the City limits include the following.

- Ora-15: Recorded in 1949 as a surface scatter of lithic artifacts. Includes a pestle, a mano, a hammerstone, and a side scraper. Scatter dimensions not given.
- Ora-267. Recorded in 1966 as a scatter of shell (abalone, pecten, and mussel) fragments and a mano inside a rock shelter. Shelter overhang measured about 45 feet in length, shelter was 4 feet in height, and "midden soil" about 12 inches in depth.

- Ora-268: Recorded in 1966 as a 300 x 400-foot surface scatter of lithic tools, including a broken portable metate, manos, hammer stone, scraper, and chipping waste.
- Ora-610: Recorded in 1977 as an almost totally destroyed hilltop campsite. Destroyed during construction of two large water storage tanks. All artifacts recovered from disturbed area, including a scraper, quartz cores, hammerstones, handstone fragments, and chipping waste.
- Ora-854: Recorded in 1980 as a 200 x 300-meter scatter of millingstone tools and fire-cracked rock over a gently sloping knoll. Artifacts include 1 whole metate, 4 fragments, 2 manos, 6 mano fragments, 2 hammerstones, 1 core, and three flakes. Northern part of the site destroyed by housing development.

No prehistoric burials have been discovered in the City. All of the above sites have been destroyed by development. Thus, there are no recorded prehistoric sites that still exist within the City limits.

Paleontological Resources

Geologic maps and published reports indicate that the City of Laguna Woods is underlain by Tertiary bedrock, locally covered by unconsolidated Quaternary sediments. Approximately 95 percent of the City is geologically mapped as units known to be paleontologically sensitive. A paleontologic records search of the Regional Paleontologic Locality Inventory at the Los Angeles County Museum revealed that numerous vertebrate fossil localities have been recorded within and near the City of Laguna Woods. The Sespe Formation, which predominates in the western part of the City, contains upper Eocene-lower Miocene terrestrial vertebrates. Eastward, there is a succession of younger marine units that are also paleontologically sensitive. The overlying Vaqueros Formation, crops out in the central part of the City. The eastern part of the City is mapped predominately as the middle to upper Miocene Monterey Formation. The upper Miocene-lower Pliocene Capistrano Formation crops out along the southeastern perimeter of the City, where a diverse marine fauna that includes several new species was collected. Among the fossils recovered from this area are sharks, bony fish, sea turtles, crocodiles, marine birds, sirenians, sea lions, dolphins, whales, and

desmostylians. Exposures of the Pliocene Niguel Formation are in the south-central part of the City.

Quaternary deposits of alluvium, slopewash, landslide, nonmarine (alluvial) terrace, and artificial fill obscure bedrock in low-lying areas, but only older alluvium, the terraces, and slow-moving landslides (e.g., slumps) have high paleontologic sensitivities.

Historical Resources

The historic resources assessment was based on the National Register of Historic Places, the California Historical Landmarks, the California Historic Resources Inventory, and the California Points of Historic Interest.

The records search revealed that there are no recorded historic (>45 years old) structures in, or within a half-mile of, the City of Laguna Woods.

4.11.2 DATA RESOURCES

The information for this section is primarily derived from archaeological, paleontological, and historical records researches for the entire City of Laguna Woods.

4.11.3 THRESHOLDS OF SIGNIFICANCE

For the purposes of this analysis, a project is considered to have a significant impact if it would cause a substantial adverse change in the significance of an archaeological, paleontological, or historical resource.

4.11.4 PROJECT AND CUMULATIVE IMPACTS

Archaeological Resources

Implementation of the proposed General Plan would involve construction activities to buildout land uses proposed in the General Plan. Project construction would involve site clearance, grading, earth moving, cut and fill operations, and travel of heavy-duty construction vehicles and equipment over development sites.

These construction activities would substantially alter the land area within the grading limits of designated sites. Five prehistoric sites have been recorded in the City, indicating that the area is highly sensitive for archaeological resources and future development could unearth additional finds. Implementation of the proposed General Plan could result in potential significant impacts to archaeological resources.

Paleontological Resources

The proposed General Plan includes the future buildout of a few undeveloped areas. All parcels currently designated for developments are at least partially underlain by Tertiary bedrock or Quaternary deposits that may contain significant paleontological resources. Thus, construction-related ground disturbance on these lands could impact significant paleontological resources. If excavations extend through other Quaternary deposits, they will also encounter Tertiary bedrock and, therefore, could exhume significant paleontological resources. As a result, the implementation of the proposed General Plan could result in a significant impact to paleontological resources.

Historical Resources

Since the records search did not reveal any recorded historic (>45 years old) structures in, or within a one-half mile of the City of Laguna Woods, no impacts on historical resources would occur with the implementation of the proposed General Plan.

Cumulative Impacts

Future development in accordance with the proposed General Plan is located in an area known to contain archaeological resources and the area has the potential to yield significant paleontological resources. No historical resources are located within the City. The implementation of the proposed General Plan as well as past, present, and reasonably anticipated future projects could potentially result in significant cumulative impacts to archaeological and paleontological resources. However, with the implementation of the mitigation measures provided below,

the potential cumulative impacts to archaeological and paleontological resources could be reduced to less than significant. Furthermore, the implementation of the proposed General Plan would not contribute to any cumulative impacts to historical resources.

4.11.5 MITIGATION MEASURES

Archaeological Resources

CR-1 The City shall prepare a “Development Project Review Procedure Manual” which will include development project level impact measures as follows:

- ☐ A Phase I archaeologic field assessment should be performed prior to any earth-disturbing activities if a proposed construction site (a) has not been surveyed within the last 10 years, (b) has a recorded prehistoric site on it or in its vicinity, or (c) if a potentially historic site is on or adjacent to the property. Excluded are heavily disturbed areas and grounds obscured by water or pavement. If a recorded prehistoric site is located on the property, it should be re-evaluated. A technical report following format and content guidelines proposed by the State Office of Historic Preservation (SHPO) must be completed. This report shall include a discussion of the sites’ significance (depth, nature, condition, and extent of the resources), final mitigation recommendations, and cost estimates. Excavated finds shall be offered to the City of Laguna Woods, or designee, on a first refusal basis. Final mitigation shall be carried out based upon the report recommendations and a determination as to the sites’ disposition by the City. Possible determinations include, but are not limited to, preservation, salvage, partial salvage, or no mitigation necessary.
- ☐ If buried cultural materials are exposed during construction, work must be halted near the find until a qualified archaeologist can assess its significance.
- ☐ If prehistoric artifacts and/or features are exposed, the archaeologist will remove the cultural remains in a timely and professional manner in accordance with CEQA Section 15064.5-f and PRC Section 21082.

- ❑ In the unlikely event that human remains are unearthed during construction, and in compliance with California State Health and Safety Code Section 7050.5 and CEQA Section 15064.5-e, the Orange County Coroner must be contacted within 24 hours of the discovery. No further disturbance shall occur until the coroner has made the necessary findings as to origin and disposition pursuant to CEQA Appendix K and Public Resources Code Section 5097.98.
- ❑ The archaeologist will submit a report of all archaeological discoveries on the site for review and approval by the City of Laguna Woods, which shall include the period of site inspection, a catalog and analysis of recorded features, and repository of the collection.

Paleontological Resources

CR-2 Earth-disturbing activities on designated parcels within the City of Laguna Woods could impact significant paleontologic resources. Thus, full-time monitoring for paleontologic resources is recommended during all construction-related ground disturbances. The only areas where monitoring may not be necessary would be within the slopewash of Parcels 4, 5, and 6 if pre-construction geotechnical test (borehole) data reveals that subjacent bedrock is too deep to be disturbed by planned excavations.

The City shall prepare a “Development Project Review Procedure Manual” which will include development project level impact measures as follows

- ❑ Prior to the issuance of grading permits for any future construction project, the landowner or designee shall provide written evidence to the City of Laguna Woods that a certified paleontologist has been retained to oversee paleontologic monitoring of excavations and to salvage and document fossils as necessary. The paleontologist shall be present at the pregrading conference, and shall establish, in cooperation with the project developer, procedures for temporarily halting or redirecting work to permit the evaluation and, if necessary, salvage of resources encountered.

- ❑ Upon discovering a major paleontologic resource that requires long-term halting or redirecting of grading, the paleontologist will report the find to the City or designee. The paleontologist shall determine appropriate actions, in cooperation with the City or designee to ensure proper assessment of the find and/or its salvage.
- ❑ Excavated finds will be offered to the City, or designee, on a first-refusal basis. The City or designee may retain said finds if written assurance is provided that they will be properly preserved in Orange County. Otherwise, and in accordance with County guidelines, said finds will be deposited in the County repository. Final mitigation and disposition of the resources will be subject to the approval of the City.
- ❑ The paleontologist will submit a report for review and approval by the City, which shall include the period of site inspection, a catalog and analysis of recorded fossils, and repository of the collection.

Historical Resources

None.

4.11.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

After the implementation of the above measures, all potential cultural resources impacts would be less than significant.

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5.0 ALTERNATIVES TO THE PROPOSED PROJECT

Pursuant to *Guidelines for California Environmental Quality Act*, § 15126.6, “An EIR shall describe a range of reasonable alternatives to the project that would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR is not required to consider alternatives which are infeasible.”

The following alternatives are considered in this section of the Program EIR:

ALTERNATIVE 1 – “NO PROJECT”

The Draft Laguna Woods General Plan would not be adopted and the Interim General Plan would remain in effect;

ALTERNATIVE 2 – “DRAFT GENERAL PLAN WITH REDUCED FUTURE DEVELOPMENT CAPACITY”

A Land Use Element Land Use Plan with future commercial building and residential development reduced from that in the General Plan evaluated as the “project” in the EIR.

Objectives to be met through adoption and implementation of the project General Plan are as follow:

1. Achieve a self-sustaining community affording goods, services, housing, employment, transportation, and recreational opportunities appropriate to the needs of current and future residents;
2. Achieve a balance among land uses consistent with the infrastructure and municipal services capabilities of the City;
3. Designate for residential use appropriate sites for meeting the new construction allocation of the Regional Housing Needs Assessment of the Southern California Association of Governments;

4. Promote development of commercial uses that will generate sufficient municipal revenues to maintain and enhance municipal services;
5. Provide municipal service programs to accommodate the unique mobility, security, and health care concerns of residents;
6. Provide the basis for revised land use regulations including Zoning and Subdivision Ordinances that reflect local issues, opportunities, and constraints and as necessary to maintain consistency with the General Plan.

The analysis of Alternatives assumes that applicable mitigation measures identified in the analysis of the “project” General Plan will be implemented pursuant to adoption of one of the Alternatives. The scope and/or magnitude of any applicable mitigation measures may be modified to correspond to changes in the scope and/or magnitude of future development associated with the respective alternative.

ALTERNATIVE 1 – NO PROJECT ALTERNATIVE

Project Description

Alternative 1 is the “no project” option. Pursuant to this option, the Draft Laguna Woods General Plan would not be adopted and the Interim General Plan would remain in effect. No changes in land use designations would be effected and development would be limited to that permitted under the Interim General Plan and current zoning ordinance. Potential future development would be effectively limited to a two-acre vacant parcel designated as “Employment” in the Interim General Plan and “Commercial Office” in the Zoning Ordinance. Additional recreation-related structures could be constructed on properties designated as “Open Space” within the Leisure World gated community (Map 5.0-1).

Impact Analysis

Land Use and Planning

The “no project” option would retain the Interim General Plan that does not include a Housing Element as required by California Government Code Section 65581. Because the Land Use Plan of the Interim General Plan does not include

sites suitable for residential development as required by Government Code Section 65583, the draft Housing Element included in the project General Plan could not be adopted independent of the Land Use Plan of the Land Use Element included in the project General Plan which includes an inventory of sites suitable for residential development. The City, therefore, could not comply with State law under the “no project” alternative.

The Interim General Plan is not consistent with the Airport Environs Land Use Plan. The “no project” option, therefore, would not resolve the conflict between Interim General Plan provisions and those of the Airport Environs Land Use Plan.

The “no project” option would eliminate the potential for view impacts. The Interim General Plan does not include development sites identified in the project General Plan as having the potential to substantially interfere with views from existing residential development.

The “no project” option would eliminate the potential for incompatibility of future uses with existing uses. The Interim General Plan includes only one site for future development. Commercial development on this site consistent with the Interim General Plan subject to the Zoning Ordinance would be substantially similar in size, bulk, and height to the adjacent commercial building to the northwest. Undeveloped property to the west would remain undeveloped open space. Commercial development pursuant to this alternative would be separated from the adjacent church building to the southeast by the church parking lot that separates the two by a horizontal distance of 100 feet.

The Interim General Plan includes land use designations for certain parcels that are inconsistent with corresponding zoning map designations and uses established on these parcels. An objective of the project General Plan is revision of land use designations to achieve consistency between the Zoning Ordinance and the General Plan. The “no project” alternative does not achieve consistency as required by Government Code Section 65860.

The “no project” option would not satisfy the project objectives of developing a self-sustaining community affording goods, services, housing, employment, and recreational opportunities and of accommodating the maintenance and future development of commercial uses that will generate sufficient municipal revenues necessary to maintain and enhance the level of municipal services.

Population and Housing

The “no project” option would eliminate population growth attributable to new development as no new housing would be constructed pursuant to the Interim General Plan. The only developable parcel included in the Interim General is designated for commercial use. Development of this property would represent the only source of new employment attributable to new development. Approximately 30 additional permanent jobs are projected to accompany development of this site contrasted with up to 1,500 jobs in the project General Plan.

Geology and Soils

The two-acre commercial site identified in this “No-Project” alternative may be subject to liquefaction that could be a significant impact, but can be mitigated to a level of less than significant as indicated in the “project” analysis.

Hydrology and Water Quality

Surface Water

The “no project” alternative Interim General Plan identifies a two-acre site for limited commercial development. Stormwater runoff after development of this site could exceed the capacity of the City’s existing drainage system. Stormwater runoff from future development consistent with the Interim General Plan would drain into an existing culvert under Moulton Parkway and into a drain in El Toro Road and the existing storm drain system that eventually drains into the Veeh Reservoir. Stormwater runoff could be a significant cumulative impact on existing drainage facilities within and outside of the City. Development on the one potential development site in this alternative, however, would be subject to preparation of a hydrology study as required by the Orange County Grading

Ordinance as adopted by the City. Therefore, surface water impacts associated with this alternative are less than significant.

Water Quality

The increase in storm water runoff from the implementation of the Interim General Plan is not anticipated to be significant because of the small incremental increase associated with development of a two-acre parcel. It is also anticipated that surface water quality within the Newport Bay/San Diego Creek watershed will not be jeopardized with the development of the two-acre commercial property. Therefore, water quality impacts associated with this alternative are less than significant.

Groundwater

With an increase in impervious surfaces and consequent increase in stormwater runoff from future development under the Interim General Plan, there is the potential for an increase in pollutants from development. However, the increase of impervious surfaces is not expected to affect groundwater because no groundwater recharge areas are located in or in the immediate vicinity of the project area. Therefore, no impacts are anticipated.

Flooding

The two-acre site identified for development under this alternative is not located within a 100- or 500-year floodplain. No impacts are associated with adoption and implementation of this alternative. No flooding impacts are associated with the project General Plan.

Air Quality

Emissions of Ozone, Carbon Monoxide, Oxides of Nitrogen and Suspended Particulates continue to be present in the South Coast Air Basin at levels that exceed both federal and State standards. According to the 1997 Air Quality Management Plan, attainment of federal and State standards is expected by the year 2006 for all criteria pollutants. Because air quality in the basin is subject to cumulative impacts from numerous sources throughout the region, improvement

in air quality will be attributed to emission control measures that are implemented on a regional basis.

Estimated pollutant emissions associated with implementation of both the project General Plan and the “no project” alternative are summarized in Section 4.4, Table 4.4-4. Data generated for the project General Plan indicates that criteria pollutants would increase, and some thresholds would be exceeded with implementation. Conversely, the “no project” alternative would generate only a nominal increase in criteria pollutants and would not exceed the established thresholds. Therefore, the no project alternative is considered environmentally superior to the project General Plan.

Transportation and Circulation

Traffic volumes associated with “no project” alternative conditions for the year 2015 are shown in Table 5. Table 5 illustrates forecast Levels of Service on key roadways in the City.

Key roadway segments are forecast to operate at level of service (LOS) B or better, except for Moulton Parkway which is forecast to operate at LOS E throughout the City. The volume/capacity (V/C) ratios for Moulton Parkway shown in Table 5 are at or about 0.95, indicating that traffic volumes on Moulton Parkway will be close to the capacity of the roadway.

Moulton Parkway currently operates at LOS C to LOS D throughout the City. The deterioration in level of service in the “no project” alternative will be attributable to regional growth in the County outside of the City of Laguna Woods.

Project and cumulative traffic associated with this alternative do not exceed roadway capacities or cause deterioration in Levels of Service to unacceptable levels. Consequently, traffic impacts associated with this alternative are less than significant and this alternative is environmentally superior.

Biological Resources

Potential future development under Alternative 1 will have minimal impacts on local biological resources. The anticipated development in this “no project” scenario may result in impacts to riparian and wetland vegetation. The two-acre site assumed to be developed under this scenario is at the terminus of an unnamed drainage that falls under the jurisdiction of the U.S. Army Corps of Engineers and the California Department of Fish & Game. This same two-acre parcel is also a potential development site in the project General Plan.

Because future potential development in the no project alternative is limited to two-acres, and the proposed project General Plan includes significantly greater additional for future development and more extensive areas biological resources that could be impacted, the no project alternative is considered environmentally superior.

Noise

Vehicles are the significant noise-source within the City of Laguna Woods. Continued growth in the region will result in increased traffic on roadways in the City regardless of the implementation of the General Plan. The increase in traffic will generate additional noise that will affect sensitive receptors including existing residential uses. The “no project” alternative would eliminate the majority of new development, however, the noise environment currently exceeds standards and would continue to do so as traffic will increase attributable to regional growth in the County outside of the City of Laguna Woods. Consequently, the environmental conditions would essentially be the same with the no project alternative.

Public Services

Police Protection

Commercial development consistent with this alternative would be limited to a two-acre parcel. No new dwelling units would be constructed. As no expansion of Sheriff’s Department facilities would be necessitated by more intensive

commercial and residential development of the project General Plan, no impact is associated with the “no project” alternative.

Fire Protection

Commercial development consistent with this alternative would be limited to a two-acre parcel. No new dwelling units would be constructed. No impact is associated with adoption of the “no project” alternative.

Schools

Commercial development consistent with this alternative would be limited to a two-acre parcel. No new dwelling units would be constructed. No impact is associated with the “no project” alternative.

City Facilities

Commercial development consistent with this alternative would be limited to a two-acre parcel. No new dwelling units would be constructed. No impact is associated with the “no project” alternative.

Roads

Commercial development consistent with this alternative would be limited to a two-acre parcel. No new dwelling units would be constructed. No impact is associated with the “no project” alternative.

Utilities and Service Systems

Storm Drains

Stormwater runoff associated with development in this alternative would drain into an existing culvert under Moulton Parkway and into a drain in El Toro Road and the existing storm drain system that eventually drains into the Veeh Reservoir. Stormwater runoff could be a significant cumulative impact on existing drainage facilities within and outside of the City. Development on the one potential development site in this alternative, however, would be subject to preparation of a hydrology study as required by the Orange County Grading

Ordinance as adopted by the City. Therefore, surface water impacts associated with this alternative are less than significant.

Water Treatment Facilities

With only one parcel of land identified in the Interim General Plan for commercial development, water demand impacts within the context of Interim General Plan would be minimal. The El Toro Water District has indicated that there is adequate water supply to meet the demand of future development, and therefore, the impact on water treatment facilities would be less than significant.

Wastewater Treatment Facilities

The Interim General Plan identifies a two-acre parcel within the City as being designated for commercial development. However, because the size of a commercial building on this site would be relatively small, an increase in wastewater discharges would be cumulatively insignificant. Therefore, the impact on wastewater treatment facilities is less than significant.

Natural Gas

The Southern California Gas Company has indicated in a *Will-Serve Letter* that there is adequate gas supply to meet the future demand associated with this alternative. Although there is adequate gas supply to meet the projected increase in gas consumption, construction of gas mains and/or service lines from the existing gas mains in the City may be required in order to provide service to new development. However, the construction of gas line laterals does not have an impact on the natural gas supply or require the need for additional distribution stations, and would require only minor excavation work. Therefore, the impact is less than significant.

Electricity

The current Southern California Edison forecast for generation capacity and consumption extends to the year 2008. In reviewing the potential to build-out the maximum potential of 73 acres as identified in the project General Plan, Southern California Edison indicated adequate capacity to serve this level of development. With commercial development in this alternative limited to a two-acre site, the impact on electrical facilities is less than significant.

Solid Waste

Based on the potential commercial development under the Interim General Plan in this alternative, solid waste generation would increase by 0.37 tons per year. The County of Orange Planning and Development Services Department has indicated that adequate disposal capacity for future development anticipated in the project General Plan is available. The relatively small, incremental increase in daily tonnage (pipeline capacity) associated with a 0.37 ton per year increase is considered less than significant. Therefore, solid waste impacts are considered to be less than significant.

Cultural Resources

There are no documented cultural resources known to exist at the potential development site identified for this alternative. This site has been disturbed from previous construction grading activity in preparing a stormwater drainage course, and any archeological or paleontological remnants would likely have been documented at that time. Under the no project alternative, potential impacts are less than significant.

Conclusions

Alternative 1, “No Project”, would incrementally reduce certain environmental impacts from levels associated with the project General Plan. Unlike the project, Alternative 1 would cause the City to be out of compliance with the Regional

Housing Needs Assessment. As with the project, this alternative is in conflict with the Airport Environs Land Use Plan.

Alternative 1 does not satisfy the following project objectives:

Achieve a self-sustaining community affording goods, services, housing, employment, transportation, and recreational opportunities appropriate to the needs of current and future residents;

Designate for residential use appropriate sites for meeting the new construction allocation of the Regional Housing Needs Assessment of the Southern California Association of Governments;

Promote development of commercial uses that will generate sufficient municipal revenues to maintain and enhance municipal services;

Provide municipal service programs to accommodate the unique mobility, security, and health care concerns of residents;

Provide the basis for revised land use regulations including Zoning and Subdivision Ordinances that reflect local issues, opportunities, and constraints and as necessary to maintain consistency with the General Plan.

ALTERNATIVE 2 – ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Project Description

Alternative 2 is a General Plan comprised of substantially the same Goals, Policies, and Implementation Measures for each of the seven Elements as in the project General Plan. The Alternative 2 General Plan would include minor text modifications necessary to reflect a Land Use Plan that accommodates fewer dwelling units, less commercial building area, and more open space at build-out than the Land Use Plan of the project General Plan.

A three-acre parcel would be redesignated from “Open Space” to “High Density Residential” as in the project General Plan. Approximately 68 acres currently

designated as “Open Space” would be redesignated as “Urban Activities Center”. Approximately two (2) acres of land currently designated “Employment” would also be redesignated as “Urban Activities Center” (Map V-2). This contrasts with redesignation of 68 acres to “Commercial” or “Medium Density Residential” in the project General Plan.

Properties designated Urban Activities Center in this alternative would be subject to general performance and development standards consistent with provisions of the Land Use Element of the Alternative 2 General Plan as follows:

Land Use Element Implementation Measure II.A.6

- II.A.6 Adopt a Zoning Ordinance provision requiring preparation of a Specific Plan for the “Urban Activities Center” designated on the Land Use Plan prior to approval of development on any of the subject parcels and including performance and development standards consistent with Section II.C.2, *Specific Plan Concept*.

Land Use Element Policy Document Section II.C.2

Specific Plan Concept

Laguna Woods was developed as a “planned community” and the importance of continuing in this tradition is recognized. Integration of uses, designs, and infrastructure on contiguous properties promotes development of greater aesthetic and economic value, maximizes municipal revenues, enhances the overall balance of land uses in the City, and minimizes adverse impacts on the environment. To this end, development on any portion of Parcels 2 through 9 (Potential Development Sites, above) requires preparation of a Specific Plan encompassing all such parcels that includes project submittal and review procedures, and performance and development standards incorporating and reflecting the following:

- ❑ A balance in the mix and intensity of land uses as necessary to generate sales tax and/or transient occupancy tax revenues, or their

equivalents, sufficient to maintain or improve the City's ability to provide municipal services. The method for evaluating the projected fiscal impact shall be included in the Specific Plan in sufficient detail to enable definitive determination by the City as to the positive or negative fiscal impact of development consistent with the Specific Plan;

- Vehicular trip generation associated with use and intensity of proposed development consistent with maintenance of Level of Service standards for primary and secondary arterials in the City. The method for evaluating projected vehicular trip generation and consistency with Level of Service standards shall be included in sufficient detail to enable definitive determination by the City;
- A development phasing program ensuring that uses projected by the fiscal impact analysis to generate sales and/or transient occupancy tax revenues are substantially established and operating prior to occupancy of buildings not projected to include sales tax generating uses;
- Rights-of-way to be granted as consideration for approvals granted pursuant to the Specific Plan;
- The distribution, location, and extent of the uses of land, including open space for all properties designated on the Land Use Plan as "Urban Activities Center";
- Procedures for assigning land use designations for parcels that are to remain undeveloped upon exhaustion of available vehicular trip generation budget consistent with evaluations of Levels of Service as indicated herein;
- The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential

facilities proposed to be located within the area covered by the plan and needed to support the land uses included in the plan;

- ❑ Shared vehicular access points;
- ❑ Integrated on-site vehicular circulation and parking;
- ❑ Complementary orientation and massing of buildings relative to the street and to each other;
- ❑ Natural-appearing slope banks;
- ❑ Compatible scale, massing, and materials among buildings;
- ❑ Accommodation and integration of pedestrian and alternative vehicle use and circulation;
- ❑ Consistent landscape palette and theme;
- ❑ View impact review;
- ❑ Standards for building size, bulk, and scale consistent with existing development.

The extent of future development within the Urban Activities Center (UAC) of the Alternative 2 General Plan would be limited based on projected vehicle trip generation for proposed land uses and the capacity of arterial highways to accommodate the additional trips. Consistent with guidelines in the Alternative 2 General Plan Land Use Element, both residential and commercial land uses would be permitted within the approximately 70- acre UAC. A permissible mix and intensity of uses would generate no more vehicular trips than would be consistent with maintenance of adopted Levels of Service on affected roadway segments and intersections.

The methodology and procedure for determining trip generation associated with development within the Urban Activities Center would be set forth in the Circulation Element of the Alternative 2 General Plan as follows:

Circulation Element Implementation Measure I.A.2

Within the first year following adoption of the General Plan, and prior to processing of plans for development within the Urban Activities Center, the City shall develop a Traffic Impact Analysis Procedures Manual to guide the conduct of traffic studies. The Manual shall define procedures for analyzing the traffic impacts of new development on roadways both within and outside the City, for determining appropriate and effective mitigations measures, and for establishing procedures ensuring that new development pays at least its fair and proportionate share of required mitigation measures. The Manual shall identify the types and sizes of projects requiring a traffic impact analysis, and a process for preparing the analysis, including analysis methodologies, and development of significance criteria consistent with level of service performance criteria identified in the Circulation Element. The Manual shall also identify procedures for analyzing land development within the Urban Activities Center to ensure that overall trip generation totals identified in the General Plan are not exceeded, and that General Plan roadway standards continue to be met. The Manual shall include methods to ensure consistency with the requirements of the County of Orange Congestion Management Plan and the Growth Management Plan.

Implementation of the Alternative 2 General Plan would change the land use designation for approximately 70 acres from “Open Space” to “Urban Activities Center”. Up to thirty (30) acres within the UAC is projected to be developed at build-out consistent with the Alternative 2 General Plan. A hypothetical permissible development consistent with Alternative 2 could include the following mix of uses:

- 13,000 square feet of freestanding restaurant space;
- 120,000 square feet of office space;
- 75,000 square feet of retail space;
- 94 attached dwelling units.

Land Use and Planning

The Alternative 2 General Plan includes substantially the same Goals, Policies, and Implementation Measures as the project General Plan except as would be revised to accommodate the Urban Activities Center (UAC) land use. Alternative 2 includes a Housing Element as required by California Government Code Section 65581.

The Housing Element and Land Use Element in this Alternative include an inventory of sites suitable for residential development including a three-acre “High Density Residential” site that could accommodate the Regional Housing Needs Assessment new construction allocation. Additional dwelling units could be accommodated within the Urban Activities Center.

Unlike the project General Plan, Alternative 2 requires that undeveloped portions of the 70-acre Urban Activities Center be re-designated for alternative uses after build-out of the Urban Activities Center Specific Plan. This provision could accommodate reversion of undeveloped portions of the UAC for appropriate, low-intensity uses such as open space use.

The Alternative 2 General Plan accommodates commercial and residential development in areas subject to land use restrictions in the County of Orange Airport Environs Land Use Plan. Alternative 2 does not include policies in the Land Use, Noise, and Safety Elements that would restrict development in areas located under the former flight path of Marine Corps Air Station El Toro. Implementation and adoption of the Alternative 2 General Plan, therefore, would not resolve the conflict between Interim General Plan provisions and those of the Airport Environs Land Use Plan.

Alternative 2 addresses impacts associated with potential incompatibilities between existing development and new development. Alternative 2 requires that a Specific Plan adopted pursuant to the Urban Activities Center land use designation include procedures for evaluating and mitigating potential view impacts, and for maintaining consistency of bulk, size and scale between and among new buildings and existing, nearby structures.

Alternative 2 includes the three-acre High Density Residential site as in the project General Plan. As indicated in the project General Plan analysis of compatibility issues, no impacts are associated with development of this site.

The Alternative 2 General Plan Land Use Element corrects inconsistencies that currently exist on parcels developed with uses consistent with current zoning designations, but inconsistent with their Interim General Plan land use designations. An objective of the project General Plan is revision of land use designations to achieve consistency between the Zoning Ordinance and the General Plan as required by Government Code Section 65860.

Alternative 2 substantially satisfies project objectives of developing a self-sustaining community affording goods, services, housing, employment, and recreational opportunities and of accommodating the maintenance and future development of commercial uses that will generate sufficient municipal revenues necessary to maintain and enhance the level of municipal services.

Population and Housing

Adoption and implementation of the Alternative 2 General Plan will not accommodate or result in extension of backbone infrastructure such as roadways and water and sewer mains that would allow or promote development of land not otherwise suitable for development, or extend development outside the geographic limits of existing urbanized land uses.

Population increase in Laguna Woods indirectly attributable to adoption and implementation of the Alternative 2 General Plan is projected to range between 290 and 627 new residents by the year 2015 as construction of new dwelling units occurs. The actual population increase will depend upon the household composition of new dwelling unit occupants. The low end of the range assumes new units are exclusively for senior citizens (1.4 persons per household) and the high end assumes family-occupied new units (3.0 persons per household). Maximum City population at build-out could be as high as 17,134.

Geology and Soils

Areas identified for potential development in this alternative may be subject to liquefaction. Impacts to geology and soils are typically defined and analyzed in-depth at the development project stage. Implementation of the mitigation measures described in Section 4.2 would ensure that build-out under the proposed General Plan would result in less than significant impacts related to geology and soils.

Hydrology and Water Quality

Surface Water

Stormwater runoff under the Alternative 2 General Plan could significantly affect the City's existing drainage plans. Implementation of the proposed General Plan could contribute a substantial amount of stormwater runoff north of the City. The increase in stormwater runoff from future development consistent with Alternative 2 land use plan would combine with runoff from additional development that is expected to occur north of the City. This could result in a significant cumulative impact on existing drainage facilities both within and outside of the City.

Actual land area projected to be developed in this alternative, and the intensity of development, will be less than in the project General Plan. Accordingly, the volume of run-off will be diminished from that in the project General Plan. Furthermore, mitigation measures indicated for the project General Plan and applied to short-term construction and long-term use and occupancy of new development consistent with Alternative 2 would reduce this impact to a less than significant level.

Water Quality

There is a potential substantial increase in storm water runoff from the adoption and implementation of Alternative 2. Decreases in surface water quality within the Newport Bay/San Diego Creek watershed may occur. This potential decrease in surface water quality could be significant.

Actual land area projected to be developed in this alternative, and the intensity of development, will be less than in the project General Plan. Accordingly, the volume of run-off will be diminished from that in the project General Plan and the potential degradation in surface water quality diminished. Implementation of the mitigation measures consistent with those indicated for the project General Plan will facilitate compliance with water quality standards during construction and long-term operation of development to reduce impact levels to less than significant.

Groundwater

The increase in impervious surfaces and consequent increase in stormwater runoff from future development under the proposed Alternative 2 would create the potential for an increase in pollutants from new land uses. However, this increase in impervious surfaces is not expected to affect groundwater because no groundwater recharge areas are located in or in the immediate vicinity of a groundwater recharge area.

Mitigation measures identified for the project General Plan, applied in this alternative, to protect surface water quality will reduce potential impacts to groundwater quality to a level of less than significant.

Flooding

The development under this alternative is not located within a 100- or 500-year floodplain. No impacts are associated with adoption and implementation of this alternative.

Air Quality

Estimated pollutant emissions associated with the project General Plan and Alternative 2 are summarized in the data tables provided in the Section 4.4 Appendix. The data generated for Alternative 2 indicates that emissions would increase, however, after implementation of mitigation measures, they would not exceed thresholds established for the criteria pollutants.

Assuming that regional control measures are effective in attaining federal and State air quality standards by their designated attainment dates, emissions generated through the 2015 build out year would not be locally or cumulatively significant. Therefore, the impacts are less than significant. When compared to the project General Plan, Alternative 2 is environmentally superior.

Transportation and Circulation

This scenario addresses the land uses proposed for Alternative 2. It is estimated that the growth in land use projected in Alternative 2 would generate approximately an additional 7,426 daily vehicle trips. The trip generation estimates and impact analysis for Alternative 2 are shown in Appendix D.

For Alternative 2 the majority of roadway segments will operate at LOS B or better, except for Moulton Parkway which will operate at LOS E throughout the City. The land uses in this alternative would not cause roadway conditions that would exceed the standards set in the General Plan. Impacts associated with this alternative would be less than significant.

Biological Resources

In terms of biological impacts, the proposed development and associated impacts under Alternative 2 are similar to the proposed project General Plan. Both plans are anticipated to accommodate development that may involve impacts to protected species and their habitat, and/or waters of the United States. Both impacts are considered potentially significant under CEQA. As a result, potential impacts on biological resources would be similar to the proposed project.

Mitigation measures defined in the project General Plan analysis, if adopted and implemented for this alternative, would reduce the level of impact to less than significant.

Noise

Under the proposed Alternative 2, impacts would be almost identical with the implementation of the Project. That is, continued growth in the region will result in increased traffic on roadways in the City regardless of the implementation of the General Plan. The increase in traffic will generate additional noise that will affect sensitive receptors including existing residential uses. This alternative reduces future commercial building and residential development, however, the noise environment currently exceeds standards and would continue to do so as traffic will increase attributable to regional growth in the County outside of the City of Laguna Woods. Consequently, the incremental impacts of this alternative are not cumulatively considerable since they are so small that they make only a de minimus contribution to an existing and projected significant cumulative impact.

Public Services

Police Protection

The number of dwelling units to be constructed consistent with this alternative is not expected to be more than in the project General Plan. Total future development (both commercial and residential) anticipated in this alternative will be less than in the project General Plan. As no expansion of Sheriff's Department facilities would be necessitated by adoption and implementation of the project General Plan, the reduction in the scope of development consistent with Alternative 2 will similarly result in impacts at a level of less than significant.

Fire Protection

The number of dwelling units to be constructed consistent with this alternative is not expected to be more than in the project General Plan. Total future development (both commercial and residential) anticipated in this alternative will

be less than in the project General Plan. As no expansion of Orange County Fire Authority facilities would be necessitated by adoption and implementation of the project General Plan, the reduction in the scope of development consistent with Alternative 2 will similarly result in impacts at a less than significant level.

Schools

Development consistent with the Alternative 2 General Plan could include additional dwelling units equal in number to that consistent with the project General Plan. Additional portable classrooms could be required as a result of cumulative future development in Laguna Woods and throughout the area served by the Saddleback Valley Unified School District. Adoption and implementation of this alternative would require mitigation measures as identified for the project General Plan. With mitigation, the level of impact would be reduced to less than significant.

City Facilities

Future development anticipated in Alternative 2 would be reduced from that associated with the project General Plan. As no new City facilities are required as a result of the project General Plan, no new facilities will be needed as a result of adoption and implementation of the Alternative 2 General Plan. The level of impact is therefore less than significant.

Roads

Future development anticipated in Alternative 2 would be reduced from that associated with the project General Plan. The extent of development consistent with Alternative 2 would be limited to the extent that existing roadway capacity will accommodate additional vehicular traffic generated by such development. The project General Plan would accommodate development in excess of existing roadway capacity and any feasible expansion of that capacity. Alternative 2 is an environmentally superior alternative relative to roadway capacity. Acceptable

levels of service on arterials would be maintained after adoption of Alternative 2. Accordingly, the level of impact is less than significant.

Utilities and Service Systems

Storm Drains

Implementation of Alternative 2 will increase the amount of impervious surfaces that could increase potential storm water runoff in development areas. The storm drain capacity in the City is currently inadequate to handle existing storm water runoff. The City's existing drainage system may not be able accommodate the future development in accordance with Alternative 2. As a result, the development of new residential and commercial uses may cause a significant impact on the capacity of the existing drainage system.

Development consistent with this alternative could exceed the maximum stormwater carrying capacity currently available in the City. The increase in stormwater runoff from future development in the City would combine with runoff from additional development that is expected to occur north of the City and result in a significant cumulative impact on existing drainage facilities both within and outside of the City.

Mitigation measures defined for the project General Plan would be adopted and implemented in conjunction with this alternative and would reduce this impact to a less than significant level.

Water Treatment Facilities

Future development, as indicated in Alternative 2, would increase residential water consumption from 3,260,000 gallons up to 3,283,124 gallons per day, an increase of 0.7%. Commercial water consumption is estimated to increase by 95,680 gallons, from 387,770 gallons per day to 483,450 gallons per day, an increase of 24.6%.

The El Toro Water District (ETWD) has indicated that there is adequate supply to handle the additional demand that would occur with future development. Therefore, this impact is less than significant.

Wastewater Treatment Facilities

Development consistent with Alternative 2 will result in an increase in wastewater generation. It is estimated that residential wastewater generation will increase by 17,343 gallons or 0.7%, from 2,445,000 gallons per day to 2,462,343 gallons per day. Commercial generation is estimated to increase by 86,112 or 24.6%, from 348,993 gallons per day to 435,105 gallons of wastewater per day.

The El Toro Water District (ETWD) has indicated that existing treatment facilities are adequate to handle the projected increase in wastewater. However, future development could create sewage line “bottlenecks” in potential development areas. If new distribution lines are required, they will be constructed adjacent to existing distribution lines and only in the areas of potential “bottlenecks”, as deemed necessary by ETWD.

No significant environmental impacts are associated with installation of new pipelines, if required, as this will require minimal excavation within existing rights-of-ways and on development project sites. Future development will not require construction of new or expansion of existing wastewater treatment facilities. Accordingly, impacts are less than significant.

Natural Gas

Based on the consumption figures identified in Section 4.11.4 from SCAQMD and The Gas Company, the development of 209 new multi-family units would increase residential gas consumption from 51,451,499 cubic feet of gas per month up to 52,309,960 cubic feet of gas per month, a 1.7% consumption increase. Commercial consumption would rise from 9,123,624 cubic feet of gas per month up to 11,370,024 cubic feet of gas per month, a 24.6% increase. Retail development would also create a 24.6% increase in gas consumption, from

16,169,124 cubic feet of gas per month up to 20,150,244 cubic feet of gas per month. Although The Gas Company has indicated that there is an adequate supply of natural gas to accommodate new development, service lines may not be adequate to provide natural gas to the development areas. However, the construction of laterals from existing gas mains will require minimal excavation within existing rights-of-way and on development project sites and is not expected to result in significant impacts on the environment. Therefore, the level of impact is less than significant.

Electricity

Adoption and implementation of Alternative 2 would increase residential electrical consumption by 1.6%, an increase from 74,562,378 kwh per year up to 75,766,499 kwh per year. Commercial consumption would increase from 380,151 kwh per year to 473,751 kwh per year, an increase of 24.6%. Development of an estimated 114,400 square feet of retail space would increase consumption from 6,295,737 kwh per year up to 7,498,439, a 19.1% increase.

The current Edison forecast for generation capacity and consumption extends to the year 2008. Based on review of maximum potential build-out of 73 additional acres, Southern California Edison indicated adequate capacity to serve this level of development. Accordingly, adoption of Alternative 2, which anticipates a reduction in development at build-out from that of the project General Plan, would not result in electricity demands in excess of generating capacity. The level of impact is less than significant.

Solid Waste

Future development of Alternative 2 would result in an ultimate build-out of 209 new residential units with an estimated population increase of approximately 300 residents and an additional 208,000 square feet of commercial development.

Based on the potential development in the City and the existing average solid waste produced by residents in the City, residential development would create an estimated solid waste production increase from 9414.6 tons of solid waste per

year up to 9,580 tons of solid waste per year, an increase of 166.6 (1.8%) tons per year. Development of 208,000 square feet of commercial space, would create an increase in commercial solid waste from 8.9 tons of waste per year per acre up to 11.18 tons per year per acre, an increase of 25.6%.

While the daily increase of waste production will contribute to reaching the maximum daily limits of the Bowerman Landfill, according to the County of Orange Planning and Development Services Department, it can be assumed that adequate capacity for the future development anticipated in the project General Plan is available. Therefore, because solid waste production associated with this alternative will be less than the project General Plan production rate, solid waste impacts are considered to be less than significant.

Cultural Resources

Project construction consistent with development facilitated through adoption of the Alternative 2 General Plan would involve site clearance, grading, earth moving, cut and fill operations, and travel of heavy-duty construction vehicles and equipment over development sites. These construction activities would substantially alter the land area within the grading limits of designated sites and future development could unearth additional archeological finds. Implementation of the General Plan under Alternative 2 could result in potential significant impacts to archaeological resources and paleontological resources.

Although the potential for impacts exists under this alternative, grading activity associated with a reduction in developable area from that of the project General Plan would be less extensive and the potential for impacts diminished accordingly. Moreover, adoption of mitigation measures as defined for the project General Plan in conjunction with this alternative would reduce the impact to a less than significant level.

Conclusions

Alternative 2, “Draft General Plan with Reduced Future Development Capacity”, would incrementally reduce certain environmental impacts from levels associated

with the project General Plan. Alternative 2 will reduce the amount of open space acreage redesignated for future residential or commercial development, thus reducing the extent of future, significant irreversible environmental impacts from that associated with the project General Plan. Alternative 2 will avoid significant, unavoidable transportation and air quality impacts associated with the project General Plan.

Alternative 2 substantially achieves objectives indicated for the project General Plan.

6.0

APPENDIX

APPENDIX A

INITIAL STUDY

Initial Study Checklist
Supporting Commentary

Land Use and Planning

- a. **No Impact.** Changes in land use designations and related policies and implementation measures do not require, promote, make possible, or allow interference with physical access between one part of the City and another. No existing rights-of-way for vehicular or pedestrian travel would be reduced, impeded, or abandoned as a direct or indirect result of the project. No changes in roadway configurations or land use patterns that would have the practical effect of visually or physically dividing the community would attend or result from adoption of the General Plan.
- b. **Potentially Significant Impact.** Land use designation changes in the General Plan will accommodate development of parcels of land that are currently vacant, underutilized, or developed with uses inappropriate to the overall land use pattern of the General Plan. Consistency with land uses in adjacent cities and with area and regional plans relating to land use will be determined after analysis in the EIR.
- c. **Potentially Significant Impact.** Land use designation changes in the General Plan will accommodate development of parcels of land that are currently vacant, underutilized, or developed with uses inappropriate to the overall land use pattern of the General Plan. Subsequent development of these parcels could potentially result in incompatibilities with existing land uses both within and adjacent to the City. Further analysis is required and will be provided in the EIR.
- d. **No Impact.** The land area subject to the General Plan is urbanized and no agricultural resources or operations exist within this area.

Population and Housing

- a. **Potentially Significant Impact.** Land use designation changes in the General Plan will accommodate construction of additional residential and commercial office and retail buildings. New jobs could be added in the City as a result of this development, accompanied by a potential increase in demand for new housing. Further analysis is required and will be provided in the EIR.
- b. **No Impact.** Land use designation changes in the General Plan do not include any sites developed with residential uses. A net increase in the number of dwelling units in the City is anticipated during the planning term of the General Plan and no dwelling units are indicated for demolition or conversion to other uses.

Geology and Soils

- a. **Less Than Significant Impact.** The City does not lie within or immediately adjacent to an Alquist-Priolo Earthquake Fault Zone, designated by the State of California where there is evidence of active faulting. Published geologic maps do not show any active faults on, or in the vicinity of, the City. The closest faults likely to produce large earthquakes are the San Andreas, San Jacinto, Elsinore-Whittier, and Newport-Inglewood. Locally, there are several less-significant faults: the Christianitos fault to the northeast is suggested to be active; the Shady Canyon fault and Laguna Canyon fault zone are located to the west, and the east-trending Temple Hill fault terminates near Aliso Creek. There is no strong evidence of Holocene offset along any of these local faults. Strong seismic ground shaking is not expected to significantly affect future structures within the City because these structures would be designed to meet or exceed the seismic safety standards set forth in the most current version of the Uniform Building Code (UBC). Therefore, no significant ground-shaking impacts causing loss, injury, or death would occur with future development in accordance with the proposed General Plan.
- b. **Potentially Significant Impact.** The most severe ground response to seismic activity in the project area is likely to be the liquefaction of unconsolidated Quaternary deposits in areas of the City where the groundwater level is within 30 feet of the surface. Potential liquefaction impacts are considered significant and will be further evaluated in the EIR.
- c. **No Impact.** In the remote possibility that a sea-floor earthquake generates a tsunami that reaches the coast of southern California, the City is not at risk because of its inland location and elevation above sea level. If an earthquake generates a sudden landslide into a large mountain lake or reservoir, or a coastal fiord, adjacent and down slope areas could be devastated by flooding and muddy debris flows. The City is not situated in an area that is at risk from this geologic phenomenon. Likewise, there is no volcanic activity in any part of the City of Laguna Woods. Therefore, no impacts from seiche, tsunami, or volcanic hazards would occur to future development that is implemented in accordance with the proposed General Plan.
- d. **Less Than Significant Impact.** Severe shaking from a strong earthquake could trigger bedrock failures, including rock falls in steep areas. Areas underlain by the expansive mudstones of the Monterey and Capistrano Formations are the most prone to slumping in steep areas. Intense rainfall could also result in mud-debris flows, mainly at the heads of steep canyons. These sudden and rapid landslides are common in Sespe and Monterey Formations, but the hazard is greatest in the Oso Member of the Capistrano Formation. Since the implementation of the

Initial Study Checklist
Supporting Commentary

proposed General Plan would result in future development in areas that have relatively flat terrain, potential landslide activity in this area would be very low. Therefore, the potential impact of landslide activity affecting future development that is in accordance with the proposed General Plan is considered to be less than significant.

- e. **No Impact.** Units highly susceptible to rilling, ravelling, and wind erosion are the sand facies of the Niguel Formation and friable interbeds in the Oso Member of the Capistrano Formation. Capistrano Formation siltstones are particularly prone to piping (development of subsurface open drainage passages along joints and fractures). None of these formations of high erosion potential are present in areas proposed for future development. Likewise, the areas that are proposed for future development are relatively flat, and the erosion potential is low on flat surfaces. Therefore, implementation of the proposed General Plan would not be affected by erosion.
- f. **Less Than Significant Impact.** Subsidence of the land typically occurs by way of three mechanisms: (1) differential settling of soil from earthquake activity or liquefaction; (2) siphoning off of subsurface fluids, such as groundwater or oil; and (3) the dissolution of limestone. The only potential for subsidence of land in the project area is that resulting from an earthquake or liquefaction. No subsurface fluids will be affected, and limestone does not exist in the project area. As discussed above under “Fault Rupture and Seismic Ground Shaking”, the City is not within a significant active faulting area and, therefore, not likely to subside in an earthquake event. Therefore, potential subsidence impacts associated with the implementation of the proposed General Plan are considered less than significant.
- g. **No impact.** Expansive soils, or soils that swell and contract considerably, are those soils with a high clay content. No soils in the areas proposed for future development are particularly high in clay. Therefore, no impacts in the way of expansive soils are anticipated.
- h. **No Impact.** No unique geologic or physical features exist in the areas proposed for future development.

Hydrology and Water Quality

- a.. **Potentially Significant Impact.** Implementation of the proposed General Plan could result in the development of land within the vicinity of the Mouton Parkway/El Toro Road intersection. This future development will increase the amount of impervious surfaces in the City and increase runoff to existing storm

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drains. This increase in storm water runoff may be significant. This will be further evaluated in the EIR.

- b. **No Impact.** According to the Federal Emergency Flood Agency's Flood Insurance Rate Maps (FIRM), Panel 57 and 64 of 81, for the City of Laguna Woods, County of Orange, flood potential within the City of Laguna Woods is generally low. The areas proposed for future development, as well as the majority of the City, lie outside the 100- or 500-year flood zones. Therefore, implementation of the proposed General Plan will not expose people to hazards related to flooding.
- c. **Potentially Significant Impact.** Both Aliso Creek and San Diego Creek watersheds are affected by development with the City. These watersheds are both designated on the 303(d) list (of impaired water bodies) of the 1972 Clean Water Act for toxicity, bacteriological contamination, priority organics, and pesticides. Increases in surface runoff to these creeks occasioned by future development in accordance with the proposed General Plan could potentially contribute water pollutants associated with nuisance flow in an urbanized environment (e.g. pesticides, herbicides, vehicle oil, grease, paint, and detergents). Potential surface water quality impacts will be further evaluated in the EIR.
- d. **Less than Significant Impact.** Development in accordance with the proposed General Plan will potentially increase surface runoff to Aliso Creek, San Diego Creek, and two holding ponds, located just north of Ridge Route Road on the west and east side of Moulton Parkway. This increase in surface water runoff from land that may be proposed for future development consistent with the General Plan is not expected to significantly affect the capacity of these water bodies.
- e. **No Impact.** The proposed project will not affect the currents, course, or direction of surface water in any water body. Runoff from the areas proposed for future development will drain into the storm drain system. Future development in accordance with the proposed General Plan is not expected to affect groundwater quality or quantity as it will not result in any withdrawals of groundwater or seepage of runoff into any groundwater basin. Water for public consumption is currently purchased from water agencies and will be purchased from water agencies in the future.

Air Quality

- a. **No Impact.** The 1997 Air Quality Management Plan (AQMP) of the South Coast Air Quality Management District was developed consistent with the Southern California Association of Governments' (SCAG) Regional Transportation Plan (RTP). The RTP is designed to achieve a balance between the numbers of jobs and the numbers of housing units available to employees within SCAG sub-regions. Laguna Woods is a "housing-rich" community with only 0.13 jobs per

Initial Study Checklist
Supporting Commentary

- dwelling unit. The RTP sets a target jobs-to-housing ratio of 1.27 to achieve “balance”. Implementation of the General Plan may result in addition of up to 1,370 jobs upon build-out of new commercial office and retail buildings. As a result, implementation of the General Plan would move toward a balance between jobs and housing. In addition, the General Plan identifies and directs implementation of control and mitigation measures recommended for local agencies in the 1997 AQMP. For these reasons, the General Plan will not conflict with or obstruct implementation of the 1997 Air Quality Management Plan
- b. **Potentially Significant Impact.** Emissions resulting from development associated with the General Plan may contribute criteria pollutants to the South Coast Air Basin, which is currently a non-attainment area and in violation of air quality standards. As a result, implementation of the General Plan may result in potentially significant impacts and additional analysis is needed.
 - c. **Potentially Significant Impact.** As indicated in the 1997 Air Quality Management Plan of the South Coast Air Quality Management District, attainment of state and federal standards for all criteria pollutants is expected by 2006. However, development associated with the General Plan may contribute criteria pollutants to the South Coast Air Basin which is currently a non-attainment area. Therefore, implementation of the General Plan may result in potentially significant cumulative impacts, and additional analysis is needed.
 - d. **Potentially Significant Impact.** Land use designations that permit residential uses near roadways may result in exposure of sensitive receptors to significant levels of pollutant concentrations. Further analysis is required.
 - e. **Less than Significant Impact.** Residential and commercial office and retail uses that may be developed consistent with the General Plan will be subject to development standards in the existing Zoning Ordinance. The most likely source of odors among permitted uses would be kitchen exhaust fans of restaurants. Appropriate filtering and emission controls consistent with Air Quality Management District regulations will limit such emissions. Accordingly, the impact associated with objectionable odors is less than significant.

Transportation/Circulation

- a. **Potentially Significant Impact.** The Circulation Element indicates increases in average daily traffic volumes attributable to growth occurring outside the City and indirectly to adoption of the General Plan. The increases in traffic relative to existing traffic volumes and roadway capacities may be significant and will be evaluated further in the EIR.
- b. **Potentially Significant Impact.** The Circulation Element indicates increases in average daily traffic volumes that may result in decrease in levels of service on

Initial Study Checklist
Supporting Commentary

certain roadway segments. The resultant reductions in levels of service may be significant and will be evaluated further in the EIR.

- c. **No Impact.** No specific changes to rights-of-way or public vehicular or pedestrian corridors or pathways are contemplated at the General Plan level. Any attempt to describe such improvements that might ultimately result from implementation of the General Plan is purely speculative. No impacts are anticipated.
- d. **No Impact.** No changes to policies or standard designs for roadways or vehicular ingress or egress are contemplated in the General Plan. No impacts are anticipated.
- e. **No Impact.** No policies in the General Plan facilitate reduction in parking requirements for future projects that result in inadequate parking. No impacts are anticipated.
- f. **No Impact.** Implementation Measures included in the Land Use and Circulation Elements require accommodation of alternative modes of transportation, including bicycles and busses, in all future development and redevelopment projects. No impacts are foreseen or anticipated.
- g. **No Impact.** No rail, water, or air transportation facilities are located within the sphere of influence of the City. The magnitude of increases in population (<175 people) and jobs (<1,500) anticipated over the planning term of the General Plan are accommodated within household and employment growth projections in the Southern California Association of Government's Draft 2001 Regional Transportation Plan.

Biological Resources

- a. **Potentially Significant Impact.** The City encompasses four vegetation communities: urban/developed, coastal sage scrub, riparian, and freshwater marsh. Based on a review of the California Department of Fish and Game California Natural Diversity Database, there are six sensitive wildlife species potentially occurring within the project area. These wildlife species include: (1) coastal cactus wren (*Campylorhynchus brunneicapillus couesi*), a California species of concern, (2) least Bell's vireo (*Vireo bellii pusillus*), a federal and state endangered species, (3) coastal California gnatcatcher (*Poliophtila californica*), a federal threatened species, (4) yellow breasted chat (*Icteria virens*), a migratory nongame bird of management concern and a California species of concern, (5) orange-throated whiptail (*Cnemidophorus hyperythrus*), a California species of concern, and (6) northern red-diamond rattlesnake (*Crotalus ruber*), a California species of concern.

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Furthermore, there are three sensitive plant species potentially occur within the project area. These plant species include: (1) the many-stemmed dudleya (*Dudleya multicaulis*), a federal species of concern, (2) Laguna Beach dudleya (*Dudleya stolonifera*), a federal and state-threatened species, and (3) the Intermediate mariposa lily (*Calochortus weedii* var *intermedius*).

Implementation of the proposed General Plan may affect one of more sensitive plant and wildlife species. A further analysis of sensitive plant and wildlife species will be provided in the EIR.

- b. **No Impact.** There are no locally designated plant or wildlife species within the City of Laguna Woods. Therefore, the implementation of the proposed General Plan would have no impact on locally designated species.
- c. **No Impact.** There are no locally designated natural communities within the City of Laguna Woods. Therefore, the implementation of the proposed General Plan would have no impact on locally designated natural communities.
- d. **Potentially Significant Impact.** There is currently a freshwater marsh located east of Moulton Parkway and south of Ridge Route Drive. In addition, there are two riparian areas within the City: one is along Aliso Creek and the other is along an unnamed drainage course near the central portion of the City. Implementation of the proposed General Plan may affect wetland habitat within the City. A further evaluation of impacts to wetland habitat will be provided in the EIR.
- e. **No impact.** Potential wildlife movement through the City of Laguna Woods would likely occur through open space areas such as Aliso Creek. No other open space areas extend through the City because existing urban development is located to the north, east, and south. West of the City is the Laguna Coast Wilderness Park; however, there are no open space areas within the City that connect to this park. The area surrounding Aliso Creek is primarily built out with urban uses. No additional development is proposed within the City adjacent to Aliso Creek. Therefore, the implementation of the proposed General Plan will not affect wildlife movement within the City.

Energy and Mineral Resources

- a. **Potentially Significant Impact.** The consumption of energy, including natural gas and electricity, will increase with development consistent with the General Plan. A broad analysis of future consumption and the ability of local utilities to meet future demand will be included in the EIR.
- b. **No Impact.** No mineral resource recovery sites are located within the geographic area covered by the General Plan.

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- c. **No Impact.** Geologic investigation conducted in preparation of this document revealed no evidence of mineral resources that would be of future value.

Hazards

- a, b, c. **Less Than Significant Impact.** Development of retail uses consistent with the General Plan could result in the storage, for use and for sale, of common hazardous materials including pesticides, chlorine, acids, and cleaning solvents near concentrations of people. Users, sellers, and handlers of such materials are required, depending upon the quantities, to report to and register with the Orange County Fire Authority. Risk Management Plans are required of those businesses handling defined Regulated Substances. The Orange County Fire Authority routinely inspects these facilities to minimize risk of release and mitigate potential threats in the event of a release of hazardous materials.
- d. **Less Than Significant.** Underground gasoline storage tanks and hazardous waste generators are the only known potential sources of health hazards in the City. All leaking underground tanks have been removed and remediation of contaminated soils either has been completed or is continuing at five sites pursuant to State and Federal law under the direction of the Orange County Department of Health Services. These remedial actions will prevent exposure of people to health hazards associated with this source and no impact is associated with adoption and implementation of the General Plan.

Six generators of hazardous wastes have been identified in the City. Two are dry cleaners (cleaning solvents) and two are automobile service facilities (used motor oil). The El Toro Water District facility and The Golden Rain Foundation maintenance garage are included. All generators are regulated through the Hazardous Waste Inspection Program of the Environmental Health Division of the County of Orange Health Care Agency, subject to Title 22 of the California Code of Regulations. With routine inspection of hazardous waste generators to ensure proper handling, storage, and disposal of hazardous wastes and given the relatively small sizes and numbers of generators, exposure of people to a potential health hazard is unlikely. The Impact associated with potential exposure of people to existing sources of health hazards, attributable to adoption of the General Plan, is considered, therefore, to be less than significant.

- e. **No Impact.** The City is largely built-out and urbanized. Undeveloped and underdeveloped parcels indicated for future development in the General Plan have been disturbed by previous grading and excavation and have minimal vegetative cover. Development of these parcels will ultimately include typical landscaping installed, irrigated, and maintained consistent with urbanized use of the properties. As a consequence of these landscape improvements, adoption of the

Initial Study Checklist
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General Plan will have no impact associated with increased risk of fires in areas with flammable brush, grass, or trees.

- f. **No Impact.** The General Plan identifies emergency responders including police, paramedics, fire and hazardous materials units and response plans for flood, nuclear, and disaster-related emergencies. No aspect of implementation of the General Plan has been identified as having the potential to interfere with or impede an emergency response or evacuation plan.

Noise

- a, c. **Potentially Significant Impact.** Implementation of the General Plan together with continued growth in the region will result in increased traffic on roadways in the City. The increase in traffic will generate additional noise that could affect sensitive receptors including existing residential uses. Future residential uses in the Moulton Parkway corridor anticipated in the General Plan may be subject to excessive noise levels. Stationary noise sources associated with future commercial development could affect existing residential uses. An analysis of noise levels associated with both mobile and stationary sources will be included in the EIR.
- b. **No Impact.** No uses that may be a source of excessive ground-borne noise or vibration have been identified and none are anticipated in the General Plan.
- d. **Potentially Significant Impact.** Future development consistent with the General Plan will result in periodic increases in ambient noise levels associated with project construction. Although project-specific impacts cannot be anticipated at the General Plan level, a generalized analysis will be included in the EIR.

Public Services

- a, b, c, d. **Potentially Significant Impact.** Development of additional commercial and residential uses consistent with the General Plan could result in the need for new or altered government facilities in order to maintain service levels for fire and police protection, schools, and public facilities including roads. Analysis of potential impacts will be included in the EIR.

Utilities and Service Systems

- a. **No Impact.** The Infrastructure component of the Circulation Element includes a determination from the El Toro Water District that existing facilities have adequate capacity to service the potable water and sanitary sewer needs associated with development anticipated in the General Plan.

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- b. **Potentially Significant Impact.** Additional stormwater discharge associated with future development consistent with the General Plan may result in the need for an increase in capacity of existing drainage facilities. Additional analysis will be included in the EIR.

Aesthetics

- a. **Less Than Significant Impact.** Development of property on the east side of Moulton Parkway at Santa Maria Avenue would be subject to height limitations of the zoning ordinance. Together with building pad elevation below the grade of Moulton Parkway, the height limitations should keep the parapet line of any new building at or below the existing tree line, thus having minimal, if any effect on views to the mountains. Accordingly, this effect is considered less than significant.
- b. **Less Than Significant Impact.** Development consistent with the General Plan will require exterior security lighting customary for parking residential and commercial parking lots. These parking lots will be sufficiently distant, at elevations significantly below, and separated by existing development from the nearest potential viewing stations. Consequently, the potential for significant light and glare effects is less than significant.
- c. **Less Than Significant Impact.** Land development and construction accommodated in the General Plan will be undertaken pursuant to existing subdivision, zoning, grading, and building standards consistent with existing building types, intensity, and design. The resultant conformity in design and intensity with the existing built environment will result in a less than significant impact.

Cultural Resources

- a. **Potentially Significant Impact.** Based on a review of geologic maps, the City of Laguna Woods is underlain by Tertiary bedrock and Quaternary deposits which are known to be paleontologically sensitive. Therefore, future development in accordance with the proposed General Plan may result in potentially significant impacts on paleontologic resources. These impacts will be further evaluated in the EIR.
- b. **Potentially Significant Impact.** Based on a records check and literature searches through the South Central Coastal Information Center at California State University, Fullerton, five prehistoric sites have been recorded within the City limits. All five sites have been removed or destroyed by past development activities. Since prehistoric sites have been found within the City, the City is considered highly sensitive for archaeological resources. Therefore, development in accordance with the proposed General Plan may result in potentially significant

Initial Study Checklist
Supporting Commentary

impacts to archaeological resources. These impacts will be further evaluated in the EIR.

- c. **No Impact.** Based on a records check of the National Register of Historic Places, the California Historical Landmarks, the California Historic Resources Inventory, and the California Points of Historic Interest, no historical (>45 years old) structures in, or within a half-mile of, the City of Laguna Woods were recorded. Therefore, the implementation of the proposed General Plan would not affect existing historical resources.

Recreation

- a, b **Less Than Significant.** All existing residential communities include recreation facilities for their respective residents consistent with requirements of the County of Orange prior to the City's incorporation. No public recreation facilities were required and none were developed prior to incorporation.

Additional dwelling units contemplated in the General Plan will be required to include appropriate recreation facilities consistent with the Open Space Element of the General Plan. Applying the minimum industry-wide standard of 2.5 acres per 1,000 people to a maximum anticipated population increase of no more than 300, a park site of three-quarters of an acre would be required. In an urbanized area such as Laguna Woods, impacts associated with grading and improvement of a site of this size, subject to existing zoning, building, grading, and development review procedures, would represent a less than significant impact.

APPENDIX B

EIR PREPARERS AND CONTRIBUTORS ORGANIZATIONS AND PERSONS CONSULTED

APPENDIX B EIR PREPARERS AND CONTRIBUTORS

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Weiland Associates, Inc.

Noise Analysis

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Benjamin P. de Mayo

City of Irvine

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City of Aliso Viejo

Clint Sherrod

APPENDIX C

AIR QUALITY DATA

URBEMIS 7G For Windows 5.1.0

File Name: F:\Projects\1125\EIR\Air Quality\Existing Setting 2002.urb
Project Name: Existing Conditions - All Land Uses
Project Location: South Coast Air Basin (Los Angeles area)

SUMMARY REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SOX
TOTALS (lbs/day, unmitigated)	658.40	108.30	50.19	0.22	0.01
TOTALS (lbs/day, mitigated)	658.40	108.30	50.19	0.22	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10
TOTALS (ppd, unmitigated)	839.48	1,062.14	4,764.33	396.01
TOTALS (ppd, mitigated)	777.07	943.22	4,227.98	351.52

URBEMIS 7G For Windows 5.1.0

File Name: F:\Projects\1125\EIR\Air Quality\Existing Setting 2002.urb
Project Name: Existing Conditions - All Land Uses
Project Location: South Coast Air Basin (Los Angeles area)

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SOX
TOTALS (lbs/day, unmitigated)	657.78	108.26	45.86	0.21	0.00
TOTALS (lbs/day, mitigated)	657.78	108.26	45.86	0.21	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10
TOTALS (ppd, unmitigated)	1,156.79	1,180.74	7,881.51	396.01
TOTALS (ppd, mitigated)	1,059.19	1,048.55	6,996.83	351.52

URBEMIS 7G For Windows 5.1.0

File Name: F:\Projects\1125\EIR\Air Quality\The Project With Existing.urb
Project Name: The "Project" and Existing Conditions
Project Location: South Coast Air Basin (Los Angeles area)

SUMMARY REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SOX
TOTALS (lbs/day, unmitigated)	670.45	0.04	5.12	0.02	0.01
TOTALS (lbs/day, mitigated)	670.45	0.04	5.12	0.02	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10
TOTALS (ppd, unmitigated)	389.60	811.60	2,740.71	445.33
TOTALS (ppd, mitigated)	355.36	698.84	2,359.12	383.38

URBEMIS 7G For Windows 5.1.0

File Name: F:\Projects\1125\EIR\Air Quality\The Project With Existing.urb
Project Name: The "Project" and Existing Conditions
Project Location: South Coast Air Basin (Los Angeles area)

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SOX
TOTALS (lbs/day, unmitigated)	669.71	0.00	0.00	0.00	0.00
TOTALS (lbs/day, mitigated)	669.71	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10
TOTALS (ppd, unmitigated)	467.60	879.93	3,469.89	445.33
TOTALS (ppd, mitigated)	422.53	757.70	2,987.18	383.38

URBEMIS 7G For Windows 5.1.0

File Name: F:\Projects\1125\EIR\Air Quality\No Project at 2015.urb
Project Name: No Project - Future Post 2010
Project Location: South Coast Air Basin (Los Angeles area)

SUMMARY REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SOX
TOTALS (lbs/day, unmitigated)	650.08	0.03	4.33	0.01	0.01
TOTALS (lbs/day, mitigated)	650.08	0.03	4.33	0.01	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10
TOTALS (ppd, unmitigated)	346.40	697.44	2,362.37	384.59
TOTALS (ppd, mitigated)	317.87	603.72	2,044.71	333.09

URBEMIS 7G For Windows 5.1.0

I Name: F:\Projects\1125\EIR\Air Quality\No Project at 2015.urb
Project Name: No Project - Future Post 2010
Project Location: South Coast Air Basin (Los Angeles area)

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SOX
TOTALS (lbs/day, unmitigated)	649.45	0.00	0.00	0.00	0.00
TOTALS (lbs/day, mitigated)	649.45	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10
TOTALS (ppd, unmitigated)	413.09	755.70	2,989.65	384.59
TOTALS (ppd, mitigated)	375.54	654.10	2,587.85	333.09

URBEMIS 7G For Windows 5.1.0

File Name: F:\Projects\1125\EIR\Air Quality\Alternative 2.urb
Project Name: Existing and Future Land Uses - Preferred Alternative
Project Location: South Coast Air Basin (Los Angeles area)

SUMMARY REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SOX
TOTALS (lbs/day, unmitigated)	660.66	0.04	5.12	0.02	0.01
TOTALS (lbs/day, mitigated)	660.66	0.04	5.12	0.02	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10
TOTALS (ppd, unmitigated)	365.42	746.47	2,529.20	410.76
TOTALS (ppd, mitigated)	330.74	632.62	2,143.34	348.37

URBEMIS 7G For Windows 5.1.0

Name: F:\Projects\1125\EIR\Air Quality\Alternative 2.urb
Project Name: Existing and Future Land Uses - Preferred Alternative
Project Location: South Coast Air Basin (Los Angeles area)

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SOX
TOTALS (lbs/day, unmitigated)	659.92	0.00	0.00	0.00	0.00
TOTALS (lbs/day, mitigated)	659.92	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10
TOTALS (ppd, unmitigated)	437.20	809.02	3,202.93	410.76
TOTALS (ppd, mitigated)	391.48	685.57	2,714.42	348.37

APPENDIX C

CRITERIA POLLUTANTS

Photochemical oxidants (Ozone) (O_3)

Ozone is the most severe regional air quality problem in South Coast Air Basin and is known to negatively impact a person's respiratory system. Ozone is not emitted directly into the atmosphere, but is formed by the reaction between sunlight, volatile organic compounds (VOC) or reactive organic gases (ROG) and Nitrogen Oxide (NO_x). While the SCAB's peak ozone levels are usually measured at stations near the foothills, violations of ozone standards are frequent and widespread throughout the air basin.

Nitrogen Oxide (NO_x)

Nitric Oxide (NO) and Nitrogen dioxide NO_2 are collectively referred to as NO_x , Nitrogen Oxide, which play a significant role in the formation of ozone. NO_2 is the most abundant form of NO_x and affects the respiratory system and reduces visibility due to its brown color. Concentrations of NO_2 have declined substantially in recent years. For the first time in 1992, no location within the AQMD exceeded the federal standard, and 1994 was the first year the State NO_2 standard was not exceeded. Despite the decline in NO_x emissions over the last decade, further reductions are necessary because NO_x is a precursor to Ozone.

Fine Particulate Matter (PM_{10})

PM_{10} is made up of suspended particulates less than ten microns in size and include natural and man-made materials such as soil, biological materials, sulfates, sea salt, soil, organics and other materials. The greatest PM_{10} concentrations in the region occur in the urbanized areas of Riverside and San Bernardino counties. On average, the SCAB experiences PM_{10} levels that are twice the federal standard. The tiny particles of dust and soot that PM_{10} is made of, are known to cause irritation and damage to the respiratory system.

Sulfur Dioxide (SO_2)

Sulfur dioxide (SO_2) is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. SO_2 concentrations have been reduced to levels well below state and federal standards. Because SO_2 is a precursor to sulfate and PM_{10} formation, further reductions in emissions of SO_2 are needed to attain compliance with standards for these other pollutants.

Carbon monoxide (CO)

CO is a colorless, odorless gas formed by the incomplete combustion of fuels. Carbon Monoxide is known to reduce oxygen in the bloodstream and is particularly dangerous to persons with heart disease. The attainment year for CO was 2000, which has not been met. Therefore, the entire basin is a non-attainment area for CO.



South Coast Air Quality Management District



21865 E. Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • <http://www.aqmd.gov>

Information Management
Public Records Unit

Direct Dial (909) 396-3700
Fax: (909) 396-3330

COMPLETION LETTER

February 20, 2002

DOUGLAS STOWELL
HOGLE-IRELAND, INC. (CONSULTANT TO CITY OF LAGUNA WOODS)
42 CORPORATE PARK
IRVINE, CA 92606

Ref.: CONTROL NO. 14585

Re: EMISSIONS SUMMARY, AIR MONITORING & HRA'S FOR
23542 MOULTON PKWY., LAGUNA WOODS, CA 92653.

Your request for records dated January 25, 2002 was received and processed. After a thorough search of our records:

YOUR REQUESTED RECORDS ARE ENCLOSED TOTALING LESS
THAN 10 PAGES, SO THERE IS NO CHARGE FOR THE DIRECT
COST OF DUPLICATION.

NO AIR MONITORING OR HRA'S FOR ID#44242 & 15093.

If you have any questions, please do not hesitate to contact me, Tuesday through Friday, **8:00 a.m. to 4:30 p.m.**

Sincerely,

CLAUDETTE SIEBERTx2849
For Linda L. Mills
Public Records Coordinator

LLM: CS

South Coast Air Quality Management District

Facility Equipment List Report

Facility: 44242 EL TORO WATER DIST

Last Inspection: 07/13/2001

SIC: 4952

Inspector: DR04 DANIEL J RUSSELL

Inspection Date: 07/13/2001

Location Address: 23542 MOULTON PKY, LAGUNA HILLS 92653-1960 Sector:RG

Mailing Address: P O BOX 4000, LAGUNA HILLS 92654-4000

Instruction:

MR: 1403

TS: TS53 - POTW, Public Owned Tre

Facility Status: Active

Assignment No. 662633

Disposition: Operating in Compliance at time of inspection

Contact: WES MAUTZ (714) 8370580

Quarter: 0100 - inspect in 2nd quarter, every year

On Hold:

Facility Team: L

Suspended:

RECLAIM: N		TITLE V: N		SIP:		AIR:	
Application No.	Permit No.	Permit Issue Date	Permit Status	Equipment Category	BCAT/CCAT Description	Application Date	Application Status
175996	D13858	01/09/1990	ACTIVE	043902 BCAT	ICE (>500 HP) EM ELEC GEN DIESEL	10/13/1988	PERMIT TO OPERATE GRANTED
282215	D93891	10/17/1995	ACTIVE	022600 BCAT	SEWAGE TREATMENT (>5 MG/D) AEROBIC	06/11/1993	PERMIT TO OPERATE GRANTED
303028	F31973	06/22/2000	ACTIVE	78 CCAT	BIOFILTER	04/27/1995	PERMIT TO OPERATE GRANTED
347920	F19347	01/29/1999	ACTIVE	043902 BCAT	ICE (>500 HP) EM ELEC GEN DIESEL	10/13/1998	PERMIT TO OPERATE GRANTED

Report:

Contact: Wes Mautz, Plant Superintendent (949) 837-0580.

P/O D13858 - ICE operating an emergency generator. Total operating hours on the non-resettable hour meter was 292. In compliance with P/O conditions.

P/O F19347 - ICE operating an emergency generator. Total operating hours on the non-resettable hour meter was 159. In compliance with P/O conditions.

P/O D93891 - POTW permit allow 6 mgd, currently operating at 5.2 mgd.

P/O F31973 - Biofilter which controls odor nuisance emissions from sludge tank, equalization basins 1 & 2, influent diversion box, and all the head works area. Records show no exceedances of 1 ppmv from the surface of the biofilter.

South Coast Air Quality Management District

Facility Equipment List Report

Facility: 15093 LAGUNA HILLS SANITATION INC

Last Inspection: 05/16/1983

SIC: 495

Inspector:

Inspection Date:

Location Address: 23542 MOULTON PKY, LAGUNA HILLS 92653 Sector:RG

Mailing Address: P O BOX 3000, LAGUNA HILLS 92653 Sector:RG

Instruction:

MR: 1403

TS:

Facility Status: Inactive

Assignment No.

Disposition:

Contact:

Quarter: none - do not inspect

On Hold: N

Facility Team:

Suspended: N

RECLAIM: N

TITLE V: N

SIP:

AIR:

Application No.

Permit No.

Permit Issue Date

Permit Status

Equipment Category

BCAT/CCAT Description

Application Date

Application Status

05848A

S05060

09/15/1980

INACTIVE

815950

BCAT

TEST EQUIPMENT

01/01/1900

PERMIT TO OPERATE GRANTED

Report:

Inspector: _____

Date: _____

Reviewed By: _____

Date: _____

PLEASE PRINT YOUR UPPER-CASE LETTERS
AND NUMBERS NEATLY LIKE THIS:

A B C D E 1 2 3 4 5

(See reverse side for Instructions.)

Submittal Date: March 4, 1994

FACILITY I.D. NUMBER

0 4 4 2 4 2

EL TORO WATER DIST

EL TORO WATER DIST

P.O. BOX 4000

23542 MOULTON PKWY

LAGUNA HILLS

LAGUNA HILLS

CA 92653

If your MAILING address is different from the one shown above, please make the changes below:

Street Address

Business
Operating Hours

City

State

Zip Code

Hours

Per Day 8

Contact Person (Last, First)

Days Per

Week 5

Phone Number

Industry Code (see list on reverse side)

Weeks

Per Year 5 2

7 1 4 8 3 7 7 0 5 0 2 0

I declare under penalty of perjury that the data submitted truly represents throughput and emissions for the Calendar Year 1993, and that the emission factors represent the best available data for my company in the calculation of annual emission figures.

Authorized
Signature:Preparer
Signature:

Date: 3-2-94

Date:

Name:

Title: Contracts Admin.

Title:

Phone #: (714) 837 - 7050

Organization:

Phone #: () -

EXT:

FEES DUE SUMMARY

(THIS FORM SHOULD BE THE TOP PAGE OF YOUR RETURN PACKAGE)

PLEASE PRINT YOUR UPPER-CASE LETTERS
AND NUMBERS NEATLY LIKE THIS:

A B C D E 1 2 3 4 5

(See reverse side for Instructions.)

COMPANY NAME

EL TORO WATER DIST

FACILITY I.D. NUMBER

0 4 4 2 4 2



044242

	ORGANIC GASES (a)	SPECIFIC ORGANICS (c)	NITROGEN OXIDES (d)	SULFUR OXIDES (e)	CARBON MONOXIDE (f)	PARTICULATE MATTER (g)
1. Total Emissions from FORM C, Line 6.	, 0	, 0	, 0	, 0	, 0	, 0
2. Emission Fee Due per Pollutant from	, 0	, 0	, 0	, 0	, 0.00	, 0

ATTACH CHECK HERE

- | | | | | | |
|--|--|--|--|--|------|
| 3. Total Emission Fees for all pollutants
(Add all fees on Line 2) [a + c + d + e + f + g]. | | | | | 0. |
| 4. Toxic Air Contaminants/Ozone Depleter
Fees. | | | | | 0.00 |
| 5. TOTAL FEES DUE (Add Lines 3 & 4). | | | | | 0.00 |
| 6. LATE FEE (If any). | | | | | 0.00 |
| 7. TOTAL AMOUNT PAID. | | | | | 0.00 |
- For District use only

For District use only

PLEASE PRINT YOUR UPPER-CASE LETTERS
AND NUMBERS NEATLY LIKE THIS:

COMPANY NAME

FACILITY I.D. NUMBER

A B C D E 1 2 3 4 5

EL TORO WATER DISTRICT

0 4 4 2 4 2

(See reverse side for Instructions.)

ORGANIC GASES (tons/year) (a)	METHANE (tons/year) (b)	SPECIFIC ORGANICS (tons/year) (c)	NITROGEN OXIDES (tons/year) (d)	SULFUR OXIDES (tons/year) (e)	CARBON MONOXIDE (tons/year) (f)	PARTICULATE MATTER (tons/year) (g)
1. FORM B1	, . , .		, . , .	, . , .	, . , .	, . , .
2. FORM B2	, 0.0 , 0.0		, 0.1 , 0.0	, 0.0 , 0.0	, 0.0 , 0.0	, 0.0 , 0.0
3. FORM B3	, . , .	, . , .				
4. FORM B4	, . , .	, . , .	, . , .	, . , .	, . , .	, . , .
5. FORM E1 or R1	, . , .	, . , .	, . , .	, . , .	, . , .	, . , .
6. Total Emissions (Add Lines 1 through 5).	, 0.0 , 0.0	, 0.0 , 0.0	, 0.1 , 0.0	, 0.0 , 0.0	, 0.0 , 0.0	, 0.0 , 0.0

* See Note.

* Note: 1. If any total on Line 6 is equal to or greater than 4.0 tons, round to the nearest ton and transfer to FORM S, Line 1.

Totals equal to or less than 3.9 tons, are NOT to be transferred to FORM S.

2. Transfer all totals to FORM CU, Line 6.



PLEASE PRINT YOUR UPPER-CASE LETTERS
AND NUMBERS NEATLY LIKE THIS:

A B C D E 1 2 3 4 5

(See reverse side for Instructions.)

COMPANY NAME

EL TORO WATER DISTRICT

FACILITY I.D. NUMBER

0 4 4 2 4 2

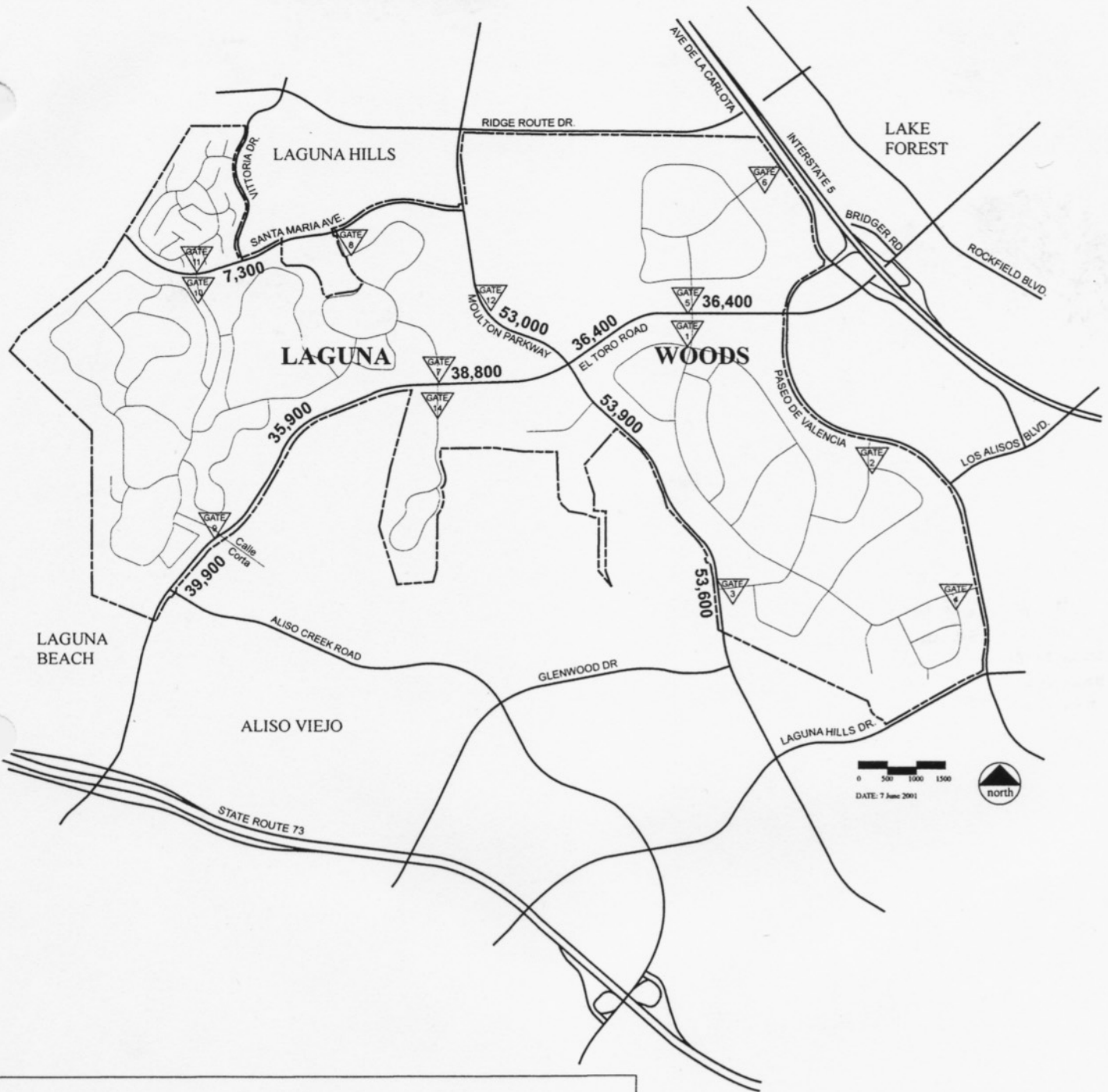
ORGANIC GASES (tons/year) (a)	METHANE (tons/year) (b)	SPECIFIC ORGANICS (tons/year) (c)	NITROGEN OXIDES (tons/year) (d)	SULFUR OXIDES (tons/year) (e)	CARBON MONOXIDE (tons/year) (f)	PARTICULATE MATTER (tons/year) (g)
--	-------------------------------	--	--	--	--	---

1. FORM B1U	,	.	,	.	,	.	,
2. FORM B2U	,	.	,	.	,	.	,
3. FORM B3U	,	.	,	.	,	.	,
4. FORM B4U	,	.	,	.	,	.	,
5. FORM E1U or R1U	,	.	,	.	,	.	,
6. Emissions From Form C, Line 6.	,	0.0	,	0.0	,	0.0	,
7. Total Emissions (Add Lines 1 through 6).	,	0.0	,	0.0	,	0.0	,



APPENDIX D

TRAFFIC/CIRCULATION



LEGEND

- LAGUNA WOODS CITY BOUNDARY
- XXXXX DAILY TRAFFIC VOLUME (2-way vehicles)

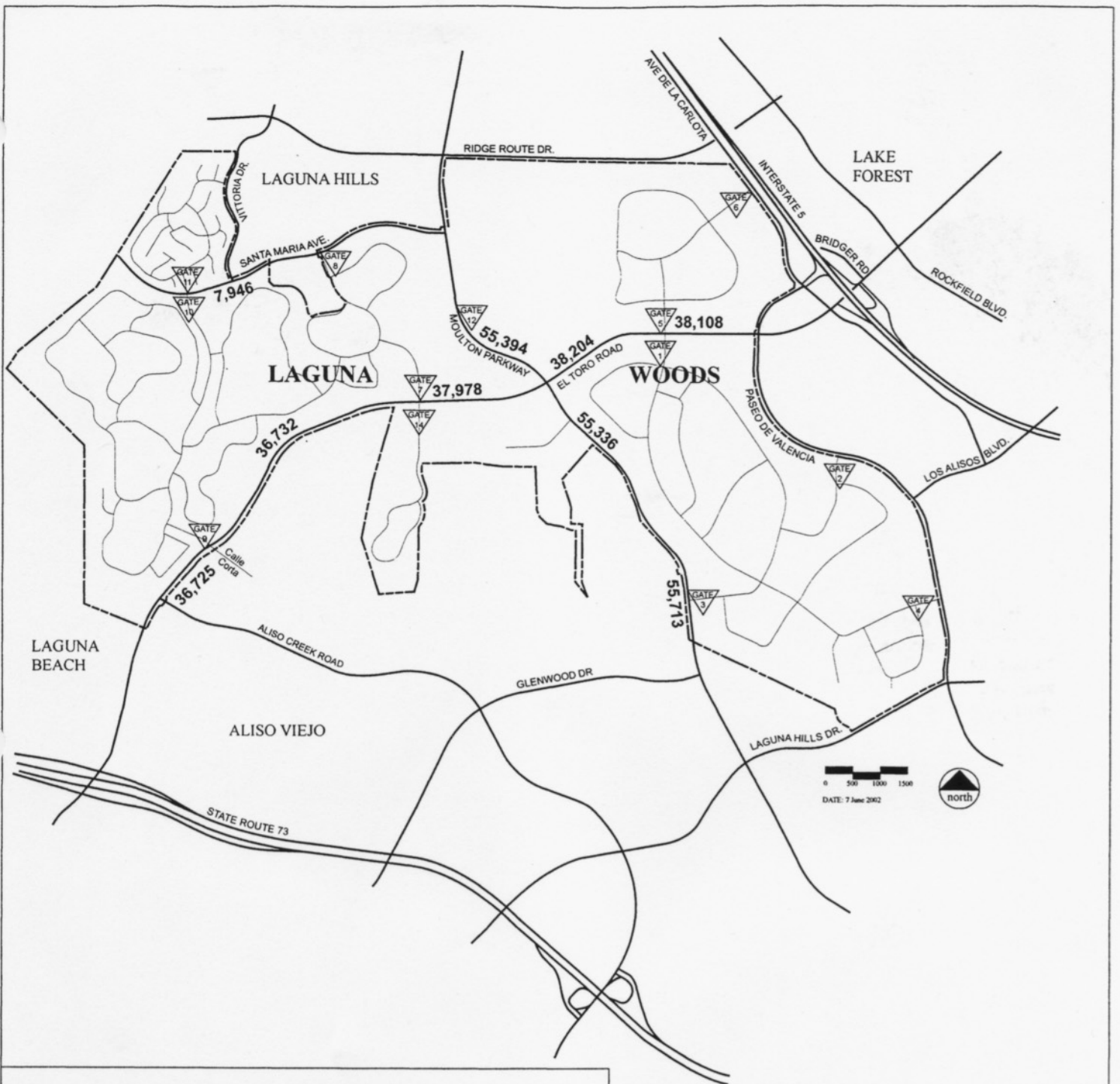
SOURCE: Traffic Counts, May 2001



NO PROJECT DAILY TRAFFIC VOLUMES

Draft Environmental Impact Report
City of Laguna Woods General Plan

Fig. 5



LEGEND

- LAGUNA WOODS CITY BOUNDARY
- XXXXX DAILY TRAFFIC VOLUME (2-way vehicles)

SOURCE: Traffic Counts, May 2001



ENVIRONMENTALLY SUPERIOR ALTERNATIVE DAILY TRAFFIC VOLUMES

Draft Environmental Impact Report City of Laguna Woods General Plan

FIG. 11

Table A-1. Laguna Woods General Plan - Trip Generation
Daily Trips

Parcel	Location	Amount	Units	Type	Source & Code	ADT		ADT Adjustments		
						Rate	Trips	Internal	Pass By	Net Trips
1.	Moulton at Santa Maria	115	DU	Apt.	ITE 220	7.16	823	0%	0%	823
2.	Opposite Gate 12 on Moulton	10	KSF	Rest.	ITE 832	130.34	1,303	20%	0%	1,043
3.	North of Town Center	10	KSF	Retail	ITE 814	40.67	407	20%	0%	325
		66	KSF	Retail	ITE 820	79.07	5,218	20%	44%	2,338
4.	Equestrian Center	116	KSF	Office	ITE 710	11.01	1,277	0%	0%	1,277
		104	KSF	Retail	ITE 820	67.22	6,991	20%	38%	3,467
5.	West of Equestrian Center	0	KSF	Retail	ITE 820	0.00	0	NA	NA	0
6.	Moulton at Campo Verde	26	KSF	Office	ITE 710	11.01	286	0%	0%	286
7.	West of Campo Verde at Moulton	299	DU	Apt.	ITE 220	6.44	1,926	0%	0%	1,926
8.	West of Gate 12	0	KSF	Retail	ITE 820	0.00	0	NA	NA	0
		0	KSF	Office	ITE 710	0.00	0	NA	NA	0
9.	Garden Plot, Maint. Yard, RV Storage	174	KSF	Retail	ITE 820	55.94	9,733	10%	33%	5,869
Total							27,965			17,355

Note: Used Trip Generation Equations except ITE 832, 814, and 710 used rates.

¹⁾ Parcel 4 and 5 combined since lots adjacent.

²⁾ Parcel 3 and 8 combined since lots adjacent.

Table A-2. Laguna Woods Alternative 1 - Trip Generation
Daily Trips

Parcel	Location	Amount	Units	Type	Source & Code	ADT		ADT Adjustments		
						Rate	Trips	Internal	Pass By	Net Trips
1.	Moulton at Santa Maria	0	DU	Apt.	ITE 220	0.00	0	0%	0%	0
2.	Opposite Gate 12 on Moulton	22	KSF	Activities Bldg.	ITE 495	22.88	503	35%	0%	327
3.	North of Town Center	0	KSF	Retail	ITE 814	0.00	0	0%	0%	0
		0	KSF	Office	ITE 710	0.00	0	0%	0%	0
4.	Equestrian Center	0	KSF	Retail	ITE 820	0.00	0	0%	0%	0
5.	West of Equestrian Center	0	KSF	Retail	ITE 820	0.00	0	0%	0%	0
6.	Moulton at Campo Verde	0	KSF	Retail	ITE 820	0.00	0	0%	0%	0
		30	KSF	Office	ITE 710	11.01	330	10%	0%	297
Total							834			624

Note: Used Trip Generation Equations except ITE 832, 814, and 710 used rates.

¹⁾ Parcel 4 and 5 combined since lots adjacent.

Table A-3. Laguna Woods Alternative 2 - Trip Generation
Daily Trips

Parcel	Location	Amount	Units	Type	Source & Code	ADT		ADT Adjustments		
						Rate	Trips	Internal	Pass By	Net Trips
1.	Moulton at Santa Maria	115	DU	Apt.	ITE 220	7.16	823	0%	0%	823
2.	Opposite Gate 12 on Moulton	10	KSF	Rest.	ITE 832	130.34	1,303	20%	0%	1,043
3.	North of Town Center	10	KSF	Retail	ITE 814	40.67	407	20%	0%	325
		25	KSF	Office	ITE 710	11.01	275	0%	0%	275
4. ¹⁾	Equestrian Center	25	KSF	Retail	ITE 820	111.82	2,795	0%	60%	1,118
5.	West of Equestrian Center	80	KSF	Retail	ITE 820	73.82	5,906	0%	40%	3,543
6.	Moulton at Campo Verde	0	KSF	Retail	ITE 820	0.00	0	0%	40%	0
		30	KSF	Office	ITE 710	11.01	330	10%	0%	297
Total							11,840			7,426

Note: Used Trip Generation Equations except ITE 832, 814, and 710 used rates.

¹⁾ Parcel 4 and 5 combined since lots adjacent.

Table 4. Bus Routes through the City of Laguna Woods

Route No.	Route Location	Service Hours	Typical Service Frequency
70	Sunset Beach - Dana Point	5:00 AM - 11:20 PM	30 min.
89	Laguna Hills - Laguna Beach	5:50 AM - 11:20 PM	30 min.
91	Laguna Hills - Dana Point	5:00 AM - 10:45 PM	30 min.
187	Laguna Hills - Dana Point	6:00 AM - 6:20 PM (Rush hour only)	30 min.
188	Irvine - Laguna Woods	5:25 AM - 7:00 PM (Rush hour only)	30 min.
Express 203	Fullerton - San Juan Capistrano	One trip each direction for commuting	
Express 205	Anaheim - Laguna Hills	4:45 AM - 11:50 PM	30 min.
Express 212	Irvine - San Juan Capistrano	Three trips in each direction	
Express 216	Costa Mesa - San Juan Capistrano	Three AM Trips and two PM trips	

Source: City of Laguna Woods Transit Needs Assessment,
Draft Final Report, March 2001.

Table 5. Future Without Project - Roadway Analysis - Daily 2-Way Total

Link No.	Arterial	Location	Jurisdiction	MPAH Designation	Total				LOS	
					Daily Volume	No. of Lanes ¹	Daily Capacity	V/C		
2	Moulton Pkwy	Gate 12 - El Toro Rd	LW	Smartstreet 6 Lane Divided	53,000	6	D	56,300	<u>0.941</u>	<u>E</u>
3	Moulton Pkwy	El Toro Rd - Calle Cortez	LW	Smartstreet 6 Lane Divided	53,900	6	D	56,300	<u>0.957</u>	<u>E</u>
4	Moulton Pkwy	Via Iglesia - City Limits	LW	Smartstreet 6 Lane Divided	53,600	6	D	56,300	<u>0.952</u>	<u>E</u>
5	El Toro Rd	Aliso Creek Rd - Calle Corta	LW	Major 6 Lane Divided	35,900	6	D	56,300	0.638	B
6	El Toro Rd	Calle Corta - Calle Sonora	LW	Major 6 Lane Divided	35,900	6	D	56,300	0.638	B
7	El Toro Rd	Calle Sonora - Moulton Pkwy	LW	Major 6 Lane Divided	36,800	6	D	56,300	0.654	B
8	El Toro Rd	Moulton Pkwy - Avd Sevilla	LW	Major 6 Lane Divided	36,400	6	D	56,300	0.647	B
9	El Toro Rd	Avd Sevilla - Paseo De Valencia	LW	Major 6 Lane Divided	36,400	6	D	56,300	0.647	B
13	Santa Maria Ave	Avd Sosiega - Santa Vittoria	LW	Secondary 4 Lane Undivided	7,300	4	U	25,000	0.292	A

1. D = Divided, U = Undivided, UT = Undivided Central Turn Median
Source: OCTAM 2025 Adjusted.

Table 6. General Plan - Roadway Analysis - Daily 2-Way Total

Link No.	Arterial	Location	Jurisdiction	MPAH Designation	Total				LOS
					Daily Volume	No. of Lanes ¹	Daily Capacity	V/C	
2	Moulton Pkwy	Gate 12 - El Toro Rd	LW	Smartstreet 6 Lane Divided	58,500	6	D 56,300	<u>1.039</u>	F
3	Moulton Pkwy	El Toro Rd - Calle Cortez	LW	Smartstreet 6 Lane Divided	61,500	6	D 56,300	<u>1.092</u>	F
4	Moulton Pkwy	Via Iglesia - City Limits	LW	Smartstreet 6 Lane Divided	58,800	6	D 56,300	<u>1.044</u>	F
5	El Toro Rd	Aliso Creek Rd - Calle Corta	LW	Major 6 Lane Divided	38,200	6	D 56,300	0.679	B
6	El Toro Rd	Calle Corta - Calle Sonora	LW	Major 6 Lane Divided	38,200	6	D 56,300	0.679	B
7	El Toro Rd	Calle Sonora - Moulton Pkwy	LW	Major 6 Lane Divided	39,000	6	D 56,300	0.693	B
8	El Toro Rd	Moulton Pkwy - Avd Sevilla	LW	Major 6 Lane Divided	40,800	6	D 56,300	0.725	C
9	El Toro Rd	Avd Sevilla - Paseo De Valencia	LW	Major 6 Lane Divided	40,800	6	D 56,300	0.725	C
13	Santa Maria Ave	Avd Sosiega - Santa Vittoria	LW	Secondary 4 Lane Undivided	9,100	4	U 25,000	0.364	A

1. D = Divided, U = Undivided, UT = Undivided Central Turn Median

Source: OCTAM 2025 Adjusted.

Table 7. Alternative 1 - Roadway Analysis - Daily 2-Way Total

Link No.	Arterial	Location	Jurisdiction	MPAH Designation	Total					
					Daily Volume	No. of Lanes ¹	Daily Capacity	V/C	LOS	
2	Moulton Pkwy	Gate 12 - El Toro Rd	LW	Smartstreet 6 Lane Divided	53,300	6	D	56,300	<u>0.947</u>	<u>E</u>
3	Moulton Pkwy	El Toro Rd - Calle Cortez	LW	Smartstreet 6 Lane Divided	54,300	6	D	56,300	<u>0.964</u>	<u>E</u>
4	Moulton Pkwy	Via Iglesia - City Limits	LW	Smartstreet 6 Lane Divided	53,800	6	D	56,300	<u>0.956</u>	<u>E</u>
5	El Toro Rd	Aliso Creek Rd - Calle Corta	LW	Major 6 Lane Divided	36,200	6	D	56,300	0.643	B
6	El Toro Rd	Calle Corta - Calle Sonora	LW	Major 6 Lane Divided	36,300	6	D	56,300	0.645	B
7	El Toro Rd	Calle Sonora - Moulton Pkwy	LW	Major 6 Lane Divided	36,900	6	D	56,300	0.655	B
8	El Toro Rd	Moulton Pkwy - Avd Sevilla	LW	Major 6 Lane Divided	36,400	6	D	56,300	0.647	B
9	El Toro Rd	Avd Sevilla - Paseo De Valencia	LW	Major 6 Lane Divided	36,400	6	D	56,300	0.647	B
13	Santa Maria Ave	Avd Sosiega - Santa Vittoria	LW	Secondary 4 Lane Undivided	7,600	4	U	25,000	0.304	A

1. D = Divided, U = Undivided, UT = Undivided Central Turn Median
Source: OCTAM 2025 Adjusted.

Table 8. Alternative 2 - Roadway Analysis - Daily 2-Way Total

Link No.	Arterial	Location	Jurisdiction	MPAH Designation	Total					
					Daily Volume	No. of Lanes ¹	Daily Capacity	V/C	LOS	
2	Moulton Pkwy	Gate 12 - El Toro Rd	LW	Smartstreet 6 Lane Divided	55,400	6	D	56,300	<u>0.984</u>	E
3	Moulton Pkwy	El Toro Rd - Calle Cortez	LW	Smartstreet 6 Lane Divided	55,300	6	D	56,300	<u>0.982</u>	E
4	Moulton Pkwy	Via Iglesia - City Limits	LW	Smartstreet 6 Lane Divided	55,700	6	D	56,300	<u>0.989</u>	E
5	El Toro Rd	Aliso Creek Rd - Calle Corta	LW	Major 6 Lane Divided	36,700	6	D	56,300	0.652	B
6	El Toro Rd	Calle Corta - Calle Sonora	LW	Major 6 Lane Divided	36,700	6	D	56,300	0.652	B
7	El Toro Rd	Calle Sonora - Moulton Pkwy	LW	Major 6 Lane Divided	38,000	6	D	56,300	0.675	B
8	El Toro Rd	Moulton Pkwy - Avd Sevilla	LW	Major 6 Lane Divided	38,200	6	D	56,300	0.679	B
9	El Toro Rd	Avd Sevilla - Paseo De Valencia	LW	Major 6 Lane Divided	38,100	6	D	56,300	0.677	B
13	Santa Maria Ave	Avd Soslega - Santa Vittoria	LW	Secondary 4 Lane Undivided	7,900	4	U	25,000	0.316	A

1. D = Divided, U = Undivided, UT = Undivided Central Turn Median
Source: OCTAM 2025 Adjusted.

Definitions

The following common terms are used throughout the Noise Element Technical Memorandum:

- Ambient Noise* The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.
- Amplitude* A measure of the difference between atmospheric pressure (with no sound present) and the total pressure (with sound present). Although there are other measures of sound amplitude, sound pressure is the fundamental measure. The unit of sound pressure is the decibel, denoted dB.
- A-Weighted Sound Pressure Level, dB(A)*
- The sound pressure level, in decibels, as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.
- Community Noise Equivalent Level, CNEL*
- The average equivalent A-weighted sound level during a 24-hour day obtained by adding five decibels to the hourly noise levels measured during the evening (from 7:00 pm to 10:00 pm) and by adding ten decibels to the hourly noise levels measured during the night (from 10:00 pm to 7:00 am). In this way, CNEL takes into account the lower tolerance of people for noise during evening and nighttime periods.
- Day-Night Sound Level, Ldn*
- The measure of noise exposure used by the EPA, HUD, FAA and the Department of Defense. It is the same as CNEL except that the weighting considered (in CNEL) between the hours from 7:00 pm to 10:00 pm is eliminated. Throughout this technical memorandum, Ldn and CNEL are assumed to be the same measure. This is consistent with the recommended practice of the State of California Office of Noise Control.
- Decibel, dB* A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the measured sound to the reference pressure, which is 20

microPascals. Because they are logarithmic, decibels are not additive. If two similar noise sources produce the same amount of noise (e.g., 100 decibels each), the total noise level will be 103 dB, not 200 dB. An increase in noise level of 10 dB is generally perceived as being twice as loud.

Exterior Living Space

Open area designed for outdoor living and/or recreation.

Maximum Noise Level

The maximum instantaneous noise level that occurs during a specific time interval. In acoustics, the maximum sound pressure level is understood to be for single events unless some other kind of level is specified.

Noise

Annoying, harmful, or unwanted sound.

Noise Barrier

A structure designed to mitigate the impact generated by a noise source (e.g., an arterial or rail line) at an adjacent noise-sensitive location. Barriers should be continuous structures without gaps and should be constructed of a material that is impervious to noise (e.g., concrete block, stucco-on-wood, wood-on-wood, 1/4" tempered glass, earthen berm, or any combination of these materials).

Noise Contour

A line drawn around a noise source indicating constant levels of noise exposure. CNEL is the metric utilized herein to describe community exposure to noise.

Noise Impact Area

A specific area exposed to significant levels of noise.

Noise Reduction

The ability of a material to reduce the noise level from one place to another or between one room and another. Noise reduction is specified in decibels.

Noise-Sensitive Land Uses

Noise-sensitive land uses include, but are not limited to: residences, schools, libraries, hospitals, churches, offices, hotels, motels, and outdoor recreational areas. These typify land uses where suitability is restricted by intrusive noises. Hence, they are termed "noise-sensitive". Noise sensitivity factors include interference with speech communication, subjective judgment of noise acceptability and relative noisiness, need for freedom from noise intrusion, and sleep interference criteria. The Land Use Element of the General Plan provides a description of the

residential areas throughout the city and is considered the source for the inventory of noise-sensitive areas.

Sound

As used herein, sound is a reaction in the ear caused by radiant energy being transmitted from a source by longitudinal pressure waves in air or some other elastic medium.

Sound Level Meter

A measurement instrument containing a microphone, an amplifier, an output meter, and one or more frequency weighting networks. It is used for the determination of sound levels.

APPENDIX E

NOISE

Appendix II

***Noise Measurement Equipment
And
Listing of the Data***

Noise Measurement Equipment

The following items of equipment were used to obtain the noise measurements:

1. Sound Level Meter

Precision Integrating Sound Level Meter, Larson Davis Model 712, S/N 0555
Precision Integrating Sound Level Meter, Larson Davis Model 820, S/N 0556
Precision Integrating Sound Level Meter, Larson Davis Model 820, S/N 0996
Precision Integrating Sound Level Meter, Larson Davis Model 820, S/N 0997

2. Acoustical Calibration

Acoustic Calibrator, Larson Davis Calibrator, Model CAL 150, S/N 2206
Acoustic Calibrator, Larson Davis Calibrator, Model CAL 250, S/N 2996

Table 1. Noise Survey

Project: Laguna Woods Noise Element

Position: Between 2358 and 2359 Via Mariposa
at the intersection of the paths

Date: September 25, 2001

Time From: Noted

Noise Source: Traffic on Ridge Route Drive

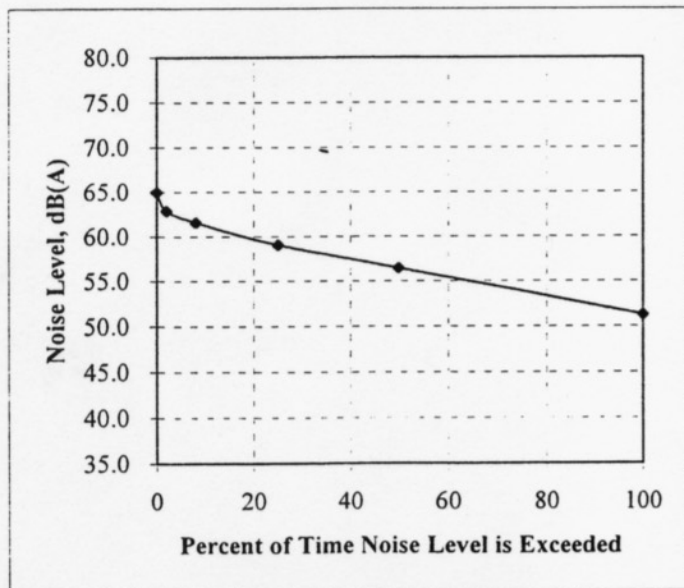
Distance: 20' from a 4' high brick wall, located
2' 4" below the elevation of the tripod

SLM Height: 5'

LD 712 S/N: 0556

LD CAL150
Calibrator S/N: 2206

Operator: Patrick Keenan



N*	Measurement Period		
	12:35 PM to 12:55 PM	to	to
Ln	Ln	Ln	Ln
2	62.9		
8	61.6		
25	59.1		
50	56.5		
90	-		
99	-		
Leq	57.9		
Lmax	65.0		
Lmin	51.3		

Source: Noted

* Leq is the average sound level during the measurement period.

* Ln is the sound level exceeded n% of the time during the measurement period.

* Lmax and Lmin are the maximum and minimum sound levels during the measurement period.

Table 2. Noise Survey

Project: Laguna Woods Noise Element

Position: Between 5008 and 5007 Duverney

Date: September 26, 2001

Time From: Noted

Noise Source: Traffic on Santa Maria Avenue

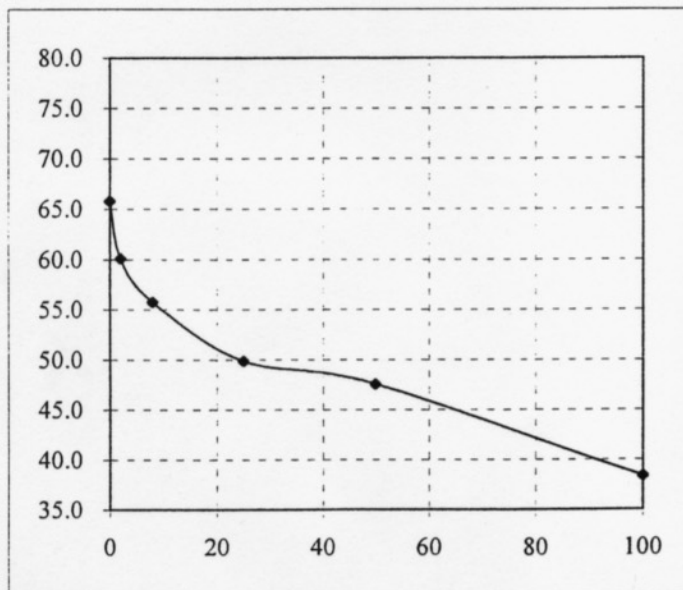
Distance: 13' from a 5' brick wall atop a 5' berm
23' 2" from the driveway of 5008 Duverney

SLM Height: 5'

LD 712 S/N: 0556

LD CAL150
Calibrator S/N: 2206

Operator: Patrick Keenan



N*	Measurement Period		
	11:25 AM to 11:55 AM	to	to
Ln	Ln	Ln	Ln
2	60.1		
8	55.8		
25	49.9		
50	47.6		
90	-		
99	-		
Leq	51.1		
Lmax	65.8		
Lmin	38.4		

Source: Noted

* Leq is the average sound level during the measurement period.

* Ln is the sound level exceeded n% of the time during the measurement period.

* Lmax and Lmin are the maximum and minimum sound levels during the measurement period.

Table 3. Measured Hourly Noise Levels and Community Noise Equivalent Level, CNEL

Project: Laguna Woods Noise Element
 Location: Patio of 3132 A Via Serena North
 Date: September 24/25, 2001

Measurement Period	Hourly Noise Level, dB(A)	Measurement Period	Hourly Noise Level, dB(A)
12:00 am - 1:00 am	45.8	12:00 pm - 1:00 pm	57.2
1:00 am - 2:00 am	45.0	1:00 pm - 2:00 pm	57.5
2:00 am - 3:00 am	43.7	2:00 pm - 3:00 pm	58.1
3:00 am - 4:00 am	45.4	3:00 pm - 4:00 pm	57.9
4:00 am - 5:00 am	48.8	4:00 pm - 5:00 pm	57.4
5:00 am - 6:00 am	52.2	5:00 pm - 6:00 pm	57.1
6:00 am - 7:00 am	55.3	6:00 pm - 7:00 pm	55.9
7:00 am - 8:00 am	60.2	7:00 pm - 8:00 pm	54.6
8:00 am - 9:00 am	59.1	8:00 pm - 9:00 pm	55.5
9:00 am - 10:00 am	56.9	9:00 pm - 10:00 pm	52.6
10:00 am - 11:00 am	57.3	10:00 pm - 11:00 pm	50.8
11:00 am - 12:00 pm	57.0	11:00 pm - 12:00 am	47.9
CNEL:			58.9

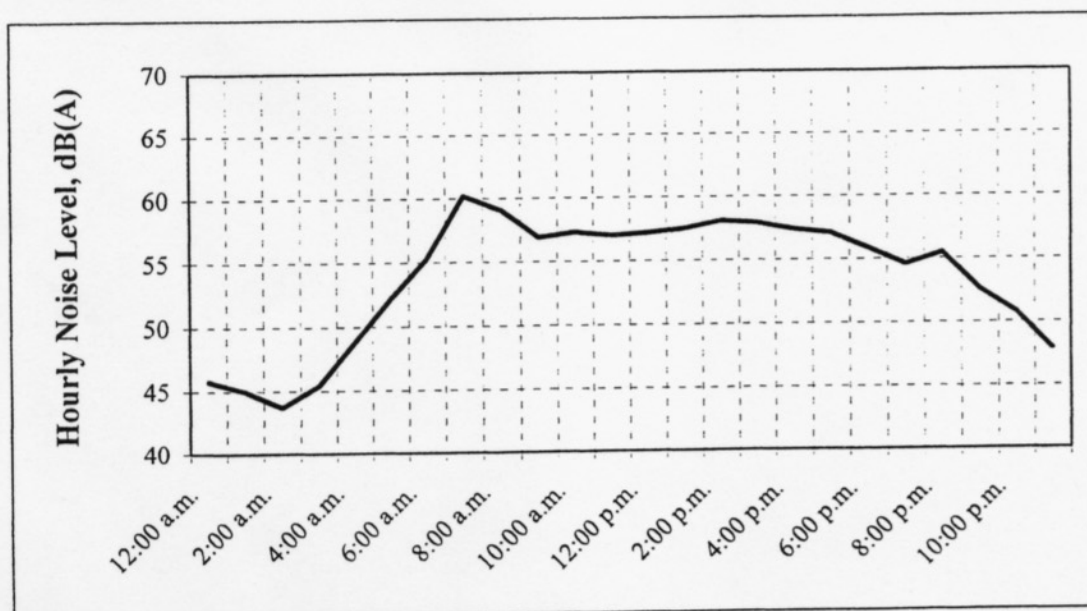


Table 4. Measured Hourly Noise Levels and Community Noise Equivalent Level, CNEL

Project: Laguna Woods Noise Element
 Location: Front patio of 2119 A Via Puerta
 Date: September 20/21, 2001

Measurement Period	Hourly Noise Level, dB(A)	Measurement Period	Hourly Noise Level, dB(A)
12:00 am - 1:00 am	58.5	12:00 pm - 1:00 pm	63.8
1:00 am - 2:00 am	58.3	1:00 pm - 2:00 pm	64.1
2:00 am - 3:00 am	59.1	2:00 pm - 3:00 pm	63.8
3:00 am - 4:00 am	58.2	3:00 pm - 4:00 pm	64.5
4:00 am - 5:00 am	60.2	4:00 pm - 5:00 pm	63.4
5:00 am - 6:00 am	63.9	5:00 pm - 6:00 pm	63.3
6:00 am - 7:00 am	66.1	6:00 pm - 7:00 pm	63.1
7:00 am - 8:00 am	66.3	7:00 pm - 8:00 pm	63.3
8:00 am - 9:00 am	65.0	8:00 pm - 9:00 pm	62.3
9:00 am - 10:00 am	62.9	9:00 pm - 10:00 pm	61.2
10:00 am - 11:00 am	62.7	10:00 pm - 11:00 pm	60.8
11:00 am - 12:00 pm	63.2	11:00 pm - 12:00 am	59.7
		CNEL:	68.5

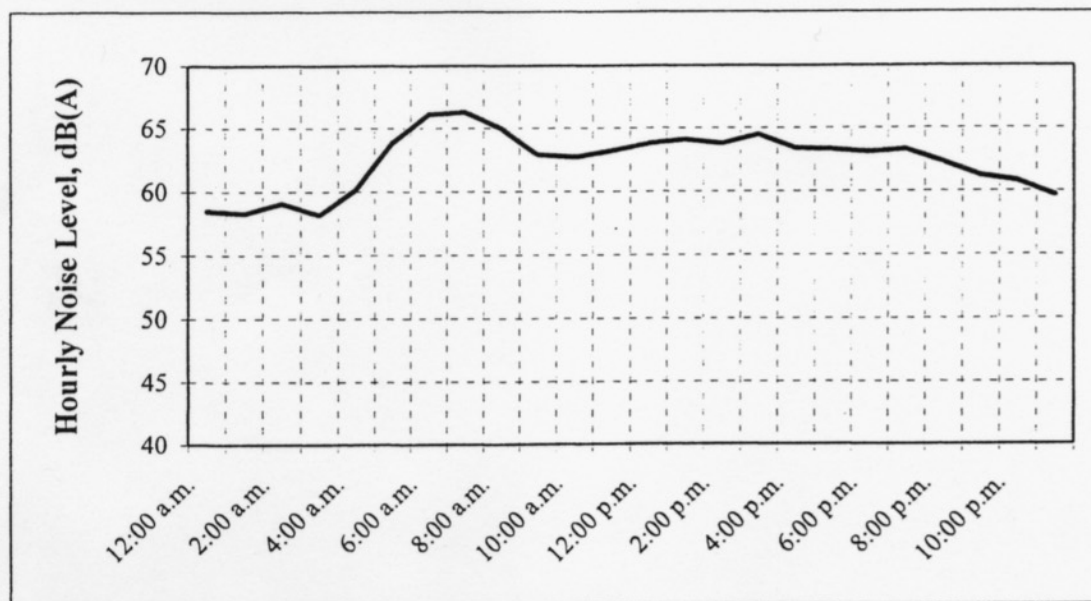


Table 5. Noise Survey

Project: Laguna Woods Noise Element

Position: Between 2060 and 2059 Via Mariposa East

Date: September 18, 2001

Time From: Noted

Noise Source: Traffic on El Toro Road

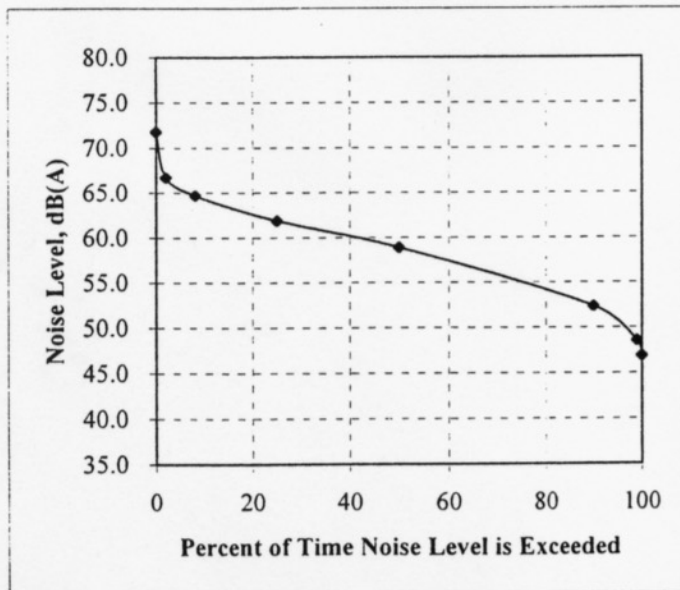
Distance: 22' 6" from a 5' 6" brick wall parallel to
El Toro Road
12' from 2060 Via Mariposa East

SLM Height: 5'

LD 820 S/N: 0997

LD CAL250
Calibrator S/N: 2996

Operator: Patrick Keenan



N*	Measurement Period		
	11:00 AM to 11:20 AM	to	to
N*	Ln	Ln	Ln
2	66.7		
8	64.7		
25	61.9		
50	58.9		
90	52.4		
99	48.6		
Leq	60.8		
Lmax	71.8		
Lmin	46.9		

Source: Noted

- * Leq is the average sound level during the measurement period.
- * Ln is the sound level exceeded n% of the time during the measurement period.
- * Lmax and Lmin are the maximum and minimum sound levels during the measurement period.

Table 6. Noise Survey

Project: Laguna Woods Noise Element

Position: Between 3198 and 3197 Via Buena Vista

Date: September 20, 2001

Time From: Noted

Noise Source: Traffic on El Toro Road

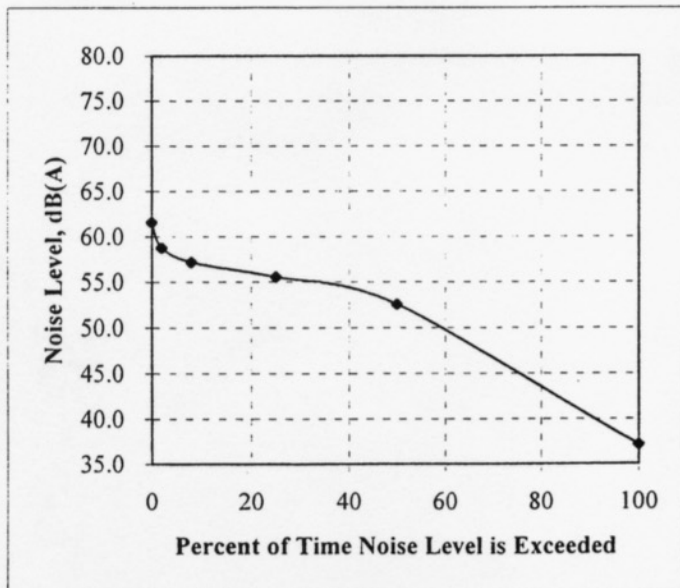
Distance: 38' from a 6' 2" brick wall
23' from 3198 Via Buena Vista

SLM Height: 5'

LD 712 S/N: 0555

LD CAL150
Calibrator S/N: 2206

Operator: Patrick Keenan



N*	Measurement Period		
	3:45 PM to 4:09 PM	to	to
N*	Ln	Ln	Ln
2	58.8		
8	57.2		
25	55.6		
50	52.6		
90	-		
99	-		
Leq	53.7		
Lmax	61.6		
Lmin	37.2		

Source: Noted

- * Leq is the average sound level during the measurement period.
- * Ln is the sound level exceeded n% of the time during the measurement period.
- * Lmax and Lmin are the maximum and minimum sound levels during the measurement period.

Table 7a. Noise Survey

Project: Laguna Woods Noise Element

Position: On the pathway at the offset of 947
Calle Aragon

Date: September 28, 2001

Time From: Noted

Noise Source: Air conditioning fans and
truck deliveries

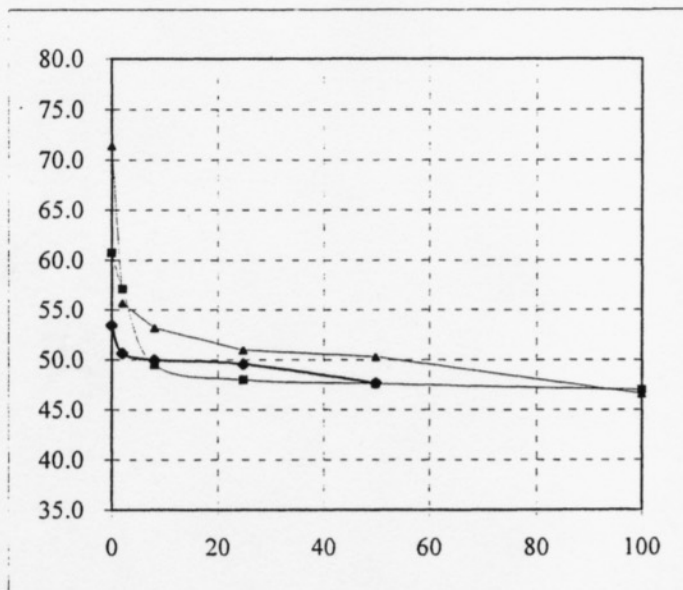
Distance: 13' from cul-de-sac 19
19' 3" from Calle Aragon

SLM Height: 5'

LD 712 S/N: 0555

LD CAL150
Calibrator S/N: 2206

Operator: Patrick Keenan



N*	Measurement Period		
	4:10 AM to 5:31 AM	5:42 AM to 5:48 AM	6:04 AM to 6:30 AM
Ln	Ln	Ln	Ln
2	53.5	57.1	55.7
8	50.7	49.5	53.2
25	50.0	48.0	51.0
50	49.6	47.6	50.3
90	-	-	-
99	-	-	-
Leq	50.6	49.3	51.4
Lmax	-	60.7	71.4
Lmin	47.7	47.0	46.6

Source: Noted

- * Leq is the average sound level during the measurement period.
- * Ln is the sound level exceeded n% of the time during the measurement period.
- * Lmax and Lmin are the maximum and minimum sound levels during the measurement period.

Table 7b. Noise Survey

Project: Laguna Woods Noise Element

Position: On the pathway at the offset of 947
Calle Aragon

Date: September 28, 2001

Time From: Noted

Noise Source: Air conditioning fans and
truck deliveries

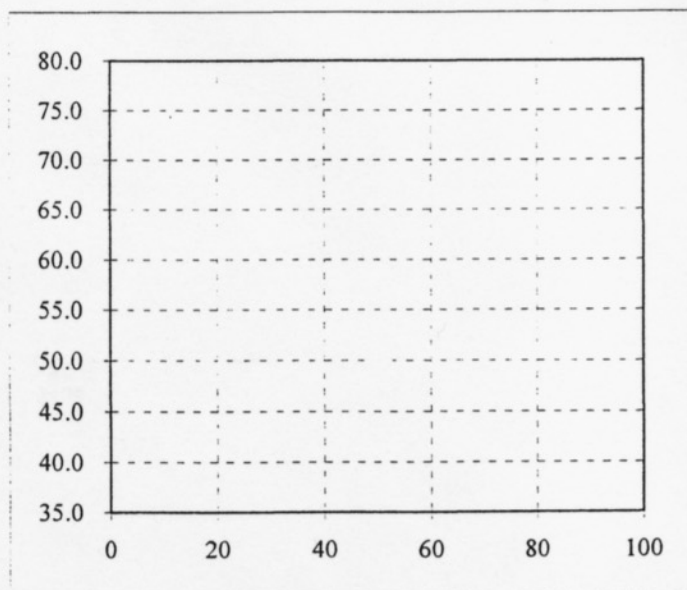
Distance: 13' from cul-de-sac 19
19' 3" from Calle Aragon

SLM Height: 5'

LD 712 S/N: 0555

LD CAL150
Calibrator S/N: 2206

Operator: Patrick Keenan



	Measurement Period		
	5:35 AM to 5:36 AM	6:02 AM to 6:03 AM	to
N*	Ln	Ln	Ln
2	-	-	
8	-	-	
25	-	-	
50	-	-	
90	-	-	
99	-	-	
Leq	50.1	47.5	
Lmax	52.0	49.1	
Lmin			

Source: Fans Parked truck

- * Leq is the average sound level during the measurement period.
- * Ln is the sound level exceeded n% of the time during the measurement period.
- * Lmax and Lmin are the maximum and minimum sound levels during the measurement period.

Table 8. Measured Hourly Noise Levels and Community Noise Equivalent Level, CNEL

Project: Laguna Woods Noise Element
 Location: Patio of 3262 B San Amadeo
 Date: September 10/11, 2001

Measurement Period	Hourly Noise Level, dB(A)	Measurement Period	Hourly Noise Level, dB(A)
12:00 am - 1:00 am	56.5	12:00 pm - 1:00 pm	67.1
1:00 am - 2:00 am	52.4	1:00 pm - 2:00 pm	66.7
2:00 am - 3:00 am	52.7	2:00 pm - 3:00 pm	67.4
3:00 am - 4:00 am	52.3	3:00 pm - 4:00 pm	67.8
4:00 am - 5:00 am	54.0	4:00 pm - 5:00 pm	68.2
5:00 am - 6:00 am	58.7	5:00 pm - 6:00 pm	68.4
6:00 am - 7:00 am	63.6	6:00 pm - 7:00 pm	67.8
7:00 am - 8:00 am	66.8	7:00 pm - 8:00 pm	66.0
8:00 am - 9:00 am	67.3	8:00 pm - 9:00 pm	64.3
9:00 am - 10:00 am	66.6	9:00 pm - 10:00 pm	63.7
10:00 am - 11:00 am	66.5	10:00 pm - 11:00 pm	61.7
11:00 am - 12:00 pm	66.9	11:00 pm - 12:00 am	57.9
		CNEL:	68.2

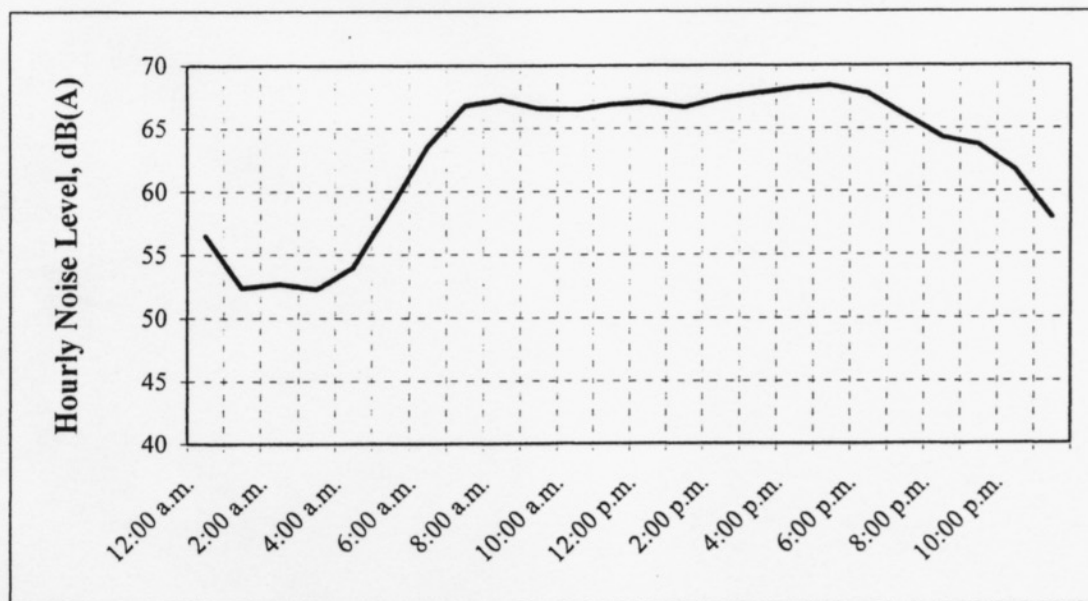


Table 9. Noise Survey

Project: Laguna Woods Noise Element

Position: Between 336 and 337 Avenida Sevilla
at the intersection of two paths

Date: September 24, 2001

Time From: Noted

Noise Source: Traffic on Moulton Parkway

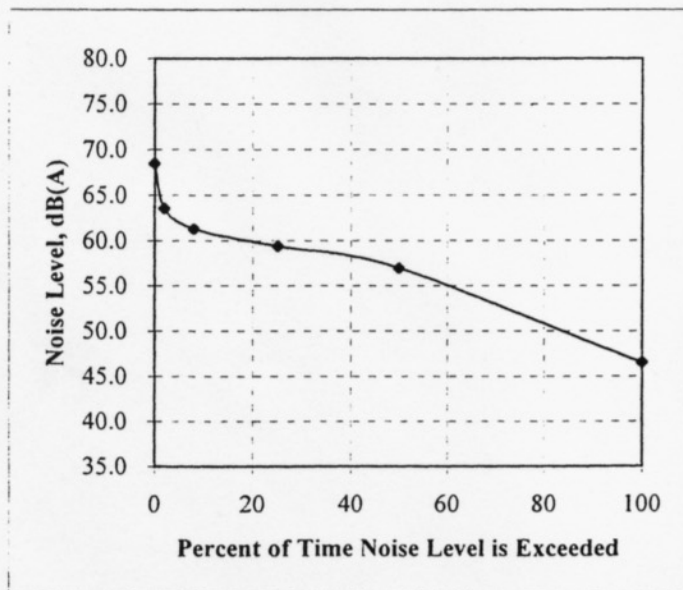
Distance: 28' 6" from a 10' 3" brick wall

SLM Height: 5'

LD 712 S/N: 0555

LD CAL150
Calibrator S/N: 2206

Operator: Patrick Keenan



N*	Measurement Period		
	3:17 PM to 3:38 PM	to	to
	Ln	Ln	Ln
2	63.6		
8	61.3		
25	59.4		
50	57.0		
90	-		
99	-		
Leq	58.1		
Lmax	68.5		
Lmin	46.6		

Source: Noted

* Leq is the average sound level during the measurement period.

* Ln is the sound level exceeded n% of the time during the measurement period.

* Lmax and Lmin are the maximum and minimum sound levels during the measurement period.

Table 10. Noise Survey

Project: Laguna Woods Noise Element

Position: Between 156 and 155 Avenida Majorca

Date: September 24, 2001

Time From: Noted

Noise Source: Traffic on Paseo De Valencia

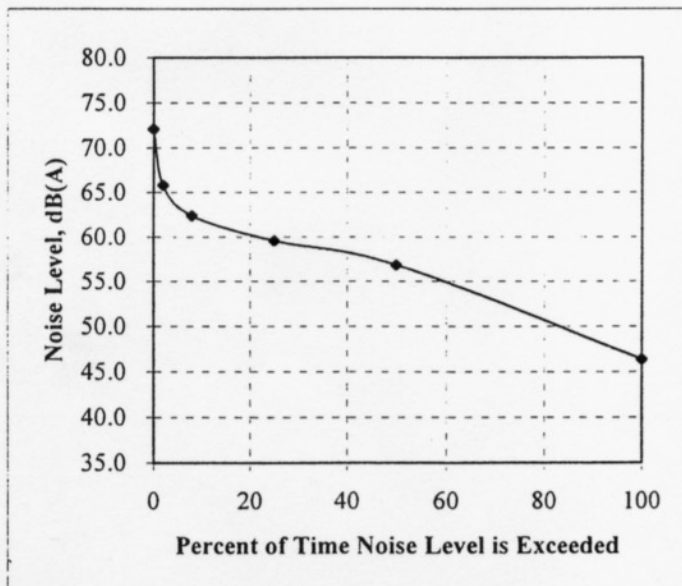
Distance: 19' 4" from a 5' 2" brick wall
23' 10" from 155 Avenida Majorca

SLM Height: 5'

LD 712 S/N: 0555

LD CAL150
Calibrator S/N: 2206

Operator: Patrick Keenan



N*	Measurement Period		
	2:35 PM to 2:55 PM	to	to
N*	Ln	Ln	Ln
2	65.8		
8	62.4		
25	59.6		
50	56.9		
90	-		
99	-		
Leq	59.1		
Lmax	72.1		
Lmin	46.4		

Source: Noted

* Leq is the average sound level during the measurement period.

* Ln is the sound level exceeded n% of the time during the measurement period.

* Lmax and Lmin are the maximum and minimum sound levels during the measurement period.

Table 11. Noise Survey

Project: Laguna Woods Noise Element

Position: At the offset of 3287 San Amadeo

Date: September 20, 2001

Time From: Noted

Noise Source: Traffic on El Toro Road

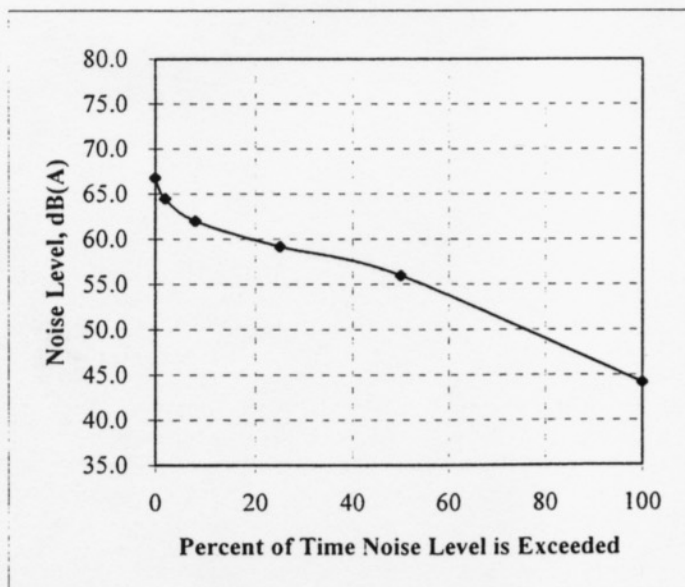
Distance: 41' from the offset of 3287 San Amadeo
21' from a ranch style fence

SLM Height: 5'

LD 712 S/N: 0555

LD CAL150
Calibrator S/N: 2206

Operator: Patrick Keenan



N*	Measurement Period		
	4:25 PM to 4:55 PM	to	to
N*	Ln	Ln	Ln
2	64.5		
8	62.0		
25	59.2		
50	56.0		
90	-		
99	-		
Leq	57.9		
Lmax	66.8		
Lmin	44.2		

Source: Noted

- * Leq is the average sound level during the measurement period.
- * Ln is the sound level exceeded n% of the time during the measurement period.
- * Lmax and Lmin are the maximum and minimum sound levels during the measurement period.

Table 12. Measured Hourly Noise Levels and Community Noise Equivalent Level, CNEL

Project: Laguna Woods Noise Element
 Location: Front yard of 435 H Avenida Sevilla
 Date: September 11/12, 2001

Measurement Period	Hourly Noise Level, dB(A)	Measurement Period	Hourly Noise Level, dB(A)
12:00 am - 1:00 am	50.2	12:00 pm - 1:00 pm	60.8
1:00 am - 2:00 am	46.6	1:00 pm - 2:00 pm	59.8
2:00 am - 3:00 am	47.6	2:00 pm - 3:00 pm	60.2
3:00 am - 4:00 am	50.2	3:00 pm - 4:00 pm	60.2
4:00 am - 5:00 am	49.5	4:00 pm - 5:00 pm	60.7
5:00 am - 6:00 am	54.9	5:00 pm - 6:00 pm	61.3
6:00 am - 7:00 am	59.8	6:00 pm - 7:00 pm	59.7
7:00 am - 8:00 am	61.1	7:00 pm - 8:00 pm	58.1
8:00 am - 9:00 am	60.4	8:00 pm - 9:00 pm	56.9
9:00 am - 10:00 am	60.0	9:00 pm - 10:00 pm	56.0
10:00 am - 11:00 am	59.4	10:00 pm - 11:00 pm	54.6
11:00 am - 12:00 pm	59.6	11:00 pm - 12:00 am	51.5
		CNEL:	62.1

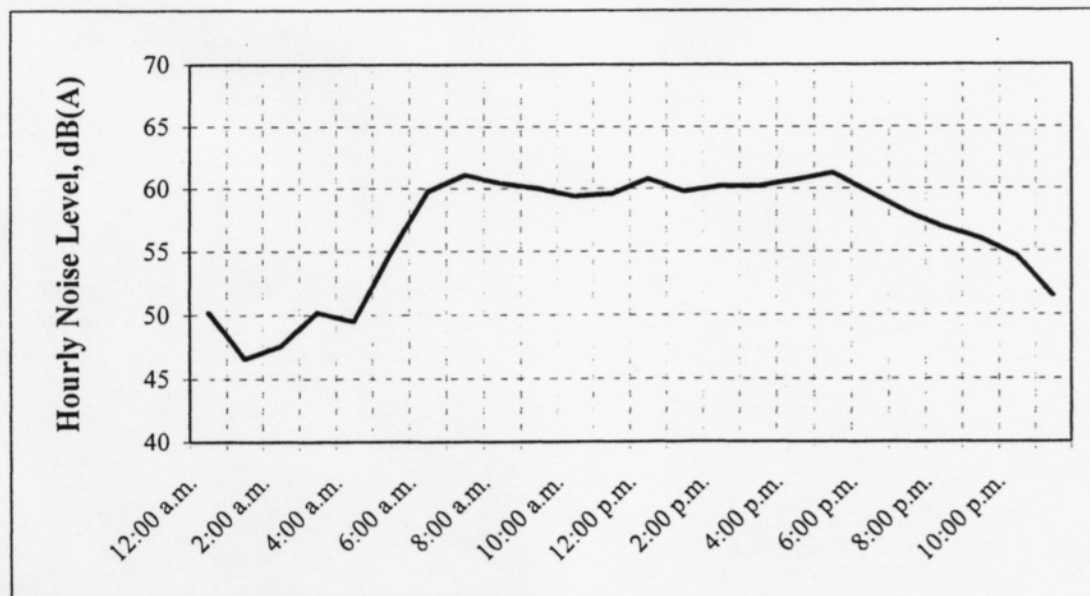


Table 13. Noise Survey

Project: Laguna Woods Noise Element

Position: Beside 753 Avenida Majorca

Date: September 24, 2001

Time From: Noted

Noise Source: Traffic on Moulton Parkway

Distance: 21' from a 5' 10" brick wall
15' 7" from a laundry facility

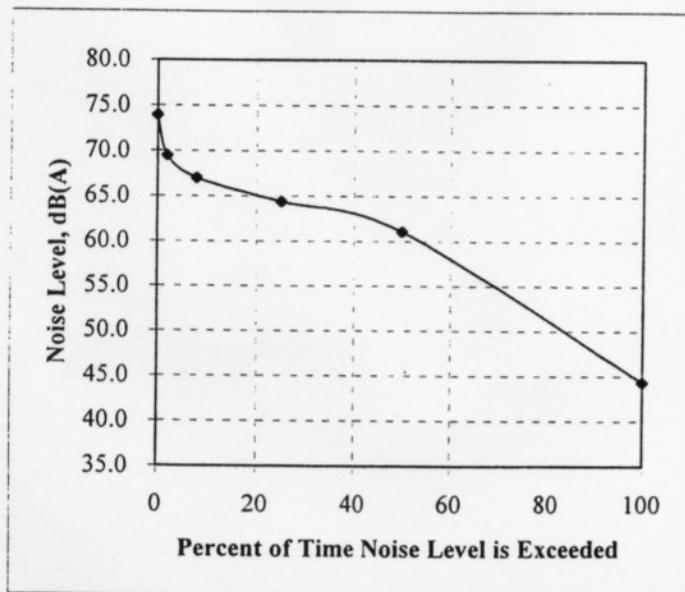
SLM Height: 5'

LD 712 S/N: 0555

LD CAL150

Calibrator S/N: 2206

Operator: Patrick Keenan



N*	Measurement Period		
	12:57 PM to 1:17 PM	to	to
Ln	Ln	Ln	Ln
2	69.5		
8	67.0		
25	64.4		
50	61.1		
90	-		
99	-		
Leq	63.0		
Lmax	74.0		
Lmin	44.4		

Source: Noted

* Leq is the average sound level during the measurement period.

* Ln is the sound level exceeded n% of the time during the measurement period.

* Lmax and Lmin are the maximum and minimum sound levels during the measurement period.

Table 14. Measured Hourly Noise Levels and Community Noise Equivalent Level, CNEL

Project: Laguna Woods Noise Element
 Location: Patio of 776 Q Via Los Altos
 Date: September 20/21, 2001

Measurement Period	Hourly Noise Level, dB(A)	Measurement Period	Hourly Noise Level, dB(A)
12:00 am - 1:00 am	53.0	12:00 pm - 1:00 pm	62.0
1:00 am - 2:00 am	52.2	1:00 pm - 2:00 pm	61.7
2:00 am - 3:00 am	50.0	2:00 pm - 3:00 pm	61.7
3:00 am - 4:00 am	49.7	3:00 pm - 4:00 pm	61.6
4:00 am - 5:00 am	51.8	4:00 pm - 5:00 pm	62.9
5:00 am - 6:00 am	56.2	5:00 pm - 6:00 pm	64.2
6:00 am - 7:00 am	60.7	6:00 pm - 7:00 pm	63.1
7:00 am - 8:00 am	62.8	7:00 pm - 8:00 pm	61.7
8:00 am - 9:00 am	62.3	8:00 pm - 9:00 pm	60.4
9:00 am - 10:00 am	60.8	9:00 pm - 10:00 pm	59.8
10:00 am - 11:00 am	61.0	10:00 pm - 11:00 pm	57.4
11:00 am - 12:00 pm	61.5	11:00 pm - 12:00 am	55.3
		CNEL:	64.2

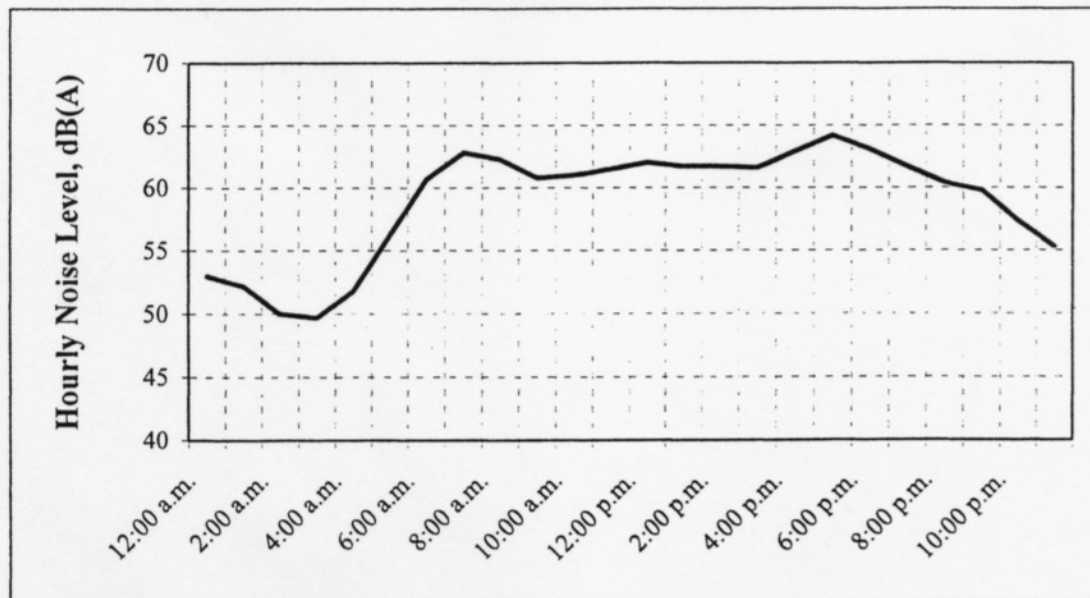


Table 15. Noise Survey

Project: Laguna Woods Noise Element

Position: Between 835 and 834 Ronda Sevilla

Date: September 24, 2001

Time From: Noted

Noise Source: Traffic on Laguna Hills Drive

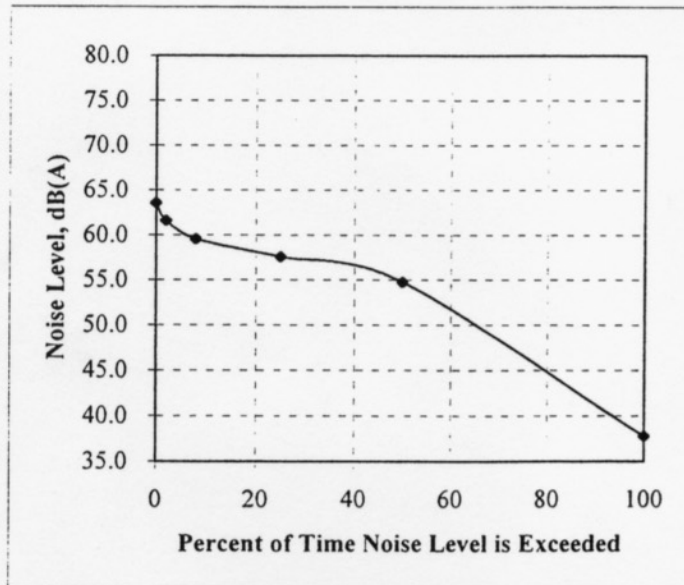
Distance: 41' 7" from a 6' 1" brick wall
25' 9" from the offset of a path
parallel to 835 Ronda Sevilla

SLM Height: 5'

LD 712 S/N: 0555

LD CAL150
Calibrator S/N: 2206

Operator: Patrick Keenan



N*	Measurement Period		
	1:55 PM to 2:15 PM	to	to
N*	Ln	Ln	Ln
2	61.6		
8	59.6		
25	57.6		
50	54.8		
90	-		
99	-		
Leq	56.0		
Lmax	63.6		
Lmin	37.8		

Source: Noted

- * Leq is the average sound level during the measurement period.
- * Ln is the sound level exceeded n% of the time during the measurement period.
- * Lmax and Lmin are the maximum and minimum sound levels during the measurement period.

Appendix III

***Traffic Noise Analysis
and
Community Noise Equivalent Level (CNEL)
Contour Data***

Table III-1. Distance to Existing CNEL Contour Lines, City of Laguna Woods

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks		Avg. Daily Traffic 2000	CNEL @ 50' From Near Lane C/L	Distance to Existing Contours From Near Lane Centerline, feet				
				Med.	Hvy			60dB	65dB	70dB	75dB	80dB
<i>5 Freeway</i>												
El Toro to Lake Forest	8	65	BELOW	2.7%	3.70%	335,000	76.5	720	365	---	---	---
<i>Moulton Parkway</i>												
Gate 12 to El Toro Road	6	45	AT	1.8%	0.7%	44,300	72.5	428	200	83	---	---
El Toro Road to Calle Cortez	6	45	AT	1.8%	0.7%	45,800	73.0	460	215	90	---	---
Via Iglesia to City Limits	6	45	AT	1.8%	0.7%	42,500	72.5	428	200	83	---	---
<i>El Toro Road</i>												
Aliso Creek Road to Calle Corta	6	50	AT	1.8%	0.7%	20,700	70.5	320	143	56	---	---
Calle Corta to Calle Sonora	6	50	AT	1.8%	0.7%	24,200	71.0	340	155	62	---	---
Calle Sonora to Moulton Parkway	6	50	AT	1.8%	0.7%	35,900	73.0	460	215	90	---	---
Moulton Parkway to Avenida Sevilla	6	50	AT	1.8%	0.7%	34,400	72.5	428	200	83	---	---
Avenida Sevilla to Paseo De Valencia	6	40	AT	1.8%	0.7%	35,200	70.0	300	130	50	---	---
<i>Santa Maria Avenue</i>												
Avenida Sosiega to Santa Victoria	6	45	AT	1.8%	0.7%	5,800	64.0	110	---	---	---	---

* Arterial Types: 1) 2 lanes, 35 mph or less; 2) 2 lanes, 40 mph; 3) 2 lanes, 45 mph or more; 4) 4-6 lanes, 35 mph or less; 5) 4-6 lanes, 40 mph; 6) 4-6 lanes, 45 mph or more; 7) 4-6 lane freeway, 55 mph or more; 8) 8 lane freeway, 55 mph or more.

Notes:

'AT', 'ABOVE', and 'BELOW' refer to the elevation of the arterial relative to the surrounding area.

Table III-2. Distance to Future CNEL Contour Lines, City of Laguna Woods, With Project in 2025

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks		Avg. Daily Traffic 2025	CNEL @ 50' From Near Lane C/L 2025	Distance to Future Contours From Near Lane Centerline, feet				
				Med.	Hvy			60dB	65dB	70dB	75dB	80dB
5 Freeway												
El Toro to Lake Forest	8	65	BELOW	2.7%	3.70%	449,000	78.0	860	460	---	---	---
Moulton Parkway												
Gate 12 to El Toro Road	6	45	AT	1.8%	0.7%	58,500	74.0	520	255	110	---	---
El Toro Road to Calle Cortez	6	45	AT	1.8%	0.7%	61,500	74.0	520	255	110	---	---
Via Iglesia to City Limits	6	45	AT	1.8%	0.7%	58,800	74.0	520	255	110	---	---
El Toro Road												
Aliso Creek Road to Calle Corta	6	50	AT	1.8%	0.7%	38,200	73.0	460	215	90	---	---
Calle Corta to Calle Sonora	6	50	AT	1.8%	0.7%	38,200	73.0	460	215	90	---	---
Calle Sonora to Moulton Parkway	6	50	AT	1.8%	0.7%	39,000	73.0	460	215	90	---	---
Moulton Parkway to Avenida Sevilla	6	50	AT	1.8%	0.7%	40,800	73.5	490	235	100	---	---
Avenida Sevilla to Paseo De Valencia	6	40	AT	1.8%	0.7%	40,800	71.0	340	155	62	---	---
Santa Maria Avenue												
Avenida Sosiega to Santa Victoria	6	45	AT	1.8%	0.7%	9,100	66.0	155	62	---	---	---

* Arterial Types: 1) 2 lanes, 35 mph or less; 2) 2 lanes, 40 mph; 3) 2 lanes, 45 mph or more; 4) 4-6 lanes, 35 mph or less; 5) 4-6 lanes, 40 mph; 6) 4-6 lanes, 45 mph or more; 7) 4-6 lane freeway, 55 mph or more; 8) 8 lane freeway, 55 mph or more.

Notes:

'AT', 'ABOVE', and 'BELOW' refer to the elevation of the arterial relative to the surrounding area.

Table III-3. Distance to Future CNEL Contour Lines, City of Laguna Woods, Without Project in 2025

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks		Avg. Daily Traffic 2025	CNEL @ 50' From Near Lane C/L 2025	Distance to Future Contours From Near Lane Centerline, feet				
				Med.	Hvy			60dB	65dB	70dB	75dB	80dB
5 Freeway	8	65	BELOW	2.7%	3.70%	449,000	78.0	860	460	---	---	---
El Toro to Lake Forest												
Moulton Parkway	6	45	AT	1.8%	0.7%	53,000	73.5	490	235	100	---	---
Gate 12 to El Toro Road	6	45	AT	1.8%	0.7%	53,900	73.5	490	235	100	---	---
El Toro Road to Calle Cortez	6	45	AT	1.8%	0.7%	53,600	73.5	490	235	100	---	---
Via Iglesia to City Limits												
El Toro Road	6	50	AT	1.8%	0.7%	35,900	73.0	460	215	90	---	---
Aliso Creek Road to Calle Corta	6	50	AT	1.8%	0.7%	35,900	73.0	460	215	90	---	---
Calle Corta to Calle Sonora	6	50	AT	1.8%	0.7%	38,800	73.0	460	215	90	---	---
Calle Sonora to Moulton Parkway	6	50	AT	1.8%	0.7%	36,400	73.0	460	215	90	---	---
Moulton Parkway to Avenida Sevilla	6	40	AT	1.8%	0.7%	36,400	70.5	320	143	56	---	---
Avenida Sevilla to Paseo De Valencia												
Santa Maria Avenue	6	45	AT	1.8%	0.7%	7,300	65.0	130	50	---	---	---
Avenida Sosiega to Santa Victoria												

* Arterial Types: 1) 2 lanes, 35 mph or less; 2) 2 lanes, 40 mph; 3) 2 lanes, 45 mph or more; 4) 4-6 lanes, 35 mph or less; 5) 4-6 lanes, 40 mph; 6) 4-6 lanes, 45 mph or more; 7) 4-6 lane freeway, 55 mph or more; 8) 8 lane freeway, 55 mph or more.

Notes:

'AT', 'ABOVE', and 'BELOW' refer to the elevation of the arterial relative to the surrounding area.

Table III-4. Distance to Future CNEL Contour Lines, City of Laguna Woods, With Reduced Project in 2025

Arterial / Reach	Arterial Type*	Speed Limit, mph	Elev.	% Trucks		Avg. Daily Traffic 2025	CNEL @ 50' From Near Lane C/L 2025	Distance to Future Contours From Near Lane Centerline, feet				
				Med.	Hvy			60dB	65dB	70dB	75dB	80dB
<i>5 Freeway</i>												
El Toro to Lake Forest	8	65	BELOW	2.7%	3.70%	449,000	78.0	860	460	---	---	---
<i>Moulton Parkway</i>												
Gate 12 to El Toro Road	6	45	AT	1.8%	0.7%	55,200	73.5	490	235	100	---	---
El Toro Road to Calle Cortez	6	45	AT	1.8%	0.7%	55,100	73.5	490	235	100	---	---
Via Iglesia to City Limits	6	45	AT	1.8%	0.7%	55,500	74.0	520	255	110	---	---
<i>El Toro Road</i>												
Aliso Creek Road to Calle Corta	6	50	AT	1.8%	0.7%	36,700	73.0	460	215	90	---	---
Calle Corta to Calle Sonora	6	50	AT	1.8%	0.7%	36,700	73.0	460	215	90	---	---
Calle Sonora to Moulton Parkway	6	50	AT	1.8%	0.7%	37,800	73.0	460	215	90	---	---
Moulton Parkway to Avenida Sevilla	6	50	AT	1.8%	0.7%	38,000	73.0	460	215	90	---	---
Avenida Sevilla to Paseo De Valencia	6	40	AT	1.8%	0.7%	38,000	70.5	320	143	56	---	---
<i>Santa Maria Avenue</i>												
Avenida Sosiega to Santa Victoria	6	45	AT	1.8%	0.7%	7,900	65.5	143	56	---	---	---

* Arterial Types: 1) 2 lanes, 35 mph or less; 2) 2 lanes, 40 mph; 3) 2 lanes, 45 mph or more; 4) 4-6 lanes, 35 mph or less; 5) 4-6 lanes, 40 mph; 6) 4-6 lanes, 45 mph or more; 7) 4-6 lane freeway, 55 mph or more; 8) 8 lane freeway, 55 mph or more.

Notes:

'AT', 'ABOVE', and 'BELOW' refer to the elevation of the arterial relative to the surrounding area.

APPENDIX F

**GEOLOGY
HYDROLOGY
BIOLOGY
CULTURAL RESOURCES**

A. Geologic Setting

The project area is located at the southeastern edge of the central structural block of the Los Angeles basin, along the northern flank of the San Joaquin Hills. Regionally, local basement rocks are overlain by a thick sequence of marine and nonmarine sedimentary rocks dating from the Cretaceous to the Quaternary; some volcanic rocks are also present.

Most of the City of Laguna Woods resides upon bedrock deposited when much of the Los Angeles area was submerged within a coastal basin. Geologically, this is within the southerly extension of the Los Angeles Basin referred to as the Capistrano Embayment. The oldest geologic unit in the City is the undifferentiated Oligo-Miocene Sespe/Vaqueros, which comprises most of the outcrops in the western sector. These interfingering deltaic (Sespe) and shallow marine (Vaqueros) sediments represent an oscillating coastline at the beginning of a major transgressive phase.

As the result of tectonic activity, the basin deepened rapidly in the Miocene, resulting in deposition of the Monterey and Capistrano Formations. Eustatic regression due to tectonic uplift and basin filling began in the early Pliocene, as evidenced transitional Niguel Formation exposed in the southernmost part of the large spur that extends south from El Toro Road. The basin finally emerged in the Pleistocene. Uplift later in the Quaternary elevated stream terrace deposits, such as those located in Laguna Woods near the San Diego (I-5) Freeway. Streams during the late Pleistocene “Ice Age”, effectively eroded the landscape and deposited alluvium in the valleys. The process continued at a slower rate in the drier climate of the Holocene.

With nearly all of the City of Laguna Woods now developed, there is little of its natural geologic surface and topography remaining. However, geologic mapping of the terrain prior to extensive development provides data on the subsurface earth materials underlying the City. This information is vital in the planning of future construction projects.

The City of Laguna Woods is underlain predominately by the marine Miocene Monterey and Capistrano Formations, with some terrestrial Quaternary terrace deposits mostly near the San Diego (I-5) Freeway and terrestrial Quaternary alluvium typically in the valleys. In the western half of the City, most of the bedrock exposures are of the undifferentiated terrestrial/marine Oligo-Miocene Sespe/Vaqueros rocks; some of the outcrops in the southernmost part of the large spur that extends south from El Toro Road are the marine Pliocene Niguel Formation.

Seismicity and Faulting

As with the rest of California, Laguna Woods lies within a seismically active belt that rings the Pacific Ocean. The City does not lie within or immediately adjacent to an Alquist-Priolo Earthquake Fault Zone designated by the State of California to include traces of suspected active faulting. No active faults are shown on or in the vicinity of the site on published geologic maps. Most faults in California trend north and northwest, and

some are capable of producing earthquake magnitudes greater than 7.0. The closest faults likely to produce large earthquakes are the San Andreas, San Jacinto, Elsinore-Whittier, and Newport-Inglewood. Locally, there are several less-significant faults: the Christianitos fault to the northeast is suggested to be active; the Shady Canyon fault and Laguna Canyon fault zone are located to the west, and the east-trending Temple Hill fault terminates near Aliso Creek. There is no strong evidence for Holocene offset along any of these local faults.

Groundwater and Liquefaction

A strong earthquake could produce severe shaking in Laguna Woods, resulting in the differential settlement and possible liquefaction of Quaternary alluvium, especially where the groundwater level is within 30 feet of the surface.

Flooding and Erosion

Severe erosion could occur in areas underlain by the Niguel Formation and the friable sand strata of the Oso Member of the Capistrano Formation.

Topography and Slope Stability

Severe shaking from a strong earthquake could trigger bedrock failures, including rockfalls in steep areas. Areas underlain by the expansive mudstones of the Monterey and Capistrano Formations are the most prone to slumping. Intense rainfall could also result in mud-debris flows, mainly at the heads of steep canyons. These sudden and rapid landslides are common in Sespe and Monterey Formations, but the hazard is greatest in the Oso Member of the Capistrano Formation.

Units highly susceptible to rilling, ravelling, and wind erosion are the sand facies of the Niguel Formation and friable interbeds in the Oso Member of the Capistrano Formation. Capistrano Formation siltstones are particularly prone to piping (development of subsurface open drainage passages along joints and fractures).

Soils

Three kinds of soil associations occur in Laguna Woods:

Sorrento-Mocho. Nearly level to moderately sloping, well-drained sandy loams, loams, or clay loams on alluvial fans and flood plains; occurs in southeastern part of Laguna Woods along Aliso Creek.

Alo-Bosanko. Strongly sloping to steep, well-drained clays on coastal foothills; most common soil association in Laguna Woods, covering nearly 90% of the area.

Friant-Cieneba-Exchequer. Strongly sloping to very steep, somewhat excessively drained and well-drained sandy loams, loams, clay loams, gravelly loams, and cobbly loams on coastal foothills; occurs in the middle of the eastern edge of Laguna Woods.

Twenty-one soil types, representing 13 soil series, occur within the City. They are indicated below by their name, map symbol (number), and characteristics (also see Table).

Alo clay, 30 to 50 percent slopes (102). This steep soil generally occurs on side slopes in the foothills. It is a slightly acid to moderately alkaline soil formed from weathered calcareous sandstone and shale. It is slowly permeable. Available water capacity is 3.5 to 5.5 inches. Effective rooting depth is 24 to 32 inches.

Alo variant clay, 15 to 30 percent slopes (104). This moderately steep soil generally occurs on broad ridgetops in the foothills, where it formed from weathered calcareous sandstone and shale. The soil is slightly acid in the upper part, moderately alkaline in the next layer and in the upper part of the weathered bedrock, and neutral and noncalcareous in the underlying sandstone and shale. It is slowly permeable. Available water capacity is 4.0 to 6.0 inches. Effective rooting depth is 26 to 36 inches.

Anaheim loam, 30 to 50 percent slopes (107). This steep soil commonly occurs on or near the top of broad rounded ridgetops. This neutral to moderately alkaline soil is calcareous in some parts. It is derived from weathered soft sandstone or shale.. Permeability is moderate. Available water capacity is 3.5 to 6.0 inches. Effective rooting depth is 24 to 36 inches.

Balcom clay loam, 9 to 15 percent slopes (111). This strongly sloping soil generally occurs on hill ridgetops and some concave side slopes. It is derived from weathered soft fine-grained sandstone, calcareous soft shale, and marl. The soil is moderately alkaline and calcareous throughout. It is moderately slowly permeable. Available water capacity is 4.0 to 6.0 inches. Effective rooting depth is 26 to 36 inches.

Balcom clay loam, 15 to 30 percent slopes (112). This moderately steep soil generally occurs on hill ridgetops. It is derived from weathered soft fine-grained sandstone, calcareous soft shale, and marl. The soil is moderately alkaline and calcareous throughout. It is moderately slowly permeable. Available water capacity is 4 to 6 inches. Effective rooting depth is 26 to 36 inches.

Bosanko clay, 9 to 15 percent slopes (126). This strongly sloping soil generally occurs on broad hilltop ridges and on toe slopes. It formed from weathered calcareous shale, sandstone, or weakly consolidated sediments. This soil is mildly alkaline in the upper 12 inches and moderately alkaline below. Available water capacity is 3.5 to 6.5 inches. Effective rooting depth is 26 to 38 inches.

Bosanko clay, 15 to 30 percent slopes (127). This moderately steep soil occurs on broad hilltop ridges. It formed from weathered calcareous shale, sandstone, or weakly consolidated sediments. This soil is mildly alkaline in the upper 12 inches and moderately alkaline below. Available water capacity is 3.5 to 6.0 inches. Effective rooting depth is 26 to 36 inches.

Bosanko clay, 30 to 50 percent slopes (128). This steep soil generally occurs on north-facing hillsides. It formed from weathered calcareous shale, sandstone, or weakly consolidated sediments. This soil is mildly alkaline in the upper 12 inches and moderately alkaline below. Available water capacity is 3.0 to 5.5 inches. Effective rooting depth is 22 to 32 inches.

Calleguas clay loam, 50 to 75 percent slopes (134). This very steep soil generally has south-facing slopes. It is a moderately permeable soil formed from weathered lime-coated shale or lime-coated sandstone, or both. As much as 75% of the original layer has been lost in areas that have been cultivated, overgrazed, or burned because of sheet, rill, and gully erosion. Geologic erosion is active, and soil slipping is common. Many areas are a succession of short, vertical exposures or “cat steps”.

Capistrano sandy loam, 2 to 9 percent slopes (135). This gently to moderately sloping soil occurs mostly as long, narrow areas in small valleys. It is a medium acid soil formed in alluvial fans and alluvial plains in small valleys of the Santa Ana Mountains and in sedimentary alluvium of the coastal foothills. It is moderately rapidly permeable. Available water capacity for the series is 5.5 to 7.5 inches. Effective rooting depth is 60 inches or more.

Capistrano sandy loam, 9 to 15 percent slopes (136). This strong sloping soil generally occurs on small toe slope fans and in small, narrow foothill valleys. It is a medium acid soil formed in alluvial fans and alluvial plains in small valleys of the Santa Ana Mountains and in sedimentary alluvium of the coastal foothills. It is moderately rapidly permeable. Available water capacity for the series is 5.5 to 7.5 inches, and effective rooting depth is 60 inches or more.

Chino silty clay loam, drained (140). This nearly level soil generally occurs on large alluvial fans. It formed in sedimentary alluvium and is moderately alkaline and calcareous throughout. It is moderately slowly permeable. Available water capacity for the series is 9.5 to 13.0 inches.

Corralitos loamy sand (146). This nearly level to gently sloping soil generally occurs as long narrow areas along stream channels. It is formed in mixed coarse textured alluvium and is medium acid throughout. It is rapidly permeable. Available water capacity is 4.0 to 5.5 inches. Effective rooting depth is 60 inches or more.

Cropley clay, 2 to 9 percent slopes (149). This gently to moderately sloping soil generally occurs as irregular oblong areas. It formed in fine textured alluvium derived from

sedimentary rocks. The soil is mildly alkaline in the surface layer and moderately alkaline and slightly calcareous in the subsurface layer; the underlying material is moderately alkaline, has segregated lime, and increases from slightly calcareous to violently calcareous with increasing depth. It is slowly permeable. Available water capacity for the Cropley series is 8.0 to 10.0 inches, and effective rooting depth is 60 inches or more.

Mocho loam, 0 to 2 percent slopes (166). This nearly level soil generally occurs on fans or floodplains. Available water capacity is 9.5 to 12.0 inches. It formed in alluvium derived from sedimentary rocks. The soil is moderately alkaline and calcareous throughout. It is moderately permeable. Available water capacity is 9.5 to 12.0 inches.

Myford sandy loam, 2 to 9 percent slopes (173). This gently to moderately sloping soil generally occurs on broad terraces. It formed in sandy sediments and is very slowly permeable. Available water capacity is 2.0 to 4.0 inches. Effective rooting depth is 60 inches or more.

Myford sandy loam, 9 to 15 percent slopes (175). This strongly sloping soil generally occurs on side slopes of terraces. It formed in sandy sediments and is very slowly permeable. Available water capacity is 2.0 to 4.0 inches. Effective rooting depth is 12 to 19 inches for root sensitive crops; for other crops it is more.

Myford sandy loam, 15 to 30 percent slopes (176). This moderately steep soil generally occurs on side slopes of terraces. It formed in sandy sediments and is very slowly permeable. Available water capacity is 2.0 to 4.0 inches. Effective rooting depth is 12 to 19 inches for root sensitive crops; for other crops it is more.

Myford sandy loam, 9 to 30 percent slopes, eroded (177). This strongly to moderately steep soil generally occurs on side slopes of terraces. It formed in sandy sediments and is very slowly permeable. Available water capacity is 2.0 to 4.0 inches. Effective rooting depth is 5 to 12 inches for root sensitive crops; for other crops it is 60 inches or more.

Sorrento loam, 2 to 9 percent slopes (207). This gently to moderately sloping soil generally occurs on upper valley fans and along stream channels. It formed in alluvium derived from sedimentary rocks. The soil is neutral in the upper 6 inches and becomes moderately alkaline and calcareous below. It is moderately permeable. Available water capacity is 10.0 to 13.0 inches. Effective rooting depth is 60 inches or more.

Yorba cobbly sandy loam, 9 to 30 percent slopes (224). This strongly to moderately steep soil generally occurs on terrace escarpments. It formed in gravelly sandy sediment. The soil is slightly acid throughout. It is slowly permeable. Available water capacity is 4.0 to 5.0 inches. Effective rooting depth is 9 to 18 inches.

Soil Associations in the City of Laguna Woods

Map Symbol	Mapping Unit	Capability Unit	Erosion Susceptibility	Runoff Potential	Storie Index Grade	Shrink/ Swell Potential
102	Alo clay, 30 to 50 percent slopes	VIe-1 (19)	High	Rapid	12	High
104	Alo variant clay, 15 to 30 percent slopes	IVe-5 (19)	High	Rapid	25	High
107	Anaheim loam, 30 to 50 percent slopes	VIe-1 (19)	High	Rapid	21	Low
111	Balcom clay loam, 9 to 15 percent slopes	IIIe-1 (19)	High	Rapid	37	Moderate
112	Balcom clay loam, 15 to 30 percent slopes	IVe-1 (19)	High	Rapid	37	Moderate
126	Bosanko clay, 9 to 15 percent slopes	IIIe-5 (19)	Moderate	Medium	28	High
127	Bosanko clay, 15 to 30 percent slopes	IVe-5 (19)	Moderate	Rapid	21	High
128	Bosanko clay, 30 to 50 percent slopes	VIe-1 (19)	High	Rapid	11	High
134	Calleguas clay loam, 50 to 75 percent slopes	VIIe-1 (19)	High	Rapid	4	Moderate
135	Capistrano sandy loam, 2 to 9 percent slopes	IIIe-1 (19)	Moderate	Slow to medium	90	Low
136	Capistrano sandy loam, 9 to 15 percent slopes	IVe-1	Moderate	Medium	81	Low
140	Chino silty clay loam, drained	I (19)	Slight	Slow	81	Moderate
146	Corralitos loamy sand	IIIs-4 (19)	Slight	Slow	68	Low
149	Cropley clay, 2 to 9 percent slopes	IIE-5 (19)	Slight	Medium	47	High
166	Mocho loam, 0 to 2 percent slopes	I (19)	Slight	Slow	100	Moderate
173	Myford sandy loam, 2 to 9 percent slopes	IVe-3 (19)	Moderate	Medium	46	Low to high

175	Myford sandy loam, 9 to 15 percent slopes	IVe-3 (19)	Moderate to high	Medium to rapid	35	Low to high
176	Myford sandy loam, 15 to 30 percent slopes	VIe-1 (19)	High	Rapid	27	Low to high
177	Myford sandy loam, 9 to 30 percent slopes, eroded	VIIe-1 (19)	High	Rapid	60	Low to high
207	Sorrento loam, 2 to 9 percent slopes	IIe-1 (19)	Slight to moderate	Slow to medium	90	Low to moderate
224	Yorba cobbly sandy loam, 9 to 30 percent slopes	Vis-1 (19)	High	Rapid	28	Low to moderate

Source: Soil Survey of Orange County and Western Part of Riverside County, California

ISSUES, OPPORTUNITIES, AND CONSTRAINTS

The majority of the City is constrained by a high shrink/swell potential or high erosion susceptibility. There are only a few areas in the westernmost, northernmost, and southernmost portions of the City that do not have either of these constraints. These constraints require the preparation of geotechnical recommendations to remediate high shrink/well and erosion susceptibility.

B. HYDROLOGIC SETTING

Surface Water

The Aliso Creek watershed comprises local surface water in the City of Laguna Woods. Aliso Creek carries water from rainfall events and urban runoff to the Pacific Ocean. In the City of Laguna Woods, this effluent is conveyed to the Creek through a series of storm drains. Dairy Fork is the major storm drain in the City of Laguna Woods (Exhibit 1). It drains the cities of Lake Forest and Laguna Hills before entering the City of Laguna Woods. The confluence of Dairy Fork and Aliso Creek is to the immediate south of the City of Laguna Woods in the vicinity of the intersection of Laguna Hills Drive and Moulton Parkway.

Groundwater

Two primary beneficial uses have been designated within the Aliso Creek groundwater basin. The first beneficial use designation is for the municipal and domestic supply, including use of water for community, military, or individual water supply. The second designation use is for agricultural supply and includes uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing. In order for groundwater to qualify for municipal uses it must pass strict water quality criteria. Irvine Ranch Water District (IRWD) currently operates approximately five wells in the upper watershed which it mixes with

recycled water for irrigation use. Withdrawals in the lower watershed run the risk of allowing saltwater intrusion into the aquifer.

Flood Potential

According to the Flood Insurance Rate Maps (FIRM), Panel 57 and 64 of 81, for the City of Laguna Woods, County of Orange, flood potential within the City of Laguna Woods is generally low. The majority of the City lies outside the 100- or 500-year flood zones, with the exception of Aliso Creek and the western boundary of Laguna Woods, located approximately 1,000 feet northeast of Laguna Lake in Laguna Coast Wilderness Park. Along its approximately 0.45 mile course through the City, Aliso Creek is an improved, concrete-lined soft bottom channel surrounded by residential developments. It is designated as a special flood hazard area inundated by an 100-year flood event. The floodplain width reaches 60 feet where the City's southern boundary crosses the Creek, at the north side of Laguna Hills Drive, to 100 feet, at the northern boundary, and the south side of Avenida de la Carlota. The average elevation for flooding along this portion of the reach is 288.5 feet above mean sea level. A 500-year recurrence interval flood will inundate where the City's northern boundary crosses the Creek. In this area, the floodway reaches a width of 700 feet. The west side of Laguna Woods, at Bahia Blanca south of the intersection with Calle Azul, is subject to a 100-year flood inundation, with a floodway width of roughly 60 feet. The base flood elevation is undetermined. Homes at 3458-3466, 3459-3465, 3445-3457, and 3446-3456 Bahia Blanca would be subject to flooding. Floodwaters would tend downward towards Laguna Lake, to the southwest.

Flood inundation of improved lands is not common in any part of the watershed due to the low precipitation (10 to 13 inches per year) and short rainy season accompanied by the generally mild coastal climate. Flood damages in the watershed are concentrated nearer to the ocean outlet. Ways to alleviate this problem have been examined and solutions are being addressed. Activities in the City of Laguna Woods, however, have no direct relation to such flood issues.

Water Quality

Surface Water

The San Diego Water Quality Control Board (SDWQCB) lists four beneficial uses for the Aliso Creek: REC2 (non-contact water recreation), WARM (warm freshwater habitat), WILD (wildlife habitat), and AGR (agricultural supply).¹ Each beneficial is protected by

¹ Contact Water Recreation (REC-1) - Includes uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and SCUBA diving, surfing, white water activities, fishing, or use of natural hot springs.

Non-contact Water Recreation (REC-2) - Includes the uses of water for recreational activities involving proximity to water, but not normally involving body contact with

water quality objectives to ensure that the water will be suitable for the beneficial uses which have been designated for protection. The water quality objectives for Aliso Creek's beneficial uses are defined and described in Water Quality Control Plan for the San Diego Basin. The beneficial uses and water quality objectives are periodically re-examined as part of SDWQB's Water Quality Control Plan Report.

Surface water quality in the Aliso Creek Watershed is marginal and generally declines toward the ocean. There is no direct evidence of poor water quality associated with the City of Laguna Woods, as no documented water quality studies have been performed within City boundaries, to date. However, bacterial investigations by the County of Orange in 1998-1999, pursuant to the County's Aliso Creek 205(j) Water Quality Planning Study, revealed consistently high levels of E.coli at the confluence of the Dairy Fork drain with Aliso Creek. This confluence is located immediately downstream from Laguna Woods, in the City of Aliso Viejo. Reasons for the high E.coli counts are not yet known, though the County of Orange and cities that use the drain are actively seeking a

water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

Wildlife Habitat (WILD) - Includes uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

Rare, Threatened, or Endangered Species (RARE) - Includes uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened or endangered.

Warm Freshwater Habitat (WARM) - Includes uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.

Marine Habitat (MAR) - Includes uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife (e.g., marine mammals, shorebirds).

Agricultural Supply (AGR) - Includes uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.

Municipal and Domestic Supply (MUN) - Includes uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.

better understanding of the issues. During the time of the study, the El Toro Water District, which provides water and sewer service to the City of Laguna Woods, did not find any indication of cracks or seepage, indicating that other factors may be at work in influencing Creek water quality.

Groundwater

Available groundwater data indicates compliance with levels of allowable fluoride, sodium, manganese, and boron. However, concentrations of sulfates, total dissolved solids, iron, and turbidity are often in excess of compliance standards, indicating Aliso Creek groundwater basin is not ideal for potable groundwater production.

IV. ISSUES, OPPORTUNITIES, AND CONSTRAINTS

The mounting financial costs and clear signs of environmental degradation along the Aliso Creek have received the attention of residents, local governments, and state and federal resource agencies. If the Creek's plight is allowed to follow its course, the following trends are expected to continue:

(1) decreasing or continued poor water quality through low dissolved oxygen content and high surface water temperatures; (2) loss of habitat, in particular riparian habitat, and the associated adverse impacts to aquatic and terrestrial wildlife, including sensitive species; (3) continued degradation and channelization; (4) increasing costs for maintenance of infrastructure and flood control facilities; (5) decreasing floodplain moisture levels and increasing rates of erosion; (6) increasing peak flows and flooding.

In response to concerns over the compromised conditions of The Watershed, the Aliso Creek Watershed Management Study was developed and executed in 1998 by the County of Orange in corroboration with, local cities, and the U.S. Army Corps of Engineers, to identify feasible management projects to improve environmental and economic conditions in the Aliso Creek Watershed. The primary focus of the study is on problems and solutions associated with hydrology, hydraulics, sedimentation, and water quality. The program encompasses a regional or multi-jurisdictional geographic area that involves local citizens, landowners, and governmental agencies. Every city and water agency within the watershed has contributed on an equal basis to the funding of the \$1.2 million feasibility study. The feasibility study is to be completed in the summer of 2001. If approved, a comprehensive management plan for Aliso Creek will be designed and implemented with financial considerations.

C. CULTURAL SETTING

Paleontologic Resources

The City of Laguna Woods is underlain predominately by the marine Miocene Monterey and Capistrano Formations, with some terrestrial Quaternary terrace deposits mostly near the San Diego (I-5) Freeway and terrestrial Quaternary alluvium typically in the valleys. In the western half of the City, most of the bedrock exposures are of the undifferentiated terrestrial/marine Oligo-Miocene Sespe/Vaqueros rocks; some of the outcrops in the southernmost part of the large spur that extends south from El Toro Road are the marine Pliocene Niguel Formation. All of these geologic units have potential to produce significant vertebrate fossils. All of the bedrock units are considered to be highly sensitive for paleontologic resources.

The paleontologic records search at the Regional Paleontologic Locality Inventory (RPLI), Los Angeles County Museum, indicates that numerous vertebrate fossil localities have been recorded within and near the City of Laguna Woods. The Miocene units in the southeastern portion of the City are particularly fossiliferous, having yielded extinct species of sharks, bony fish, sea turtles, crocodiles, marine birds, sirenians, sea lions,

dolphins, whales, and desmostylians. This diverse fauna includes five new species.

Archaeologic Resources

The City of Laguna Woods is within the territory of the Luiseño people. The records search conducted at the South Central Coastal Information Center indicates that five of their prehistoric sites have been recorded within the City. Ten other sites are located within a half-mile of the City's boundaries. Six field investigations included areas within the City, but approximately 90% of the land has never been surveyed for archaeologic resources.

As noted above, there are records on five prehistoric sites located within the City limits:

- Ora-15: Recorded in 1949 as a surface scatter of lithic artifacts. Includes a pestle, a mano, a hammerstone, and a side scraper. Scatter dimensions not given.
- Ora-267. Recorded in 1966 as a scatter of shell (abalone, pecten, and mussel) fragments and a mano inside a rock shelter. Shelter overhang measured about 45 feet in length, shelter was 4 feet in height, and "midden soil" about 12 inches in depth.
- Ora-268: Recorded in 1966 as a 300 x 400-foot surface scatter of lithic tools, including a broken portable metate, manos, hammer stone, scraper, and chipping waste.
- Ora-610: Recorded in 1977 as an almost totally destroyed hilltop campsite. Destroyed during construction of two large water storage tanks. All artifacts recovered from disturbed area, including a scraper, quartz cores, hammerstones, handstone fragments, and chipping waste.
- Ora-854: Recorded in 1980 as a 200 x 300-meter scatter of millingstone tools and fire-cracked rock over a gently sloping knoll. Artifacts include 1 whole metate, 4 fragments, 2 manos, 6 mano fragments, 2 hammerstones, 1 core, and three flakes. Northern part of the site destroyed by housing development.

No prehistoric burials have been discovered in the City. All of the above sites have been destroyed by development. Thus, there are no recorded prehistoric sites that still exist within the City limits.

Historic Resources

The National Register of Historic Places (NRHP), California Historical Landmarks (CHL), California Historic Resources Inventory (CHRI), and California Points of Historic Interest (CPHI) do not include any historic properties in, or within a half-mile of,

the City. However, structures more than 45 years old are considered to have potential historic significance if they have not yet been assessed by an architectural historian. Such structures may currently exist in the City, but they have yet to be identified. Obviously, the number of structures in the “historic” age category will increase with time.

IV. ISSUES, OPPORTUNITIES, AND CONSTRAINTS

Paleontologic Resources

Any substantial subsurface excavations within the City of Laguna Woods should be closely monitored for paleontologic resources. The eastern half of the City, in particular, is certain to yield significant vertebrate fossils. The EIR for any proposed development project should include a paleontologist’s evaluation of the project’s potential for encountering geologic units that have the potential to yield significant paleontologic resources, and a recommendation regarding paleontologic monitoring of earth-disturbing construction activities. Monitoring programs should include collecting matrix samples to process for local concentrations of small vertebrate fossils.

Archaeologic Resources

A Phase I archaeological field assessment should be performed prior to any earth-disturbing activities if a proposed construction site (a) has not been surveyed within the last 10 years, (b) has a recorded prehistoric site on it or in its vicinity, or (c) if a potentially historic site is on or adjacent to the property. Excluded are heavily disturbed areas and grounds obscured by water or pavement. If a recorded prehistoric site is located on the property, it should be re-evaluated.

A technical report following format and content guidelines proposed by the State Office of Historic Preservation (SHPO) must be completed. This report shall include a discussion of the sites’ significance (depth, nature, condition, and extent of the resources), final mitigation recommendations, and cost estimates. Excavated finds shall be offered to the City of Laguna Woods, or designee, on a first refusal basis. Final mitigation shall be carried out based upon the report recommendations and a determination as to the sites’ disposition by the City. Possible determinations include, but are not limited to, preservation, salvage, partial salvage, or no mitigation necessary.

Historic Resources

If the Phase I archaeological field survey observes any structures on or adjacent to the project site that are recorded as historic, or appear to be potentially historic, the archaeologist should note this in his/her report and recommend that the feature(s) be assessed by a qualified architectural historian for SHPO consideration prior to any onsite construction.

D. BIOLOGICAL SETTING

Vegetation

There are three vegetation communities in Laguna Woods: developed urban suburbia, as defined by Mayer and Laudenslayer (1988), coastal sage scrub as defined by Holland (1986), and riparian.

Developed urban suburbia is the dominant vegetation community, covering approximately 98% (2,050 acres) of the City. This vegetation community is composed of landscaped plantings with some tall trees, little understory and grass and flowers in the herbaceous layer. The vegetation is intensely manicured and irrigated as is typical of suburban residential landscapes. Although this community is dominated by the associated buildings and roads, the golf courses provide areas of more continuous vegetative cover.

A very small area (approximately 30 acres) of native sage scrub vegetation occurs in the southwest corner of the City. Plant species such as buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), deerweed (*Lotus scoparius*), prickly pear cactus (*Opuntia littoralis*), and white sage (*Salvia apiana*) occur in this vegetation community. The understory consists of non-native grasses, mustard (*Brassica* spp.), filaree (*Erodium* spp.), and the native common fiddleneck (*Amsinckia intermedia*). This sage scrub community is contiguous with extensive sage scrub habitat in the Laguna Coast Wilderness to the west of Laguna Woods.

There is a riparian vegetation community approximately 10 acres in size along Aliso Creek in the southeast section of the City. The riparian area contains patches of cattail (*Typhus latifolia*), mulefat (*Baccharis salicifolia*), willows (*Salix* spp.) and numerous non-native species. Above the riprap banks, there is a zone of planted vegetation with a mix of native and non-native species. Due to its wildlife value, the riparian area is considered a sensitive habitat by regulatory agencies.

Although Aliso Creek is mapped as concrete sloped soft bottom channel within Laguna Woods (Orange County 2001), the channel is lined with riprap. There are areas where vegetation is growing in the riprap. South of the Laguna Woods riparian area, Aliso Creek contains almost no vegetation.

Wildlife

The three vegetation communities, developed urban suburbia, coastal sage scrub and riparian, provide habitat for wildlife in the City.

Urban Suburbia Habitat

Developed urban suburbia areas of the City provide low value habitat for wildlife. They contain a low percent cover of vegetation, and are subject to noise and disturbance from traffic and other human activities. Species found in these areas are tolerant of human activity and are generally very common in the region. Reptiles and amphibians are rarely found in this cover type, several mammal species occur, and birds are the most abundant wildlife group in this habitat. Trees and shrubs in this vegetation community provide nesting and foraging sites for birds, and grass areas such as lawns provide feeding sites.

The landscaping activities simplify these habitats, reducing structural complexity and the available niches for wildlife. Even older residential areas with mature vegetation have simpler habitat structure and less dense foliage, and support fewer bird species than natural habitats. These landscaped habitats are good for a limited number of bird species (Beissenger and Osborne 1982). The most common species in these areas are: house finch, crow, western kingbird, mockingbird, Anna's hummingbird, scrub jay, house wren, song sparrow, and house sparrow. On occasion, American kestrels, Cooper's hawks, and sharp-shinned hawks will forage in these habitats. The coyote is expected to use these areas, although it is seldom observed because of its secretive habits. Pest species such as Norway rat and house mouse are expected in this habitat.

Sage Scrub Habitat

The sage scrub habitat within Laguna Woods is contiguous with an extensive area of sage scrub in Laguna Coast Wilderness Park. Thus the wildlife value of the sage scrub habitat within Laguna Woods is high.

Lizards expected to occur in the sage scrub include side-blotched lizard (*Uta stansburiana*), western fence lizard (*Sceloporus occidentalis*), and coastal western whiptail (*Cnemidophorus tigris multiscutatus*). southern alligator lizard (*Gerrhonotus multicarinatus*). Two sensitive lizard species, San Diego horned lizard (*Phrynosma coronatum blainvillii*) and orange-throated whiptail (*Cnemidophorus hyperythrus*) may occur. California whipsnake (*Masticophis lateralis*), gopher snake (*Pituophis melanoleucus*), coachwhip (*Masticophis flagellum*) and western rattlesnake (*Crotalus viridis*) are the most common snakes expected onsite.

Common resident birds in coastal sage scrub include California quail (*Callipepla californica*), Anna's hummingbird (*Calypte anna*), bushtit (*Psaltiriparus minimus*), Bewick's wren (*Thryomanes bewickii*), wrentit (*Chamaea fasciata*), northern mockingbird (*Mimus polyglottos*), spotted towhee (*Pipilo maculatus*), California towhee (*Pipilo crissalis*), and Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*). Coastal California gnatcatcher (*Poliophtila californica californica*) a listed species, may occur in the coastal sage scrub in Laguna Woods. The sage scrub also provides breeding habitat for several summering birds, including Costa's hummingbird (*Calypte costa*) and lazuli bunting (*Passerina amoena*). Several other birds, including white-crowned sparrow (*Zonotrichia leucophrys*) and golden-crowned sparrow (*Zonotrichia atricapilla*), are expected to use the sage scrub during winter months.

Deer mice (*Peromyscus maniculatus*), California mouse (*Peromyscus californicus*), and western harvest mouse (*Reithrodontomys megalotis*) are among the small mammals expected to use the sage scrub. Other large mammals expected to occur include mule deer (*Odocoileus hemionus*), raccoon (*Procyon lotor*), grey fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), and bobcat (*Lynx rufus*). Common bat species that may forage over the sage scrub habitat include the western pipistrelle (*Pipistrellus hesperus*), California myotis (*Myotis californicus*), and big brown bat (*Eptesicus fuscus*).

Riparian Habitat

Aliso Creek provides a water source and a potential movement corridor for wildlife. The riparian area is important as wildlife habitat providing a source of diversity for surrounding areas. Because of the variety of niches found in riparian zones, they often support a greater abundance and diversity of wildlife than other habitats. Riparian areas are used by landbirds, mammals and amphibians for moving from habitat patch to habitat patch. Riparian areas are used especially by amphibians for moving from habitat patch to habitat patch. These movement corridors are important in maintaining gene flow between otherwise isolated populations and ultimately in helping to prevent local extinctions in these isolated habitat patches.

The riparian habitat provides potential habitat for western toad (*Bufo boreas*) and Pacific chorus frog (*Pseudacris regilla*), which are expected to be the most abundant amphibians. California chorus frog (*Pseudacris cadaverina*) may also occur in smaller numbers.

Many songbird species are expected to use the Aliso Creek riparian area throughout the year. These include red-shouldered hawk (*Buteo lineatus*), Great-horned owl (*Bubo virginianus*), Nuttall's woodpecker (*Picoides nuttallii*), northern flicker (*Colaptes auratus*), California quail, northern mockingbird, California towhee, cedar waxwing (*Bombycilla cedrorum*), and orange-crowned warbler (*Vermivora celata*).

II. ISSUES OPPORTUNITIES AND CONSTRAINTS

Vegetation and Wildlife

The sage scrub vegetation may support the threatened coastal California gnatcatcher (CAGN) (*Polioptila californica californica*) and thus impacts to this habitat may be considered significant under CEQA. Mitigation for impacts to sage scrub habitat would be covered by the \$50,000 per acre mitigation fee through the Orange County Central and Coastal Area NCCP.

Jurisdictional Areas

Any proposed activity within or adjacent to Aliso Creek may require a USACE 404 permit and CDFG 1600 Agreement. As part of the permit and agreement applications, a formal delineation of the jurisdictional boundaries would be needed, a proposed project description, along with an analysis of impacts, a description of efforts to avoid and minimize impacts, and mitigation measures.

GROWTH INDUCING IMPACTS

Redesignation of sixty-six acres from Open Space to Commercial will facilitate development of up to 200,000 square feet of additional retail commercial and commercial office building space. Assuming additional employment attributable at the rate of two employees per 1,000 square feet of building area, land use redesignation resulting from the project has the potential of adding 400 jobs within the City.

The majority of new jobs accommodated by the land use changes are expected to be in retail and retail services with workers in the low to moderate income range. As the vast majority of residents in Laguna Woods are not work force participants, new employees will come from the existing resident labor pool in the surrounding area, will move into the area, or commute from outside the immediate area.

An increased demand for housing will accompany the projected increase in jobs associated with changes in land use designation. Assuming that approximately 75% of newly-created jobs will be filled from the existing resident workforce within 10 miles of Laguna Woods, a potential demand for up to an additional 100 units within the same area may be anticipated. Creation of new jobs associated with land use redesignation of the General Plan, therefore, is a growth-inducing impact.

Additional Housing Potential

Redesignation of 26 acres from Open Space to Medium and High Density Residential will result from adoption of the General Plan. This action creates the potential for construction of up to 415 additional dwelling units. Assuming an average household size consistent with the existing Laguna Woods demographics, new dwelling construction would add up to 580 residents. Land use redesignation contemplated in the General Plan, therefore, is determined to be a growth-inducing impact associated with the project.

APPENDIX G

REFERENCES

REFERENCES

Southern California Association of Governments, *Regional Comprehensive Plan and Guide*, March 1996

Southern California Association of Governments, *2001 Regional Transportation Plan*, April 2001

Southern California Association of Governments, *2001 Regional Transportation Improvement Plan*, August 2001

Orange County Transportation Authority, *1999 Orange County Congestion Management Program*

County of Orange, *General Plan*, 1999 (Update)

County of Orange, Airport Land Use Commission, *Airport Environs Land Use Plan*, November 1995

South Coast Air Quality Management District, *CEQA Air Quality Handbook* November 1993

City of Irvine, *General Plan 2000*, March 1999

City of Laguna Hills, *General Plan*, June 1994

City Laguna Woods, *Interim General Plan*, January 2001

City of Lake Forest, *General Plan*, May 2000 (Revised Edition)

APPENDIX H

LIST OF COMMENTERS AND RESPONSES

List of Commenters & Responses

- 1. Southern California Association of Governments-Attn: Mr. Jeffrey M. Smith**
- 2. Orange County Planning & Development-Attn: Mr. Timothy Neely**
- 3. State Water Resources Control Board-Attn: Mr. David G. Woelfel**
- 4. El Toro Water District- Attn: Mr. Dennis P. Cafferty**
- 5. Department of Transportation- Attn: Department of Transportation**
- 6. Mr. Don Kornreich- Attn: Mr. Don Kornreich**
- 7. The Gas Company- Attn: Mr. Bob Warth**
- 8. OCTA- Attn: Orange County Transportation Authority**
- 9. Culbertson, Adams & Associates- Attn: Mr. Kevin Canning**
- 10. The County Counsel/County of Orange- Attn: Benjamin P. de Mayo-County Counsel**
- 11. City of Irvine Attn: Ms. Sheri Vander Dussen**
- 12. City of Aliso Viejo- Attn: Mr. Clint Sherrod**
- 13. State of California Governor's Office of Planning and Research- Attn: Terry Roberts**