

**Table 1
Proposed Zoning Code Amendments**

Reference	Proposal														
10 (continued)	<p>for at least 32 regularly scheduled hours per calendar week. Flu shots, vaccines, smoking cessation, and other prophylactic wellness services may also be provided. Treatment of sick or injured persons is excluded from this definition (see <i>Clinics, Medical or Dental; Hospitals</i>)."</p> <p><i>Fortunetelling and Psychic Establishments</i> are proposed to be prohibited in the neighborhood commercial district, permitted as a principal use in the community commercial district, and prohibited in the professional and administrative office district. As <i>Fortunetelling and Psychic Establishments</i> cannot be seen to "serve the immediate needs of the surrounding neighborhood" and are not administrative in nature, <i>Fortunetelling and Psychic Establishments</i> would be prohibited in the neighborhood commercial and professional and administrative office districts. Commercial fortunetelling and psychics are separately regulated by Laguna Woods Municipal Code Chapter 6.38.</p> <p><i>Massage Businesses and Establishments</i> are proposed to be permitted as a principal use in the neighborhood commercial district, permitted as a principal use in the community commercial district, and prohibited in the professional and administrative office district. <i>Massage Businesses and Establishments</i> are best situated in more traditional, retail-oriented districts (neighborhood commercial and community commercial), as opposed to the professional and administrative office district. <i>Massage Businesses and Establishments</i> are generally inconsistent with the intended uses of the professional and administrative office district as they are not "moderate intensity professional and administrative office uses" nor reasonably related uses. Massage therapy is separately regulated by Laguna Woods Municipal Code Chapter 6.40.</p>														
11	<p>In order to promote regulatory clarity, particularly with respect to the treatment of similar land use types, the following minor modifications of identified land use types are proposed:</p> <table border="1" data-bbox="370 1329 1412 1854"> <thead> <tr> <th data-bbox="376 1337 831 1394">Existing Land Use Type</th> <th data-bbox="837 1337 1406 1394">Proposed Land Use Type</th> </tr> </thead> <tbody> <tr> <td data-bbox="376 1402 831 1459">Archery Range</td> <td data-bbox="837 1402 1406 1459">Archery Ranges</td> </tr> <tr> <td data-bbox="376 1467 831 1556">Automobile Parking Lots/Structures</td> <td data-bbox="837 1467 1406 1556">Automobile Parking Structures, Multi-Level</td> </tr> <tr> <td data-bbox="376 1564 831 1621">Automobile Service Station</td> <td data-bbox="837 1564 1406 1621">Automobile Service Stations</td> </tr> <tr> <td data-bbox="376 1629 831 1686">Bus, Railroad and Taxi Stations</td> <td data-bbox="837 1629 1406 1686">Bus and Taxi Terminal Buildings</td> </tr> <tr> <td data-bbox="376 1694 831 1751">Dance Hall</td> <td data-bbox="837 1694 1406 1751">Dance Halls</td> </tr> <tr> <td data-bbox="376 1759 831 1848">Dry Cleaning, Dyeing and Laundry Plants</td> <td data-bbox="837 1759 1406 1848">Dry Cleaning, Dyeing, and Laundry Businesses</td> </tr> </tbody> </table>	Existing Land Use Type	Proposed Land Use Type	Archery Range	Archery Ranges	Automobile Parking Lots/Structures	Automobile Parking Structures, Multi-Level	Automobile Service Station	Automobile Service Stations	Bus, Railroad and Taxi Stations	Bus and Taxi Terminal Buildings	Dance Hall	Dance Halls	Dry Cleaning, Dyeing and Laundry Plants	Dry Cleaning, Dyeing, and Laundry Businesses
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Table 1
Proposed Zoning Code Amendments

Reference	Proposal	
11 (continued)	Financial Institutions	Banks and Automated Teller Machines
	Medical Marijuana Dispensary	Medical Marijuana Dispensaries
	Transfer/Materials Recovery Facility	Transfer/Materials Recovery Facilities
12	In order to promote regulatory clarity, the following deletions of unnecessary and duplicative land use types are proposed:	
	Existing Land Use Type	Proposed Modification
	Agricultural and Produce Stands	Delete; identification of solely temporary use/special events in the Table of Permitted Land Uses is unnecessary due to regulation elsewhere in the Laguna Woods Municipal Code
	Commercial Coaches	
	Construction Trailer	
	Outdoor Charitable Collection	
	Outdoor Sales, Various	
	Outdoor Storage	
	Special Events	
	Stationary Food Cart	
Temporary Parking Lot	Delete; identification of solely temporary use/special events in the Table of Permitted Land Uses is unnecessary due to regulation elsewhere in the Laguna Woods Municipal Code	
Ice Cream Parlor	Delete; identification of <i>Ice Cream Parlor</i> separate from <i>Fast/Fast Casual Food Establishments</i> and <i>Restaurants</i> is unnecessary	

**Table 1
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13	<p>Current Permitted Commercial Uses Legend (used to interpret the table of commercial permitted uses):</p> <table border="1" data-bbox="407 422 1416 877"> <tr> <td>P</td> <td>=</td> <td>The use is permitted as the principal use within the district.</td> </tr> <tr> <td>A</td> <td>=</td> <td>The use is permitted only as an accessory to a principal use on a site.</td> </tr> <tr> <td>U</td> <td>=</td> <td>The use is permitted with an approved use permit.</td> </tr> <tr> <td>T/SE</td> <td>=</td> <td>The use is permitted with an approved Temporary Use/Special Event permit.</td> </tr> <tr> <td>RP</td> <td>=</td> <td>The use is permitted with an approved regulatory use permit.</td> </tr> <tr> <td>X</td> <td>=</td> <td>The use is prohibited in the district.</td> </tr> </table> <p>Proposed Permitted Commercial Uses Legend (used to interpret the table of commercial permitted uses):</p> <table border="1" data-bbox="407 1010 1416 1465"> <tr> <td>P</td> <td>=</td> <td>The use is permitted as a principal use within the district.</td> </tr> <tr> <td>A</td> <td>=</td> <td>The use is permitted only as an accessory to a principal use on a site within the district.</td> </tr> <tr> <td>U</td> <td>=</td> <td>The use is permitted with an approved use permit.</td> </tr> <tr> <td>T/SE</td> <td>=</td> <td>The use is permitted with an approved Temporary Use/Special Event permit.</td> </tr> <tr> <td>RP</td> <td>=</td> <td>The use is permitted with an approved regulatory use permit.</td> </tr> <tr> <td>X</td> <td>=</td> <td>The use is prohibited within the district.</td> </tr> </table>	P	=	The use is permitted as the principal use within the district.	A	=	The use is permitted only as an accessory to a principal use on a site.	U	=	The use is permitted with an approved use permit.	T/SE	=	The use is permitted with an approved Temporary Use/Special Event permit.	RP	=	The use is permitted with an approved regulatory use permit.	X	=	The use is prohibited in the district.	P	=	The use is permitted as a principal use within the district.	A	=	The use is permitted only as an accessory to a principal use on a site within the district.	U	=	The use is permitted with an approved use permit.	T/SE	=	The use is permitted with an approved Temporary Use/Special Event permit.	RP	=	The use is permitted with an approved regulatory use permit.	X	=	The use is prohibited within the district.
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14	<p>The purpose and intent of the professional and administrative office district currently calls for amenities including “large landscaped open spaces.” In light of California’s drought and the City’s commitment to environmental improvement, the purpose and intent would be revised to substitute a requirement for “large pervious open spaces” for the existing requirement for “large landscaped open spaces.” In the interest of clarity, low intensity professional and administrative office uses and related uses would also be explicitly allowed.</p> <ul style="list-style-type: none"> • Current Purpose and Intent – <i>Professional and Administrative Office (PA)</i>: “To provide for the development and preservation of an optimal environment for moderate intensity professional and administrative office uses and related uses on sites with large landscaped open spaces and off- 																																				

Table 1
Proposed Zoning Code Amendments

Reference	Proposal
14 (continued)	<p>street parking facilities. This district is intended to be located on heavily traveled streets or adjacent to commercial or industrial districts, and may be used to buffer residential areas."</p> <ul style="list-style-type: none"> Proposed Purpose and Intent – <i>Professional and Administrative Office (PA)</i>: "To provide for the development and preservation of an optimal environment for low to moderate intensity professional and administrative office uses and related uses on sites with large pervious open spaces and off-street parking facilities. This district is intended to be located on heavily traveled streets or adjacent to commercial or industrial districts, and may be used to buffer residential areas."

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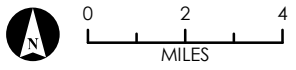
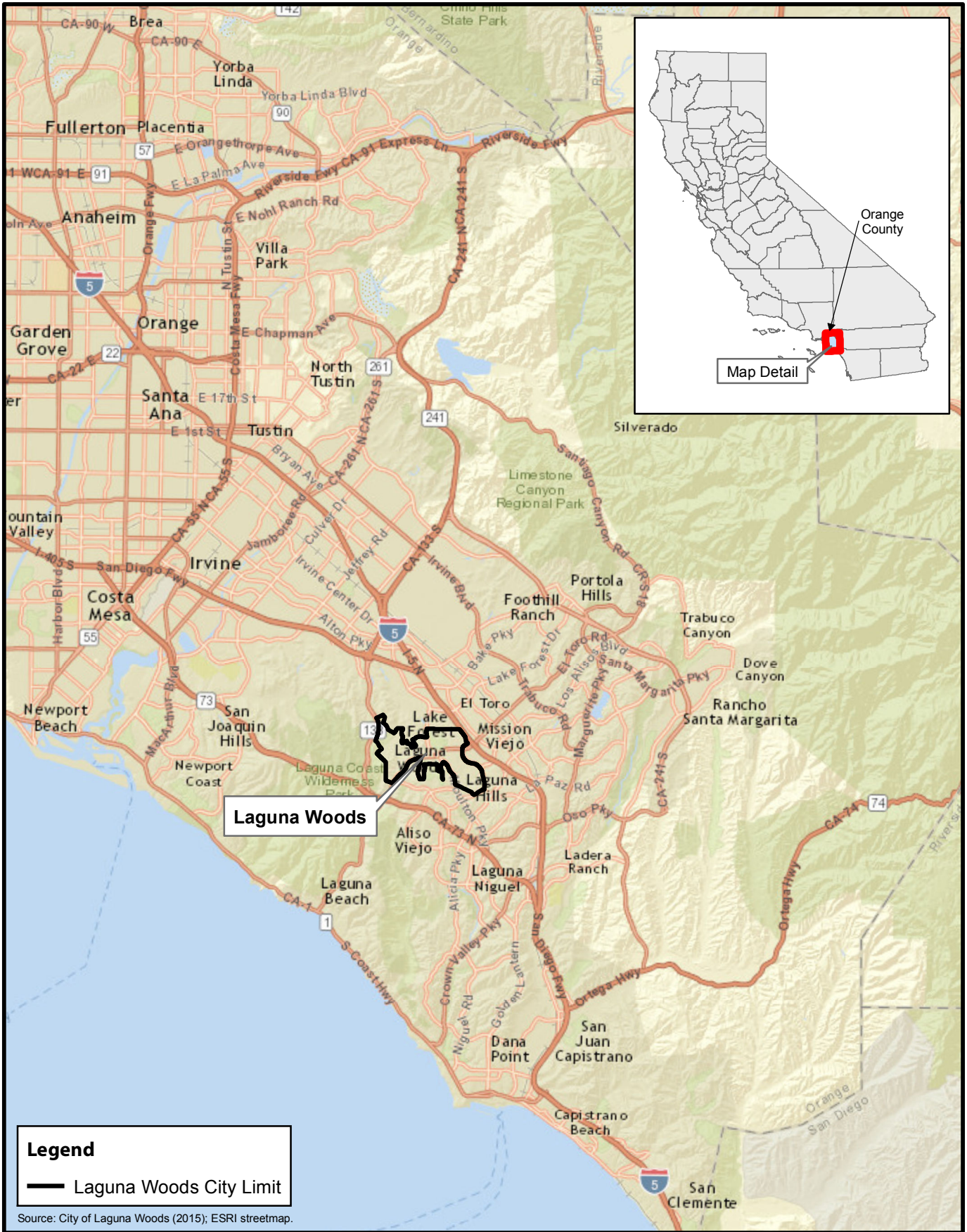
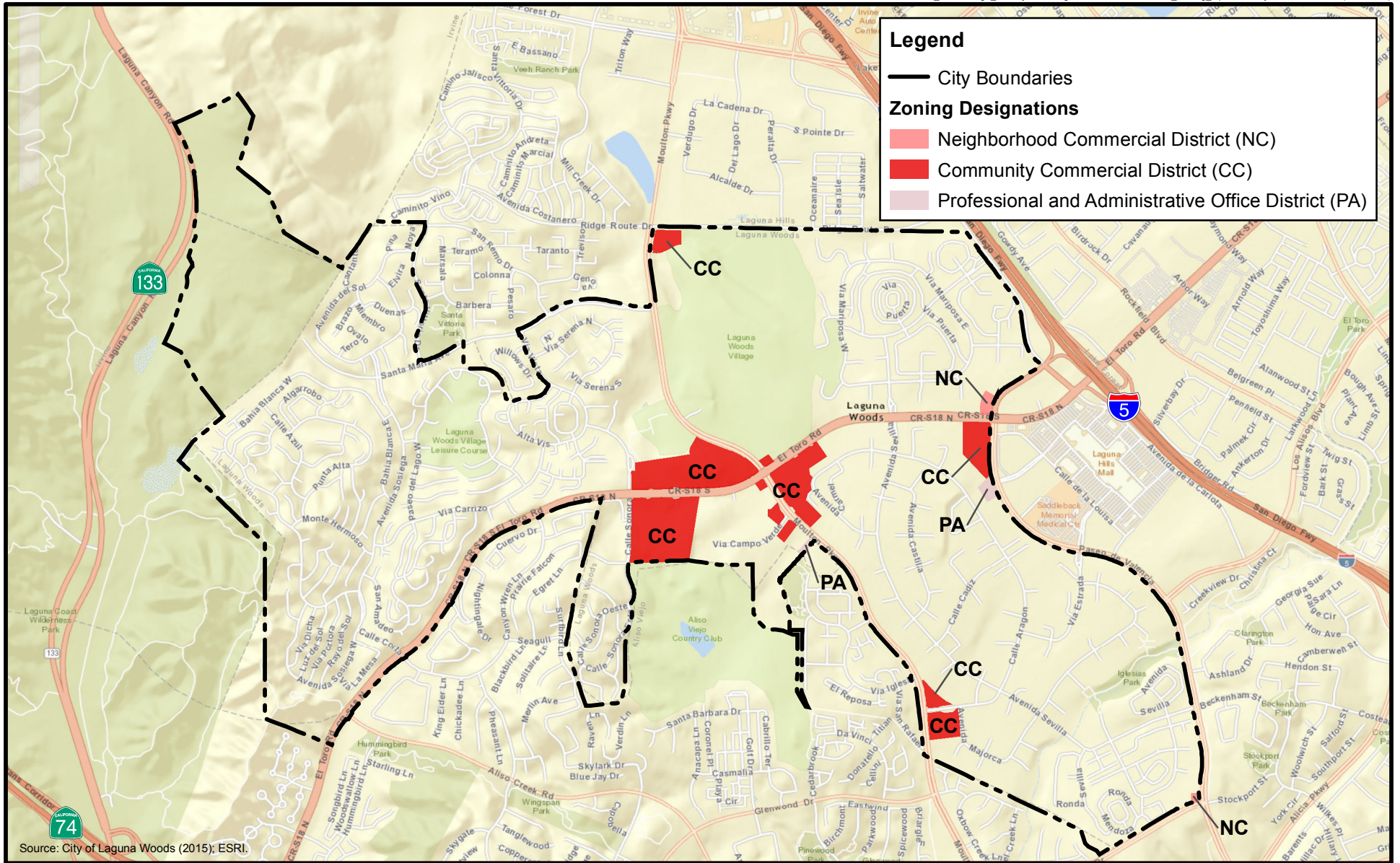


FIGURE 1
Regional Vicinity



Source: City of Laguna Woods (2015); ESRI.

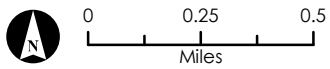


FIGURE 2
Project Location

6.2 Proposed Zone Changes:

The proposed project also includes six zone changes: four from the CC district to the PA district and two from the NC district to the PA district, as shown in **Figure 3**. The sites proposed for rezoning are currently primarily used as professional and administrative offices, and the proposed changes would better align the use of the sites with the designated zoning district. The zone changes do not include development proposals.

**Table 2
Proposed Zone Changes**

APN	Current Zoning	Proposed Zoning	Primary Existing Use
616-012-21	CC	PA	Three-story office building
616-012-24	CC	PA	Three-story medical building
621-022-11	NC	PA	Two-story dental building
621-022-14	NC	PA	Two-story dental building
621-091-15	CC	PA	Two-story medical building
621-191-11	CC	PA	Standalone real estate office

6.3 Existing Development Standards:

All development in the project area, which would occur in the future and be limited in scope by the developed nature of the area, would be required to comply with the development standards outlined in Section 13.10.030 of the Laguna Woods Municipal Code and shown in **Table 3**.

**Table 3
Existing Commercial Development Standards**

Development Standard	NC	CC	PA
Maximum Building Height (ft.)	35	65	35
Minimum Building Site Area (sq. ft.)	none	none	10,000
Minimum Building Site Width (ft.)	none	none	75
Minimum Perimeter Setback (ft.)	None		
From Street ROW	20	5	10
From Alley	20	5	10
From Residential Districts	20	20	10

**Table 3
Existing Commercial Development Standards**

Development Standard	NC	CC	PA
From Nonresidential Districts	0	0	10
Maximum FAR	0.30	0.30	0.30
Maximum Building Site Coverage	35 percent	none	35 percent
Parking	See Code Section 13.18		
Landscaping	See Code Section 13.16.190		
Screening	See Code Section 13.16.180		
Signs	See Code Section 13.20		
Waste Management/Hazardous Materials	See Code Section 13.26.200		

Supplemental development standards would also apply, as outlined in Section 13.10.040 of the Laguna Woods Municipal Code, including those regarding lighting, location of parking, sidewalks, and trash and storage areas. The application of such development standards in combination with the developed nature of the project site, would limit the scale and intensity of development.

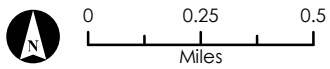
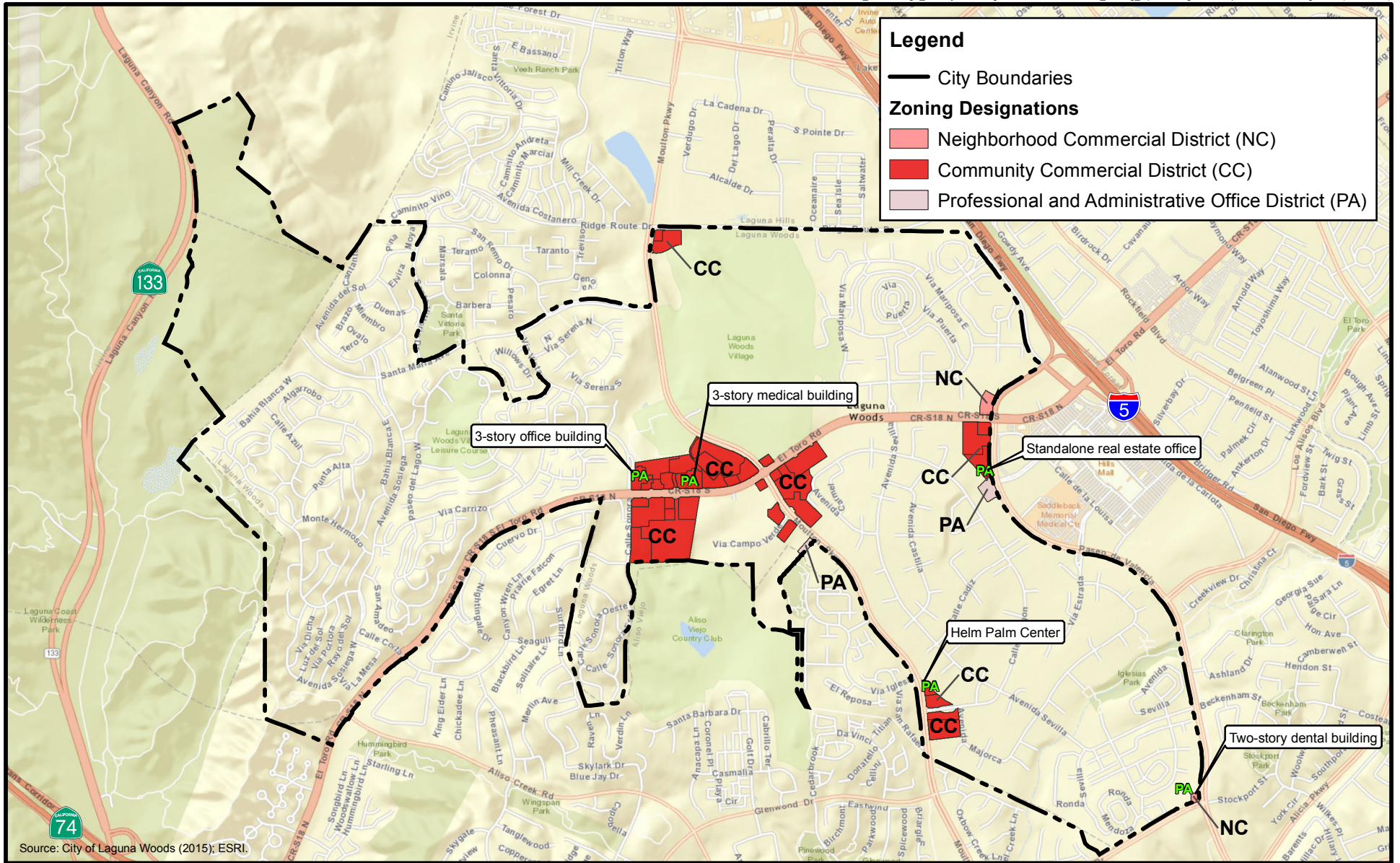


FIGURE 3
Proposed Zone Changes

7. Other Public Agencies Whose Approval May Be Required:

In the California Environmental Quality Act (CEQA), the term “responsible agency” includes all public agencies other than the lead agency (see Section A(2) of this document) that may have discretionary actions associated with the implementation of the proposed project. No responsible agencies were identified for this project.

B. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project involving at least one impact that is a “potentially significant impact,” as indicated by the checklist on the following pages. Potentially significant impacts that are mitigated to a “less than significant” impact are not shown here.

- | | | |
|---|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology and Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology and Water Quality |
| <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population and Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Utilities and Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

C. DETERMINATION

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because of the incorporated mitigation measures and revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Rebecca M. Pennington
Development Programs Analyst

September 8, 2016

Date



John Bellas
Michael Baker International

September 8, 2016

Date

D. EVALUATION OF ENVIRONMENTAL IMPACTS

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources cited. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to the proposed project. A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards.
- 2) All answers must take account of the whole proposed project, including off-site as well as on-site, cumulative as well as project-level, indirect, and construction as well as operational impacts.
- 3) “Less Than Significant Impact” applies when the proposed project would not result in a substantial and adverse change in the environment. This impact level does not require mitigation measures.
- 4) “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect of the proposed is significant. If there are one or more “Potentially Significant Impact” answers when the determination is made, an Environmental Impact Report (EIR) is required.
- 5) “Potentially Significant Unless Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect of the proposed project from “Potentially Significant Impact” to a “Less Than Significant Impact.” The initial study must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
1. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcrops, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create changes to the topography of a primary or secondary ridgeline unless the project is consistent with the General Plan pertaining to hillside development?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

EXISTING SETTING

Laguna Woods is predominantly built out with residential, commercial and community uses, roads, golf courses and other open space uses, drainage facilities, and other man-made features. The terrain generally consists of gradual and varying slopes, hills, and low-lying areas.

PROJECT IMPACTS AND MITIGATION MEASURES

- a) **Less Than Significant Impact.** Scenic vistas include views of natural features such as watercourses, rock outcrops, natural vegetation, and notable man-made features in the landscape. The City’s General Plan Open Space Element identifies two parcels in the city that afford scenic vistas: a 10-acre parcel adjoining El Toro Road opposite the terminus of Aliso Creek Road and the Southern California Edison right-of-way on the southwesterly edge of the city. In addition, the General Plan Open Space Element states that the approximately 178-acre open space area west of the terminus of Santa Maria Avenue offer “scenic qualities unique to the area.”

The proposed project includes zoning code amendments and zone changes, with no currently proposed changes of the existing land uses. Although the proposed project does not contain any development proposals, future development could take place in the project area. None of the existing or proposed commercially zoned land is in the vicinity of any of the parcels that afford scenic views or offer unique scenic qualities identified in the General Plan. Therefore, the proposed project would not have a substantial adverse effect on a scenic vista and any related impacts would be less than significant.

- b) **No Impact.** The project area is not located adjacent to or near an officially designated state, county, or local scenic highway or an eligible or officially designated route under the California Department of Transportation's (Caltrans) Scenic Highway Program. As shown on the Orange County Assessor's Maps, there is a 16-foot scenic preservation easement along the west side of Moulton Parkway, just north of El Toro Road, in the CC district. The Orange County Assessor's Maps identify an additional scenic preservation easement (i.e., a "21' Scenic Preservation Easement") along the south side of El Toro Road along parcels in the Open Space-Recreation district. The Moulton Parkway easement is currently primarily a landscaped slope and the El Toro Road easement is currently primarily unvegetated to lightly vegetated open space. Given the nature of the easements, no structures would be permitted within either easement area and no scenic resources would be degraded. Therefore, no impact would occur.
- c) **Less Than Significant Impact.** The project area contains a mix of commercial uses and is surrounded by residential, community facilities, open space, and recreational land uses. The proposed project includes zoning code amendments and zone changes, with no currently proposed changes of the existing land uses. The types of uses that would be allowed in the NC, CC, and PA districts are consistent with the existing uses in the project area and are considered visually compatible and, in many cases, complementary to the surrounding uses. Therefore, the proposed project would not substantially degrade the existing visual character or quality of the project area and its surroundings. The proposed project would have a less than significant impact.
- d) **Less Than Significant Impact.** The project area is currently developed with suburban-scale commercial uses that contain a variety of lighting sources, including streetlights, safety lights, building and landscape accent lighting, lighted signs, spillage of interior illumination, and headlights from mobile sources. Lighting is regulated by Section 12.12.120 of the Laguna Woods Municipal Code for street lightning and Section 13.10.040 of the Laguna Woods Municipal Code, which mandates that all exterior lighting be designed and located so that direct light rays are confined to the premises. Although the proposed project does not include any development proposals, future development could take place in the project area that could introduce additional light sources. Such lighting would be subject to the Laguna Woods Municipal Code lighting regulations. Additionally, Laguna Woods Municipal Code Chapter 13.18 contains regulations for off-street parking and Chapter 13.20 contains regulations for signage. Given the existing typical suburban illumination levels in the project area and in the surrounding area, the proposed project would not generate light or glare in a manner that would adversely affect views. Any potential future light and glare impacts would be less than significant.
- e) **No Impact.** The project area contains a mix of commercial uses and is surrounded by residential, community facilities, open space, and recreational land uses. The proposed project does not include any development proposals and would not result in development on a primary or secondary ridgeline. None of the three commercial districts are located on ridgelines. Therefore, no impact would occur.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
2. AGRICULTURE AND FORESTRY RESOURCES. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forestland or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forestland to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

EXISTING SETTING

The project area is located in a predominantly developed suburban area. There is no agricultural land or forestland located in the vicinity.

PROJECT IMPACTS AND MITIGATION MEASURES

a-e) No Impact. The project area is developed with a mix of commercial uses and does not contain agricultural land or forestland. The project area is not located on agricultural land or forestland, nor is there any such land nearby. Therefore, no impact would occur.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
3. AIR QUALITY. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation by exceeding SCAQMD thresholds?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in the movement or grading of earth exceeding 100,000 cubic yards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

EXISTING SETTING

Both the US Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. Those ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called “criteria” pollutants because the health and other effects of each pollutant are described in criteria documents. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas.

The project area is located in a nonattainment basin—the South Coast Air Basin (SoCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which the basin is in nonattainment, which include ozone, coarse particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead.

PROJECT IMPACTS AND MITIGATION MEASURES

a–d, f) Less Than Significant Impact. The proposed project includes zoning code amendments and zone changes, with no currently proposed changes of the existing land uses. In the future, any new development could generate air pollutants during grading and other construction activities and from vehicles accessing the commercial uses. Such emissions could include PM₁₀, PM_{2.5}, precursors of ozone (e.g., nitrogen oxides and volatile organic

compounds), and carbon monoxide. All construction projects would be required to comply with SCAQMD Rules 403 (Fugitive Dust) and 1113 (Architectural Coatings), which would significantly reduce the amount of particulate matter and volatile organic compounds generated by construction activities. Although the proposed project includes zones changes, no development projects are proposed. The specific sites are currently developed with established commercial uses and any future uses would be anticipated to be of a similar nature. As such, potential emissions from operation of future uses of the involved parcels (e.g., emissions from vehicles and maintenance equipment, combustion of natural gas, and other area sources) are anticipated to be of a similar volume and concentration as those currently generated by the City's commercial parcels. Therefore, air quality impacts resulting from adoption of the proposed commercial zoning code amendments and zone changes would be less than significant.

- e) **Less Than Significant Impact.** Odors would be considered significant if the proposed project would result in frequent exposure of members of the public to objectionable odors, which is generally defined as five or more confirmed complaints per year averaged over three years. Although the proposed project includes zones changes, there are no currently proposed changes of the existing land uses. The specific sites are currently developed with established commercial uses and any future uses would be anticipated to be of a similar nature. As such, project impacts as they relate to odors would be less than significant.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Disturb any habitat known or suspected to contain a plant or animal species listed as endangered on such federal and/or state lists?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Disturb any Significant Habitat Area as identified by the City of Laguna Woods?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

EXISTING SETTING

The predominant vegetative community types found in the city include annual grassland, coastal sage scrub, and valley-foothill riparian corridors, in addition to aquatic habitats provided by Aliso Creek and other open waters. Though Laguna Woods is predominantly urbanized, several open space areas remain that provide habitat for wildlife and vegetative biological resources. Certain urbanized areas also provide habitat.

Portions of Laguna Woods support sensitive natural communities that are of concern to state and federal resource agencies. Several special-status species, mostly birds or reptiles, are known to occur or may occur in Laguna Woods, including the federally endangered least Bell's vireo. Those areas are not located in the project area.

Connectivity between open space areas is an important element of wildlife conservation. By joining subregional and regional biological resource areas that might otherwise be fragmented as a result of urbanization, wildlife corridors can help to maintain and re-establish wildlife populations, as well as to increase biodiversity within existing populations. In Laguna Woods, several areas serve as movement corridors for wildlife, especially the generally undisturbed western edge of the city and riparian corridors located throughout Laguna Woods.

Although most of the land within the city limits supported coastal sage and native grasslands at one time, much of the land today, including the project area, is either developed or has been modified or impacted by human activity in the past.

PROJECT IMPACTS AND MITIGATION MEASURES

- a, g) **No Impact.** The proposed project includes zoning code amendments and zone changes, with no currently proposed changes of the existing land uses. The proposed project is located in a predominantly developed suburban area, and the majority of the involved commercial parcels are built out with a variety of uses including auto shops, restaurants, offices, retail centers, parking lots, and streets. No existing or proposed commercial land is located near the largely undeveloped open space along the city's western boundary or along Aliso Creek in the southeastern portion of the city. Given the highly disturbed nature of the project area, the proposed project would not impact any species identified as candidate, sensitive, or special-status in local or regional plans, policies, or regulations, or by the US Fish & Wildlife Service or California Department of Fish & Wildlife. The proposed project would also not disturb any habitat known or suspected to contain a plant or animal species listed on such federal and/or state lists. Therefore, no impact would occur.
- b) **Less Than Significant Impact.** The proposed project is located in a developed area that has been highly disturbed due to commercial-related activities occurring for several decades. The project area does not contain a dominance of native vegetation, as it is all currently used for a mix of commercial uses, rather than open space.

There are four designated sensitive habitats in Laguna Woods according to the General Plan Conservation Element. The project area does not include any part of the sensitive habitats. Given the existing and proposed permitted uses in the NC, CC, and PA districts, as well as the regulatory environment, the proposed project would not result in a significant impact on any riparian habitat or sensitive natural community.

- c) **Less Than Significant Impact.** No blue-line streams occur in the project area, as shown in the San Juan Capistrano, California, US Geological Survey (USGS) 7.5-minute topographic quadrangle map. The main drainage feature in Laguna Woods is Aliso Creek, which traverses the southeastern portion of the city and carries runoff to the Pacific Ocean. Natural and urban runoff from the adjacent hills to the west is conveyed via a culvert drain, which is tributary to San Diego Creek that also flows into the Pacific Ocean. Neither creek runs through the project area. The proposed project does not include any development proposals and, accordingly, would not result in the alteration of drainage facilities. If any potential future improvements on the subject sites involve encroachment into a jurisdictional drainage, project applicants would be required to comply with (at a

minimum) Sections 401 and 404 of the Clean Water Act and Section 1600 et seq. of the California Fish and Game Code. The City is also subject to National Pollutant Discharge Elimination System regulations, which require the City to reduce discharges of pollutants and runoff flow during planning, construction, and use of a site. Given the existing conditions on the commercially zoned property, the allowed uses in the commercial zones, and the regulatory requirements, the proposed project would not result in a significant impact on any federally protected wetlands or jurisdictional drainages.

- d) **No Impact.** The project area is developed and does not provide nursery sites for wildlife. Due to its developed nature, the area does not allow for wildlife movement and is not conducive to functioning as a corridor for migratory wildlife. Regardless, the proposed project would not restrict wildlife movement through the project area, as no development proposals are part of the project. Therefore, no impact would occur.
- e) **Less Than Significant Impact.** Section 4.26.060 of the Laguna Woods Municipal Code requires a permit to remove any significant tree on public or private land. Trees not specifically shown or listed on the tree removal permit would be assumed as not permitted for removal. Future development would be required to comply with the Laguna Woods Municipal Code. Therefore, no significant impact would occur.
- f) **No Impact.** The project area is within the boundaries of the Coastal Subregion of the Orange County Central/Coastal Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP). The project area is not located within a reserve, special linkage, or conservation easement area of the NCCP/HCP and contains no on-site habitat in support of any special-status species. Therefore, no impact would occur.
- h) **Less Than Significant Impact.** As indicated in General Plan Conservation Element Exhibit CO-1, Biological Resource Areas, the project area is not within the Aliso Creek corridor. No coastal sage scrub habitat occurs on-site either, according to General Plan Conservation Element Exhibit CO-2. Therefore, because the project area does not contain any flood hazard zone or significant habitat, and any future encroachment on sensitive habitat would need to comply with applicable federal, state, and local regulations, the proposed project would not cause a significant impact on a significant habitat area.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
5. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Cause modification or demolition of a structure with a category 1, 2, or 3 on the State's Historical List, the City Historical Survey List, or as determined by a Historical Resource Survey?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

EXISTING SETTING

Laguna Woods is a part of a region that was once populated by the Gabrielino and Luiseño Native American communities. It has a strong cultural heritage associated with Spanish missionaries and ranching activities dating back to the early Spanish land grants.

Cultural resources consist of prehistoric and historic sites, structures, and districts or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, or religious reasons.

Archaeology is the study of prehistoric human activities and cultures. Twelve known archeological sites once existed in or immediately adjacent to Laguna Woods; however, all have been destroyed by development, some prior to complete excavation and analysis. The archeological sites contained one isolated prehistoric artifact and a variety of other objects, including lithic scatter, rock shelters/ caves, habitation debris, fire-affected rocks, and bedrock milling features.

Paleontological resources include the fossilized remains of vertebrate and invertebrate organisms, fossil tracks and trackways, and plant fossils. Laguna Woods is underlain by Tertiary bedrock and covered by unconsolidated Quaternary sediments. Approximately 95 percent of Laguna Woods is mapped as paleontologically sensitive with numerous vertebrate fossil localities having been recorded.

Historical resources, as described in CEQA, include buildings, sites, structures, objects, or districts, each of which may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance and be listed or eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, or a local register of historical resources. The first modern dwelling units were constructed during the early 1960s. No buildings or resources in the planning

area are currently listed on the National Register of Historic Places or the California Register of Historic Resources (City of Laguna Woods 2015a).

PROJECT IMPACTS AND MITIGATION MEASURES

a-e) Less Than Significant Impact. The proposed project consists of zoning code amendments and corresponding zone changes, with no currently proposed changes of the existing land uses. The General Plan Conservation Element characterizes historical resources as including “buildings, sites, structures, objects, and districts, each of which may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance and be listed or eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, or a local register of historical resources.”

Identifying a particular building as a historic resource is a formal process, regulated primarily by the federal and state governments. Once identified, historical resources are afforded broad protection under CEQA, based on eligibility for the National Register of Historic Places and the California Register of Historic Resources. Generally, to be identified as a historical resource, a structure must be over 50 years old and possess integrity of location, design, setting, materials, workmanship, feeling, and association. In addition, the structure must meet at least one of the following conditions:

- Is associated with events that have made a significant contribution to the broad patterns of United States or California history and cultural heritage.
- Is associated with the lives of persons important in our past.
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- Has yielded, or may be likely to yield, information important in prehistory or history.

Although the city is relatively new and does not contain any sites included on state or federal historical registries, structures exist in the city that are significant for their historical or cultural value to residents. Direct impacts to cultural resources would not take place under the proposed project, because it does not contain any development proposals. Indirect impacts to cultural resources through modification of historic buildings could take place as a result of future development. Future development that could impact historical resources would be required to comply with Section 10.04.200 of the Laguna Woods Municipal Code, which states that any proposed rehabilitation or repair to a designated historic structure is required to preserve the historic character and design of the structure.

The project area is developed and has been largely disturbed. The project area has a low potential to contain archeological or paleontological resources. Nonetheless, the General Plan Conservation Element includes Goal CO-3 to preserve cultural resources with implementation action CO-3.1A aimed at protecting such resources. Impacts to cultural resources would be less than significant.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
6. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

EXISTING SETTING

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 is the case for most locations in Southern California, Laguna Woods is located in a region that is characterized by moderate to high seismic activity. The city has experienced moderately strong ground shaking due to earthquakes on a number of occasions, both recently and historically. The closest faults likely to produce large earthquakes are the San Andreas, San Jacinto, San Joaquin Hills, Elsinore-Whittier, and Newport-Inglewood.

Three soil associations occur in Laguna Woods: Sorrento-Mocho, Alo Bossanko, and Friant-Cieneba-Exchequer. The Sorrento-Mocho soils include well-drained sandy loams, loams, or clay loams on alluvial fans and floodplains. This soil occurs in the southeastern part of the city along Aliso Creek. Alo Bossanko soils include well-drained clays on coastal foothills. The Alo Bossanko soil association is the most common throughout the city and covers approximately 90 percent of the city. Friant-Cieneba-Exchequer soils are excessively drained and well-drained sand loams, loams, clay loams, gravelly loams, and cobbly loams on coastal foothills. This soil association occurs in the middle of the eastern edge of the city. Soils have the potential to shrink or swell based on a number of variables, such as texture and permeability. The shrink-swell potential of soil can impact the type of development and design of buildings to meet safety and environmental standards. High shrink-swell potential can result in cracking and buckling that affects building structures. The prominent soils in Laguna Woods have moderate shrink-swell potential (USDA 2015).

PROJECT IMPACTS AND MITIGATION MEASURES

a) i) **Less Than Significant Impact.** As detailed in the Laguna Woods General Plan EIR (2002), published geologic maps do not show any active faults in the city. The closest faults likely to produce large earthquakes are the San Joaquin Hills Blind Thrust Fault Zone and the San Andreas, San Jacinto, Elsinore-Whittier, and Newport-Inglewood faults. Based on the City's Local Hazard Mitigation Plan for 2013–2017, the aforementioned faults were identified as being of "particular concern." 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. Additionally, the Norwalk fault is located in the northern part of Orange County, the El Modena fault is located near the city of Orange, and the Peralta Hills fault is located in the Anaheim Hills area (Laguna Woods 2012).

Based on the five earthquake modeling scenarios in the Local Hazard Mitigation Plan, the five earthquake faults identified as being of particular concern could result in potential impacts, ranging from very light damage (from the San Jacinto Fault Zone) to moderate/heavy damage (from the San Joaquin Hills fault). Ground rupture due to faulting is considered unlikely. Therefore, the proposed project would not cause significant impacts related to exposure of people or structures to ground rupture.

ii) **Less Than Significant Impact.** See Issue a) i), above. While the project area is in a seismically active region, compliance with applicable building codes is proven to substantially lessen the risk for adverse impacts associated with strong seismic shaking. The City has adopted the California Building Code, and the City's Planning and Environmental Services Department is responsible for plan reviews and construction inspections, which help to ensure that all new structures in the city are built safely, consistent with all applicable building codes, and in a manner that limits adverse impacts from seismic ground shaking. Therefore, impacts would be less than significant.

iii) **Less Than Significant Impact.** Liquefaction occurs when loose sand and silt that is saturated with water behaves like a liquid when shaken by an earthquake. Liquefaction can result in the following types of seismic-related ground failure:

- Loss of bearing strength – soils liquefy and lose the ability to support structures
- Lateral spreading – soils slide down gentle slopes or toward stream banks
- Flow failures – soils move down steep slopes with large displacement
- Ground oscillation – surface soils, riding on a buried liquefied layer, are thrown back and forth by shaking

- Flotation – floating of light buried structures to the surface
- Settlement – settling of ground surface as soils reconsolidate
- Subsidence – compaction of soil and sediment

Three factors are required for liquefaction to occur: loose, granular sediment; saturation of the sediment by groundwater; and strong shaking. One existing community commercial area adjacent to Calle Aragon on the east side of the city is considered potentially susceptible to liquefaction based on seismic hazard zones data obtained from the Local Hazard Mitigation Plan. The City has adopted the California Building Code, and the City's Planning and Environmental Services Department is responsible for plan reviews and construction inspections, which help to ensure that all new structures in the city are built safely, consistent with all applicable building codes, and in a manner that limits adverse impacts from liquefaction. Therefore, the proposed project would not cause significant impacts related to the exposure of people or structures to liquefaction.

- iv) **Less Than Significant Impact.** As indicated in the Local Hazard Mitigation Plan, landslides are considered to pose a low to moderate risk to the city with low impact and medium probability. Landslide zones cover only 3.64 percent of the acreage in the city. Areas known to be susceptible to earthquake-induced landslides include two minor portions of the community commercial district in the center of the city near the intersection of Moulton Parkway and El Toro Road. The City has adopted the California Building Code, and the City's Planning and Environmental Services Department is responsible for plan reviews and construction inspections, which ensure that all new structures in the city are built safely, consistent with the Building Code, and in a manner that limits significant adverse impacts from landslides. Therefore, the proposed project would not result in significant impacts related to the exposure of people or structures to landslides.
- b) **Less Than Significant Impact.** The proposed project consists of zoning code amendments and zone changes, with no currently proposed changes of the existing land uses. Any future construction activities would be subject to the erosion control requirements of the Laguna Woods Municipal Code (e.g., Sections 10.06.300 and 10.06.310). Compliance with applicable Regional Water Quality Control Board requirements and Sections 10.06.300 and 10.06.310 of the Laguna Woods Municipal Code would minimize soil erosion and loss of topsoil. Therefore, impacts would be less than significant.
- c) **Less Than Significant Impact.** The potential for landslides in the project area is addressed in Issue a) iv) and was determined to be less than significant. The potential for lateral spreading, liquefaction, subsidence, and other types of ground failure or collapse is addressed under Issue a) iii) above and was also determined to be less than significant.
- d) **Less Than Significant Impact.** Expansive or shrink-swell soils are soils that swell when subjected to moisture and shrink when dry. Expansive soils typically contain clay minerals that attract and absorb water, greatly increasing the volume of the soil. That increase in volume can cause damage to foundations, structures, and roadways. Any future development would be required to comply with the California Building Code. Therefore, the project would not result in significant impacts related to expansive soils.
- e) **No Impact.** Any future development that includes bathroom and/or kitchen facilities would be required to be connected to the local wastewater purveyor's wastewater system. No septic tank or alternative wastewater disposal system would be necessary. Therefore, no impact would occur.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
7. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

EXISTING SETTING

Since the early 1990s, scientific consensus has held that the world’s population is releasing greenhouse gases (GHG) faster than the earth’s natural systems can absorb them. These gases are released as byproducts of fossil fuel combustion, waste disposal, energy use, land-use changes, and other human activities. This release of gases, such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth’s climate system.

For most nonindustrial development projects, motor vehicles make up the bulk of GHG emissions produced on an operational basis. The primary GHGs emitted by motor vehicles include carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons. **Table 4** provides descriptions of the primary GHGs attributed to global climate change, including a description of their physical properties, primary sources, and contribution to the greenhouse effect.

TABLE 4
GREENHOUSE GASES

Greenhouse Gas	Description
Carbon dioxide (CO ₂)	CO ₂ is a colorless, odorless gas and is emitted in a number of ways, both naturally and through human activities. The largest source of CO ₂ emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO ₂ emissions. The atmospheric lifetime of CO ₂ is variable because it is so readily exchanged in the atmosphere. ¹
Methane (CH ₄)	CH ₄ is a colorless, odorless gas that is not flammable under most circumstances. CH ₄ is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. CH ₄ is emitted from both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (livestock intestinal fermentation and manure management), biomass burning, and waste management. These activities release significant quantities of CH ₄ to the atmosphere. Natural sources of CH ₄ include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. Methane's atmospheric lifetime is about 12 years. ²
Nitrous oxide (N ₂ O)	N ₂ O is a clear, colorless gas with a slightly sweet odor. N ₂ O is produced by natural and human-related sources. Primary human-related sources are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N ₂ O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N ₂ O is approximately 120 years. ³

Sources: ¹EPA 2011a, ²EPA 2011b, ³EPA 2010

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Gases with high global warming potential, such as hydrofluorocarbons, perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆), are the most heat-absorbent. CH₄ traps over 21 times more heat per molecule than CO₂, and N₂O absorbs 310 times more heat per molecule than CO₂. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO₂e), which weight each gas by its global warming potential. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

PROJECT IMPACTS AND MITIGATION MEASURES

- a) **Less Than Significant Impact.** The proposed project does not include any development proposals; therefore, no direct impacts related to GHG emissions would occur. Indirect impacts resulting from future development approved under the amended code and revised zoning map could cause increases in GHG emissions.

Construction Emissions

CEQA does not require an agency to evaluate an impact that is "too speculative," provided that the agency identifies the impact, engages in a "thorough investigation" but

is “unable to resolve an issue,” and then discloses its conclusion that the impact is too speculative for evaluation (CEQA Guidelines Section 15145, Office of Planning and Research Commentary). Pursuant to CEQA Guidelines Section 15146(b), “An EIR on a project such as the adoption or amendment of a comprehensive zoning ordinance or a local general plan should focus on the secondary effects that can be expected to follow from the adoption or amendment, but the EIR need not be as detailed as an EIR on the specific construction projects that might follow.”

Construction of future development permitted by the zoning code amendments and zone changes would result in GHG emissions from the use of construction equipment. However, details of these future construction activities are unknown at this time and, therefore, cannot be quantified.

Operational Impacts

Area sources include emissions from natural gas combustion, hearths (woodstoves and fireplaces), landscaping equipment, consumer products, and architectural coatings. Indirect sources include emissions from energy consumption and water conveyance. Mobile sources include emissions from passenger vehicles and delivery trucks. Typically, mobile sources are the primary contributor of GHG emissions. However, most development would take place on an infill or redevelopment basis due to the city’s predominantly developed nature. As details of future development are not available at this time, potential GHG emissions from operation of approved uses cannot be quantified. Nonetheless, future development would be limited in scope due to the predominantly developed nature of the project area and the limitations afforded by the development standards in the Laguna Woods Municipal Code.

As such, project impacts due to GHG emissions would be less than significant.

- b) **Less Than Significant Impact.** The proposed project is subject to compliance with the Global Warming Solutions Act [Assembly Bill (AB) 32] and any other regulations aimed at reducing GHG emissions. As identified under Issue a), GHG emissions would be determined on a project-by-project basis for any projects over 10,000 square feet, while other project would be limited in scope due to the predominantly developed nature of the project area and existing development standards.

Mitigation Measures

None Required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

EXISTING SETTING

A material is considered hazardous if it appears on a list of hazardous materials prepared by one or more federal, state, or local agencies or if it has characteristics defined as hazardous by such an agency or agencies.

A hazardous material is defined by California Health and Safety Code Section 25501 as follows:

“Hazardous material” means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

A hazardous material is defined in Title 22, Section 662601.10, of the California Code of Regulations as follows:

A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

The release of hazardous materials into the environment could potentially contaminate soils, surface water, and groundwater supplies.

Most hazardous materials regulation and enforcement in Orange County is managed by the Orange County Health Care Agency and the Orange County Fire Authority. Both agencies refer large cases of hazardous materials contamination or violations to the responsible Regional Water Quality Control Board (RWQCB), the California Department of Toxic Substances Control (DTSC), and/or other agencies as appropriate. It is not uncommon for other agencies, such as both the federal and state Occupational Safety and Health Administrations (OSHA), to become involved when issues of hazardous materials arise. Under California Government Code Section 65962.5, both the DTSC and the State Water Resources Control Board (SWRCB) are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites.

A search of the DTSC and SWRCB databases identified one hazardous waste violation in the project vicinity north of El Toro Road and west of Moulton Parkway associated with a leaking underground tank cleanup site that is currently under remediation (DTSC 2016; SWRCB 2016).

PROJECT IMPACTS AND MITIGATION MEASURES

- a) **Less Than Significant Impact.** Many types of businesses use chemicals and hazardous materials, and their routine business operations involve chemicals that are manufactured, warehoused, or transported. Currently, a variety of existing business operations in the city and in the project area use, store, or transport hazardous substances, as well as generate hazardous waste. The secondary activities that would occur with commercial uses (e.g., building and landscape maintenance) would also involve the use of hazardous materials.

The proposed project would not directly create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, as no development proposals are included in the proposed project. Further, the proposed project would not change regulations and oversight related to hazardous materials. Future projects or land use decisions allowed through a conditional use permit would undergo

CEQA review on a project-by project basis. Uses allowed by right, like drug stores, could require the routine transport of hazardous materials. Nonetheless, all development would be required to comply with existing regulations regarding the routine business operation and transportation. As such, impacts would be less than significant.

- b) **Less Than Significant Impact.** Human exposure to a hazardous substance could occur through accidental release. Incidents that result in an accidental release of a hazardous substance into the environment can cause contamination of soil, surface water, and groundwater, in addition to any toxic fumes that might be generated. If not cleaned up properly, the hazardous substances could migrate into the soil or enter a local stream or channel, causing contamination of soil and water. Human exposure to contaminated soil or water can have potential health effects depending on a variety of factors, including the nature of the contaminant and the degree of exposure.

Although the proposed project does not include any development proposals, future development could result in the accidental release of hazardous materials. Future projects or land use decisions allowed through a conditional use permit would undergo CEQA review on a project-by project basis. Uses allowed by right, like drug stores, could utilize and/or store hazardous materials. Nonetheless, all development would be required to comply with existing regulations regarding accidental release of hazardous materials. As such, impacts would be less than significant.

- c) **Less Than Significant Impact.** See Issue a) above. The proposed project does not include any components that would directly result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste since no development proposals are included. However, Ocean View Non-Public School and preschools at Geneva Presbyterian Church, Laguna Country United Methodist Church (Niguel Children's Center), and the Lutheran Church of the Cross are located within a quarter mile of the project area. As future development would be required to comply with federal, state, and local regulations regarding transport and handling of hazardous materials, impacts would be less than significant.

- d) **Less Than Significant Impact.** The proposed project does not include any development proposals. Under California Government Code Section 65962.5, both the DTSC and the SWRCB are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. According to a search of the GeoTracker database (SWRCB 2016), no active federal superfund sites are located in Laguna Woods. While there is a single leaking underground storage tank cleanup site in the existing Community Commercial district at Arco Station #5831, 24181 Moulton Parkway in Laguna Woods, it is currently under remediation. Therefore, this impact would be less than significant.

- e, f) **No Impact.** The project area is not located within 2 miles of an airport or a private airstrip. The nearest airport, John Wayne Airport, is more than 10 miles away. Therefore, no impact would occur.

- g) **No Impact.** The proposed project does not include any roadway modifications and as such, there would be no interference with established evacuation routes. Use of the project area for commercial uses is not anticipated to result in any interference with either the County of Orange/Orange County Operational Area's emergency response plans or the City's Emergency Operation Plan. In addition, any future development would be

subject to fire codes and to corresponding review by the Orange County Fire Authority. Therefore, no impact would occur.

- h) No Impact.** The project area is not located in an area that is adjacent to or intermixed with wildlands, nor is it located in any one or more of the city's designated fire hazard severity zones. Therefore, no impact would occur.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
9. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood hazard Boundary of Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Place unprotected structures for human occupancy and major roadways in a 100-year floodplain?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
k) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
l) Disturb, or encroach into, any river, river tributary, riparian habitat, stream, or similar waterway identified on a US Geological Survey map as a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
"blue-line" watercourse, or any waterway otherwise identified as a significant resource by the City of Laguna Woods?				

EXISTING SETTING

Laguna Woods straddles three watersheds: Newport Bay, Aliso Creek, and Laguna Coastal Streams. The proposed project is located in the Newport Bay and Aliso Creek watersheds.

The project area is located within the jurisdictional boundaries of the Santa Ana Regional Water Quality Control Board and the San Diego Regional Water Quality Control Board (collectively, the RWQCBs). The RWQCBs develop and enforce water quality objectives and implementation plans that safeguard the quality of water resources. Specifically, the RWQCBs identify potential water quality problems, confirm and characterize water quality problems through assessment, remedy problems through imposing or enforcing appropriate measures, and monitor problem areas to assess effectiveness of remedial measures. Remedies for problems include prevention and cleanup. Common means of prevention are the issuance of National Pollutant Discharge Elimination System (NPDES) permits, waste discharge requirements, and discharge prohibitions and restrictions. Cleanup is implemented through enforcement measures such as Cease and Desist and Cleanup and Abatement orders. The project area is already urbanized and developed with commercial zones with sufficient stormwater drainage in place.

Laguna Woods is urbanized and the project area is developed. The city has existing maintained storm drainages including those on the south side of Ridge Route Drive and in Moulton Parkway; Santa Maria Avenue (excluding the portion in Laguna Hills), and El Toro Road. Runoff from the development areas currently sheet flows into respective storm drain facilities in Ridge Route Drive, Moulton Parkway, and El Toro Road.

PROJECT IMPACTS AND MITIGATION MEASURES

- a) **Less Than Significant Impact.** The proposed project consists of zoning code amendments and zone changes, with no currently proposed changes of the existing land uses. Sections 10.06.300 through 10.06.320 of the Laguna Woods Municipal Code contain the City's erosion and sediment control and water quality requirements. The implementation of various best management practices (BMPs) is required during construction.

The State Water Resources Control Board requires dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are a part of a larger common plan of development that in total disturbs 1 or more acres, to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. Thus, any improvement of at least 1 acre would be required to prepare a stormwater pollution prevention plan (SWPPP) pursuant to RWQCB standards and subject to RWQCB review for each phase of the project. SWPPPs are required to include measures designed to reduce or eliminate erosion and runoff into waterways. BMPs include wattles, covering of stockpiles, silt fences, and other physical means of slowing stormwater flow from the graded areas to allow sediment

to settle before entering stormwater channels. The methods used would be described in the SWPPPs and may vary, depending on project- and site-specific circumstances.

Construction and operational activities from future development would be required to comply with all applicable federal, state, and local standards. Additionally, through the City's development review process, future development would be evaluated for potential water quality impacts from construction and operational activities. As such, the proposed project would not result in violation of any water quality standards or waste discharge requirements in the city. Proposed project impacts to water quality would be less than significant.

- b) **No Impact.** As documented in the City's General Plan EIR, no groundwater recharge areas are located in or in the immediate vicinity of the city. Therefore, no impact would occur.
- c) **Less Than Significant Impact.** No blue-line streams occur in the project area, as shown in the San Juan Capistrano, California, USGS 7.5-minute topographic quadrangle map. Therefore, rivers or streams are not at risk for substantial erosion on- or off-site. The project area is predominantly built out and contains existing stormwater infrastructure. The proposed project does not include any development proposals and, as such, there would be no substantial erosion or siltation due to the modification of drainage patterns. Any such changes, including future development, would be required to comply with the City's Grading Code (Laguna Woods Municipal Code Chapter 10.06), which addresses drainage, erosion, and stormwater. Therefore, the proposed project would have a less than significant impact.
- d) **Less Than Significant Impact.** The proposed project consists of zoning code amendments and corresponding zone changes, with no currently proposed changes of the existing land uses. According to the General Plan Safety Element, the project area is not located in a designated 100-year flood zone (Laguna Woods 2014). Further, Orange County has a Drainage Area Management Plan and the City has a Local Implementation Plan, which ensure that all new development and significant redevelopment incorporates appropriate site design, source control and treatment control BMPs to address specific water quality issues, and mandates that construction sites implement regulatory practices that address the control of construction related pollutants discharges including erosion, sediment control, hazardous materials, and waste management (County of Orange, the Cities of Orange County, and the Orange County Flood Control District 2003). Therefore, the proposed project would have a less than significant impact on drainage, runoff, and flooding.
- e) **Less Than Significant Impact.** See responses to Issues a), c), and d) of this subsection. The proposed project does not include any development proposals. Further, according to Section 4.14.040 of the Laguna Woods Municipal Code, all new development and significant redevelopment within the city is to be undertaken in accordance with any conditions and requirements that are reasonably related to the reduction of pollutants in stormwater runoff from the project site. If the City determines that project implementation will have a de minimus impact on the quality of stormwater runoff, then the City may issue a waiver of the requirement for compliance with the development project guidance. Additionally, the project area is developed; therefore, stormwater infrastructure is already in place and the proposed project is unlikely to create or pollute significant amounts of runoff water that would exceed the capacity of the stormwater drainage system.

In accordance with applicable National Pollutant Discharge Elimination System permits, the City is required to implement BMPs outlined in the Drainage Area Management Plan and its Local Implementation Plan. Future development in the project area would be required to be reviewed by the City to confirm that there would be no significant change in site runoff and to identify the specific drainage/water quality control measures required to meet the requirements of the City's Local Implementation Plan. As the project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, the impact would be less than significant.

- f) **Less Than Significant Impact.** See discussion in Issues a) and e) of this subsection and Issue b) of subsection 6, Geology and Soils. The proposed project would have a less than significant impact.
- g-i) **No Impact.** According to the General Plan Safety Element, no portion of the project area is located within a 100-year floodplain (Laguna Woods 2014). Therefore, the project would not result in the development of any housing or structures in a 100-year flood zone and no impact would occur.
- j) **No Impact.** According to the General Plan Safety Element, the project area is not located within a 100-year floodplain and no dam or levee inundation zones affect the city (Laguna Woods 2014). Therefore, the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam, and no impact would occur.
- k) **No Impact.** The project area is located over 5 miles from the Pacific Ocean; therefore, the project is not subject to tsunami hazards. There are no water bodies or water storage facilities in the vicinity of the project area that could flood the sites in the event of seismically induced seiche conditions. Therefore, no impact would occur.
- l) **No Impact.** The project area does not contain any waterways identified on a USGS map as "blue-line" watercourses or as a significant resource by the City. Therefore, no impact would occur.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
10. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

EXISTING SETTING

The primary land use plan for the project area is the City’s General Plan Land Use Element, which was last updated in 2010. For more information on the proposed project and its various land use components, please refer to earlier sections of this document.

PROJECT IMPACTS AND MITIGATION MEASURES

- a) **No Impact.** The proposed project consists of zoning code amendments and corresponding zone changes, with no currently proposed changes of the existing land uses. No development proposals are included, nor are physical development standards proposed for significant amendment. Therefore, no impact would occur.
- b) **No Impact.** The proposed zone changes and zoning code amendments would not supersede any other regulations or requirements adopted or imposed by either the federal or state governments. While it would supersede certain existing City plans and regulations, this is a City-initiated project and no conflict has been identified. Therefore, the proposed project would not conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and no impact would occur.
- c) **No Impact.** The project area is within the boundaries of the Coastal Subregion of the Orange County Central/Coastal Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP). The project area is not located within a reserve, special linkage, or conservation easement area of the NCCP/HCP and contains no on-site habitat in support of any special-status species. Therefore, the project would not conflict with the provisions of the NCCP/HCP and no impact would occur.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
11. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

EXISTING SETTING

According to the California Department of Conservation’s Surface Mining and Reclamation Land Classification Maps, a portion of Laguna Woods is designated Mineral Resource Zone 3, indicating that the significance of mineral resources cannot be evaluated using available data (California Geological Survey 2012). The balance of Laguna Woods is designated as Mineral Resource Zone 1, meaning that available geologic information indicates that no significant mineral deposits or a minimal likelihood of significant mineral deposits.

PROJECT IMPACTS AND MITIGATION MEASURES

a, b) No Impact. No known mineral resources are located in the project vicinity (Laguna Woods 2002). Therefore, the proposed project would not adversely affect the availability of a known mineral resource and no impact would occur.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
12. NOISE. Would the project result in:				
a) The exposure of persons to, or the generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) The exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, exposure of people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, exposure of people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

EXISTING SETTING

Noise is defined as “unwanted sound.” Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm, or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies that are audible to the human ear.

PROJECT IMPACTS AND MITIGATION MEASURES

a-d) Less Than Significant Impact. The proposed project consists of zoning code amendments and corresponding zone changes, with no currently proposed changes of the existing land uses. In the future, new or expanded uses could generate noise during construction and from activities occurring on the sites. Sections 7.08.060 and 7.08.070 of the Laguna Woods Municipal Code establish the City’s exterior and interior noise standards, respectively. Future activities in the project area would be required to comply with the City’s standards. Noise generated during construction activities would be considered exempt pursuant to Section 7.08.080 of the Laguna Woods Municipal Code, provided the activities do not take place between the hours of 8 p.m. and 7 a.m. on weekdays, including Saturdays, or at any time on Sundays or federal holidays. Future projects’ compliance with applicable

regulations, including the Laguna Woods Municipal Code, would substantially minimize construction and operational noise. Therefore, the project would not expose people to noise levels in excess of standards established in the General Plan or noise ordinance or to applicable standards of other agencies; would not generate excessive groundborne vibration or noise levels; would not cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; and would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. No significant impacts would occur.

e, f) No Impact. The project area is located more than 2 miles from a public airport and is not in the vicinity of a private airstrip. Therefore, no impact would occur.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
13. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

EXISTING SETTING

The California Department of Finance (2015) estimated the city's population as of January 1, 2015 at 16,652.

PROJECT IMPACTS AND MITIGATION MEASURES

- a) **No Impact.** The project area is located in an established suburban community and no new roads or extensions of existing roads are proposed. The proposed project does not include the construction of any new homes or businesses, nor would the proposed project permit the construction of homes beyond the requirements of State law. Therefore, no increase in population would occur as a result of the proposed project.
- b) **No Impact.** No residences would be displaced or removed as a result of the proposed project. Therefore, no impact would occur.
- c) **No Impact.** As discussed under Issue b), the proposed project does not involve the displacement or relocation of any housing and would therefore not displace any people or necessitate the construction of any replacement housing. Therefore, no impact would occur.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
14. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

EXISTING SETTING

Fire Protection

The Orange County Fire Authority provides fire prevention, suppression, and paramedic services to Laguna Woods. The city is primarily served by Station No. 22 at 24001 Paseo de Valencia in Laguna Woods.

Police Protection

The City of Laguna Woods contracts with the Orange County Sheriff’s Department for police services, which are generally provided from the Aliso Viejo Substation at 11 Journey in Aliso Viejo. Private security guards patrol Laguna Woods Village.

Schools

The Saddleback Valley Unified School District operates elementary, intermediate, and high schools serving the project area.

Parks

The City of Laguna Woods operates and maintains all or part of three public parks: City Centre Park, Ridge Route Linear Park/“A Place for Paws” Dog Park, and Woods End Wilderness Preserve. Woods End Wilderness Preserve is currently leased to OC Parks for inclusion in the Laguna Coast Wilderness Park.

PROJECT IMPACTS AND MITIGATION MEASURES

a, b) Less Than Significant Impact. Future development could increase the demand for fire and police protection services in the city and while not anticipated, could result in the need for improvements to existing facilities or increases in staffing and equipment, depending on the volume and intensity of development. The environmental impacts associated with the provision of new or physically altered facilities would be dependent on the location

and nature of the proposed facilities, and such additions requiring conditional use permits would undergo separate environmental review. Additionally, future development would be subject to compliance with applicable federal, state, and local regulations governing the provision of fire protection services (e.g., fire access, fire flows, and hydrants).

The Orange County Fire Authority would impose standard conditions of approval, which would ensure that individual project impacts on fire protection services are reduced to a less than significant level. Compliance with General Plan strategies and actions, and approval of subsequent project-specific secured fire and police protection agreements, would reduce impacts to fire and police protection services to a less than significant level.

- c-e) No Impact.** The proposed project does not propose any housing and would not include any other components that would result in an increased demand for schools, parks, or other public services, such as libraries. The proposed project would include large pervious open spaces as a permitted use in the PA district, which may provide for limited passive recreational opportunities for users of the buildings in that district. Regardless, given the limited increase in demand, if any, for schools, parks, or other public facilities that would result from the proposed code amendments and zone changes, there would be no need for additional facilities to maintain acceptable service ratios and no impact would occur.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
15. RECREATION. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

EXISTING SETTING

Laguna Woods was nearly built out at the time of its incorporation in 1999. Prior to incorporation, development proceeded pursuant to Orange County's Rossmoor Leisure World Planned Community zoning. Recreational facilities were developed for the exclusive use of residents in Laguna Woods Village. Since its incorporation, the City has begun to operate and maintain all or a part of three public parks: City Centre Park, Ridge Route Linear Park/"A Place for Paws" Dog Park, and Woods End Wilderness Preserve. Woods End Wilderness Preserve is currently leased to OC Parks for inclusion in the Laguna Coast Wilderness Park.

PROJECT IMPACTS AND MITIGATION MEASURES

- a) **Less Than Significant Impact.** The proposed project would not develop residential uses. The proposed project would not increase the demand on parks and recreational facilities such that there would be substantial physical deterioration of a facility or demand for new facilities. Therefore, impacts would be less than significant.
- b) **Less Than Significant Impact.** The proposed project consists of zoning code amendments and corresponding zone changes, with no currently proposed changes of the existing land uses. Future improvements would be governed by the permitted uses and development standards in the Laguna Woods Municipal Code. The proposed project would include large pervious open spaces as a permitted use in the PA district, which may provide for limited passive recreational opportunities for users of the buildings in that district. Regardless, given the limited increase in demand, if any, for recreational facilities that would result from the proposed code amendments and zone changes, the project is not expected to result in the need for construction or expansion of recreational facilities. The proposed project does not include any development projects. Therefore, impacts would be less than significant.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
16. TRANSPORTATION/TRAFFIC. Would the project:				
a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Increase traffic by 1 percent or more at any location where level of service for road links and level of service for intersections is D (Level of Service D)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

EXISTING SETTING

Most of the commercially zoned land in the city is located along Moulton Parkway and/or El Toro Road, which are the two major public roadways bisecting the city. Both roadways carry substantial volumes of regional traffic (that is, traffic passing through Laguna Woods from one part of the county to another without stopping in the city). Many local surface streets in the city are private and are a part of the gated community of Laguna Woods Village.

PROJECT IMPACTS AND MITIGATION MEASURES

a, b, g) Less Than Significant Impact. The proposed project includes zoning code amendments and zone changes, with no currently proposed changes of the existing land uses. In the future, new or expanded commercial uses could generate new vehicle trips. Due to the developed nature of the project area and the existing and proposed permitted uses, it is expected that the majority of future commercial development would primarily serve Laguna Woods residents and a broader population substantially similar to the existing. In addition, due to the variation in types of existing and proposed permitted commercial activities and the City's demographics, trips would be spread over the course of the day and would not be concentrated during peak hours. Commercial developments in the project area that are primarily intended to serve a substantially similar population as existing are not expected to significantly impact the performance of the circulation system or the level of service at nearby intersections.

Increasing the potential for the expansion of commercial uses such as fast-food establishments, dance halls, parking structures, drug stores, and professional offices could attract people from outside of Laguna Woods. The proposed project does not include any development proposals. Future development allowed under the proposed project would be limited in scope and intensity as a result of the limitations embedded in the proposed zoning code amendments, the existing development standards in the Laguna Woods Municipal Code, and the developed nature of the project area. As such, impacts would be less than significant.

c) No Impact. The proposed project would not affect air traffic volumes. The proposed project is not located within the boundaries of an airport land use plan area or in the approach or departure pattern of any airport. Therefore, no impact would occur.

d) Less Than Significant Impact. The project area is predominantly developed. Although the project does not propose any development, future development allowed under the proposed zoning code amendments and zone changes could modify ingress and egress routes based on project siting and size. Nonetheless, because of the developed nature of the project area, the limitations included in the proposed zoning code revisions, and the development standards in the Laguna Woods Municipal Code, future development would be limited in size and scope, mainly in the form of infill and redevelopment. In addition, new and/or modified ingress and egress routes would be subject to typical building and engineering standards. As such, impacts would be less than significant.

e) Less Than Significant Impact. Emergency vehicles generally access the city via Moulton Parkway and El Toro Road. These streets and side streets are already utilized for access to existing facilities and would continue to accommodate through movements of emergency vehicles. Although the project does not include any development proposals, future development could impact emergency vehicle access based on project siting and size. Nonetheless, because of the developed nature of the project area, future development would be limited in size and scope, mainly in the form of infill and redevelopment. As such, impacts would be less than significant.

f) No Impact. Orange County Transportation Authority (OCTA) bus stops are located in close proximity to the project area. Additionally, the City's largest residential community, Laguna Woods Village, provides three types of private transportation services to its residents and their guests: a fixed-route service, a demand-responsive service, and service with specially equipped lifts. Other residential communities offer limited demand-responsive service. The

proposed project would not conflict with policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities and would not otherwise decrease the performance or safety of such facilities. Therefore, no impact would occur.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
17. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in the inability to maintain a water system, on- or off-site, which is capable of meeting the daily and peak demand of Laguna Woods residents and businesses, including the provision of adequate fire flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Result in the inability to maintain a wastewater collection treatment and disposal system, which is capable of meeting the daily and peak demands of Laguna Woods residents and businesses?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

EXISTING SETTING

Water

The El Toro Water District (ETWD) provides water to consumers in Laguna Woods. As a constituent member of the Municipal Water District of Orange County, the 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 ETWD service area and again by pipeline into Laguna Woods.

Wastewater

The ETWD owns and operates sanitary sewer lines serving Laguna Woods. The ETWD operates a treatment plant in the city that currently recycles 10 percent of all wastewater for beneficial reuse, but anticipates recycling 30 to 35 percent 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. Biosolids from ETWD sewers are transported by truck to the South Orange County Wastewater Authority's Regional Treatment Plant.

Solid Waste

Waste Management of Orange County currently provides solid waste collection services. Services are separately contracted for hazardous waste and sharps collection. Waste that is not recycled or otherwise disposed of is transported to the Frank R. Bowerman Landfill, located approximately 4 miles north of Interstate 5 in Irvine. The 725-acre Frank R. Bowerman Landfill opened in 1990 with 534 acres permitted for refuse disposal and is scheduled to close in approximately 2053 (Orange County Waste and Recycling 2015). Most green waste generated in Laguna Woods Village is either chipped and reused or composted within the community.

PROJECT IMPACTS AND MITIGATION MEASURES

a, b, d-g) Less Than Significant Impact. The proposed project consists of zoning code amendments and corresponding zone changes, with no currently proposed changes of the existing land uses. Although the proposed project does not include development proposals, future development would take place as allowed under the project. All commercial zones in Laguna Woods are already urbanized and developed with water and wastewater infrastructure in place. Any future development would be required to comply with California Building Code requirements regarding sustainable practices. Such measures would include updated and water efficient fixtures, which would reduce the amount of water used for new development. Future development would also be required to comply with all wastewater treatment provisions, as enforced by the RWQCBs, and therefore impacts to wastewater treatment requirements would be less than significant.

Based on the ETWD's 2010 Urban Water Management Plan (UWMP), Laguna Woods makes up about 36 percent of the ETWD service area, approximately 1,910 acres of the 5,350 total acres. It is the only city that is served by the El Toro Water District alone. In 2015, the ETWD estimated that generally commercial uses require 1,175 acre-feet per year of water for project operations, or about 12 percent of the water demand compared to other sectors. The project area is fully served by the ETWD, and it is estimated that future development would be accommodated by the current capacity. According to the UWMP, the ETWD's current capacity is 136.5 million gallons distributed among six reservoirs. While the ETWD's population area served has increased by 2 percent in five years, water demand has decreased by 15 percent. These figures illustrate the ETWD's efforts to promote water efficiency, such as its 2014 effort to regulate the number of days per week people can water their lawns—three day per week in the summer season and one day per week during the winter.

In the 2010 UWMP, the El Toro Water District acknowledges that Laguna Woods has potential development and redevelopment projects that would increase both water and sewer demands, and the ETWD plans to designate tens of thousands of extra gallons of water to the city. The ETWD is also in the process of creating a recycled water distribution system that could increase recycled water supply by 750 acre-feet per year. Furthermore, the ETWD puts to beneficial use approximately 7 percent of the wastewater it treats, and its primary use is irrigation on the Laguna Woods Village Golf Course (ETWD 2010).

As previously mentioned, CEQA does not require the analysis of impacts that are too speculative. Although the proposed project does not include any development projects, future projects allowed under the zone amendments would require water and wastewater services. Details of those future needs are unknown at this time and therefore cannot be quantified. Nonetheless, CEQA Guidelines Section 15155 defines a commercial office building “water-demand project” as a project that would employ more than 1,000 persons or having more than 250,000 square feet of floor space. Due to the predominantly built out nature of the project area and existing and proposed development standards, it is unlikely that a project of that size would be developed in the project area. As such, impacts would be less than significant.

- c) **Less Than Significant Impact.** Any increase in runoff from development in the project area would be subject to the Orange County Drainage Area Management Plan and the City’s Local Implementation Plan, which regulate discharges into the storm drain system, construction, and urban runoff. The proposed project does not include any development proposals that would result in the construction of new or expanded stormwater drainage facilities that could cause significant impacts. Further, any future development would be required to comply with federal, state, and local regulations regarding stormwater quality and drainage. As such, impacts would be less than significant.

- h) **Less Than Significant Impact.** The closest landfill to the city is the Frank R. Bowerman Landfill, which is located approximately 13 miles from the project area in Irvine, California. The landfill is permitted to receive a daily maximum of 11,500 tons per day (Orange County Waste and Recycling 2015). According to Orange County Waste and Recycling, the landfill has a current capacity of 11,500 tons per day and is scheduled to reach overall capacity and close in 2053. The landfill is approximately 725 acres with about 534 acres to be used for waste disposal (Orange County Waste and Recycling 2015). It is one of the largest landfills in the country, one of the first with a composite liner system to protect groundwater, and is regulated by CalRecycle.

Although the proposed project does not contain any development proposals, future development could take place in the project area. Because of the developed nature and limited size of the project area, it is not expected that future development would generate sufficient waste to exceed existing capacity at the regional landfill. Additionally, the City currently has a mandatory recycling program for commercial businesses. In accordance with California Assembly Bill 341 and Assembly Bill 1826, the City mandates that businesses that generate more than four cubic yards of trash per week implement a recycling plan and that businesses that generate a certain amount of organic waste implement an organic recycling plan. By complying with existing regulations, the proposed project would have a less than significant impact on landfills.

- i) **No Impact.** Compliance with all applicable statutes and regulations, including those for solid waste collection and disposal, is mandated. The proposed project does not include

any changes in land use or other components that would not comply with the law. Therefore, no impact would occur.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
18. MANDATORY FINDINGS OF SIGNIFICANCE. Would the project:				
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

PROJECT IMPACTS AND MITIGATION MEASURES

- a) **Less Than Significant Impact.** The proposed project would not impact any sensitive plants, plant communities, fish, wildlife, or habitat for any sensitive species, as discussed in the Biological Resources section of this document. Impacts to archaeological and paleontological resources are considered unlikely. No environmental hazards were identified as part of the analysis of the proposed project. The proposed project would not degrade the quality of the environment or impact any habitat or species and would not impact important examples of California history and prehistory.
- b) **Less Than Significant Impact.** When considering the proposed project in combination with other past, present, and reasonably foreseeable future projects in the vicinity, the proposed project does not have the potential to cause impacts that are cumulatively considerable. As detailed in this document, the proposed project would not result in any significant and unmitigable impacts in any environmental categories. In all cases, the impacts associated with the proposed project are limited to the project area or are of such a negligible degree that they would not result in a significant contribution to any cumulative impacts.
- c) **Less Than Significant Impact.** As described in this document, the proposed project would not result in substantial adverse effects on human beings. Impacts that could have a potential effect on human health and well-being, such as air quality, geology and soils, hazards and hazardous materials, and traffic, would all be less than significant.

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Sec. 13.10.010. - Purpose and intent of districts.

- (a) *Neighborhood Commercial (NC)*. To provide for the development and preservation of low intensity commercial uses which serve the immediate needs of the surrounding neighborhood. Such uses are to be grouped in small areas of three to eight acres and designed so that adverse impacts on residential properties are minimized.
- (b) *Community Commercial (CC)*. To provide for the development and preservation of high intensity commercial uses which serve the local community and regional area and are compatible with surrounding residential uses.
- (c) *Professional and Administrative Office (PA)*. To provide for the development and preservation of an optimal environment for moderate intensity professional and administrative office uses and related uses on sites with large landscaped open spaces and off-street parking facilities. This district is intended to be located on heavily traveled streets or adjacent to commercial or industrial districts, and may be used to buffer residential areas.

(Ord. No. 03-03, § 5(18.20.205), 4-16-2003; Ord. No. 11-01, § 4(Exh. 4), 1-19-2011)

Sec. 13.10.020. - Table of permitted uses.

The Permitted Commercial Uses Table, which follows, specifies whether a use or structure is permitted within the respective district and denotes the type of application process required to establish said use or structure. See Section 13.24.020 for those principally permitted uses that may be exempt from the site development permit process.

PERMITTED COMMERCIAL USES LEGEND:

P	=	The use is permitted as the principal use within the district.
A	=	The use is permitted only as an accessory to a principal use on a site.
U	=	The use is permitted with an approved use permit.
T/SE	=	The use is permitted with an approved Temporary Use/Special Event permit.
RP	=	The use is permitted with an approved regulatory use permit.
X	=	The use is prohibited in the district.

	Districts			
Land Use Types	NC	CC	PA	Code References
Accessory Building/Use	A	A	A	<u>13.16.200</u>
Administrative/Professional Offices	P	P	P	
Adult Entertainment Business	X	RP	X	<u>13.26.020</u>
Agricultural and Produce Stands	T/SE	T/SE	T/SE	<u>13.26.180</u>
Alcoholic Beverage Sales	U	U	X	
Animal Clinics	P	P	X	<u>13.26.050</u>
Archery Range	U	U	X	<u>13.26.220</u>
Automobile Parking Lots/Structures	X	P	P	
Automobile Repair Specialty Shops	X	P	X	
Automobile Service Station	U	U	X	
Automobile/Truck Maintenance and Repair	X	X	X	
Automobile Wrecking, Junk/Salvage Yards	X	X	X	

Bottling Plants	X	X	X	
Bus, Railroad and Taxi Stations	X	U	X	
Churches, Temples, and Places of Worship	U	U	U	
Civic and Government Uses	P	P	P	
Clinics, Medical or Dental	P	P	P	
Commercial Coaches	T/SE	T/SE	T/SE	<u>13.26.180</u>
Commercial Recreation	X	P	X	
Congregate Care Facilities	X	U	X	<u>13.26.090</u>
Construction Trailer	T/SE	T/SE	T/SE	<u>13.26.180</u>
Contractor's Yards	X	T/SE	X	
Dance Hall	X	U	X	
Day Care Nursery	U	U	U	
Dry Cleaning, Dyeing and Laundry Plants	X	X	X	
Educational Institutions, Adults	X	X	P	
Emergency and Transitional Housing Shelters	X	P	X	<u>13.23</u>
Fast-Food Establishment	X	P	X	

Fences and Walls	A	A	A	<u>13.16.230</u>
Financial Institution	P	P	P	
Grocery Store	U	P	X	
Heavy Equipment Rental/Sales Yards	X	X	X	
Helistops	X	U	X	<u>13.26.110</u>
Hospitals	X	U	X	
Hotels and Motels	X	U	X	
Ice Cream Parlor	P	P	U	
Impound/Storage Yards	X	X	X	
Libraries and Museums	P	P	P	
Medical Marijuana Dispensary	X	RP	X	<u>13.26.025</u>
Ministorage Facilities	X	U	X	
Mortuaries and Crematories	X	U	X	
Outdoor Charitable Collection	T/SE	T/SE	T/SE	<u>13.26.180</u>
Outdoor Sales, Various	T/SE	T/SE	T/SE	<u>13.26.180</u>
Outdoor Storage	T/SE	T/SE	T/SE	<u>13.26.180</u>
Police and Fire Stations	X	P	X	

Public/Private Utility Buildings/Structures	P	P	P	
Recycling Collection Site	T/SE	U	T/SE	<u>13.26.180</u>
Residential Uses	X	X	X	
Restaurants	P	P	U	
Retail/Service Businesses	P	P	A	
Special Events	T/SE	T/SE	T/SE	<u>13.26.180</u>
Stationary Food Cart	T/SE	T/SE	T/SE	<u>13.26.180</u>
Temporary Parking Lot	T/SE	T/SE	T/SE	<u>13.26.180</u>
Theatres	X	U	X	
Tobacco, Magazine/Periodical Sales	X	U	X	
Transfer/Materials Recovery facility	X	X	X	<u>13.26.190</u>
Vehicle Washing Facilities	X	U	X	
Vehicle/Vessel Sales/Rentals	X	X	X	
Welding and Metal Plating	X	X	X	
Wireless Communication Facilities	U	U	U	<u>13.26.120</u>

(Ord. No. 03-03, § 5(18.20.210), 4-16-2003; Ord. No. 08-01, § 5, 9-17-2008; Ord. No. 11-01, § 4(Exh. 4), 1-19-2011; Ord. No. 11-02, § 5, 1-19-2011; Ord. No. 14-01, § 4, 4-16-2014)

Sec. 13.10.030. - Development standards.

The Commercial Development Standards Table, which follows, specifies standards for the development of property within commercial districts.

Commercial Development Standards

Development Standard	Districts		
	NC	CC	PA
Maximum Building Height (ft.)	35	65	35
Minimum Building Site Area (sq. ft.)	none	none	10,000
Minimum Building Site Width (ft.)	none	none	75
Minimum Perimeter Setback (ft.)			
From Street ROW	20	<u>5</u>	10
From Alley	20	<u>5</u>	10
From Residential Districts	20	20	10
From Nonresidential Districts	0	0	10 ²
Maximum FAR	0.30	0.30	0.30

Maximum Building Site Coverage	35 percent	none	35 percent
Parking	See Code <u>Section 13.18</u>		
Landscaping	See Code <u>Section 13.16.190</u>		
Screening	See Code <u>Section 13.16.180</u>		
Signs	See Code <u>Section 13.20</u>		
Waste Management/Hazardous Materials	See Code <u>Section 13.26.200</u>		

Notes:

¹ Required for one side of building site only.

(Ord. No. 03-03, § 5(18.20.215), 4-16-2003; Ord. No. 11-01, § 4(Exh. 4), 1-19-2011)

Sec. 13.10.040. - Supplemental commercial district regulations.

- (a) *Lighting.* All lighting, exterior and interior, shall be designed and located so as to confine direct rays to the premises.
- (b) *Loading.* All loading operations shall be performed on the site, and loading areas shall be screened by a landscape or architectural feature.
- (c) *Trash and storage area.* All storage of cartons, containers and trash shall be enclosed by a roofed structure.
- (d) *Enclosed uses.* All commercial uses and their related products shall be contained entirely within a completely enclosed structure, except for parking and loading areas, and except for outdoor uses expressly permitted by an approved site development plan or use permit.
- (e) *Business hours in the Neighborhood Commercial District.* Business hours shall be limited to the hours between 6:00 a.m. and 10:30 p.m. unless otherwise provided for by an approved use permit.
- (f)

Parking provided in the Professional and Administrative Office District. Parking on the front half of the lot shall have no direct access to the street and shall be roofed unless adequate screening of open parking can be provided by berming, fencing, or landscaping as shown on an approved site development plan or use permit.

- (g) *Sidewalks.* New development shall provide sidewalks along side vehicular entrance points with a grade not to exceed plus eight percent from the public right-of-way, and/or demonstrate to the satisfaction of the Director the site accessibility to persons with disabilities.

(Ord. No. 03-03, § 5(18.20.220), 4-16-2003; Ord. No. 11-01, § 4(Exh. 4), 1-19-2011)

8.3

WATER EFFICIENT LANDSCAPE REGULATIONS

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City of Laguna Woods

Agenda Report

TO: Honorable Mayor and City Councilmembers

FROM: Christopher Macon, City Manager

FOR: December 21, 2016 Regular Meeting

SUBJECT: Water Efficient Landscape Regulations

Recommendation

Approve second reading and adopt an ordinance – read by title with further reading waived – entitled:

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF LAGUNA WOODS, CALIFORNIA, REPEALING CHAPTER 4.28 OF THE LAGUNA WOODS MUNICIPAL CODE AND ADOPTING A CODE AMENDMENT TO ADD A NEW CHAPTER 10.03 TO THE LAGUNA WOODS MUNICIPAL CODE RELATED TO WATER EFFICIENT LANDSCAPES

Background

On April 1, 2015, due to the drought, Governor Brown issued Executive Order B-29-15 and directed the State Department of Water Resources (“SDWR”) to update the State’s model water efficient landscape ordinance by expedited regulation. SDWR was specifically tasked with updating the model water efficient landscape ordinance to “increase water efficiency standards for new and existing landscapes through more efficient irrigation systems, greywater usage, onsite storm water capture, and by limiting the portion of landscapes that can be covered in turf.”

On July 15, 2015, the State adopted an updated model water efficient landscape ordinance. Cities and counties are either required to adopt or enforce that model water efficient landscape ordinance, or adopt their own water efficient landscape ordinance

that is at least as effective in conserving water. As required by State law, the City is currently enforcing the State's model water efficient landscape ordinance.

The Municipal Water District of Orange County and the Association of California Cities-Orange County formed a stakeholder group of cities, water districts, and other subject matter experts to develop a model water efficient landscape ordinance for Orange County that is "at least as effective" as the State's ordinance. The stakeholder group also sought to protect local control; promote general consistency throughout the county; and, minimize the cost and complexity of compliance.

On November 16, 2016, a public hearing was held and the City Council introduced and approved the first reading of an ordinance (Attachment A) which, if adopted, would establish new water efficient landscape regulations. At that same meeting, the City Council also repealed Resolution No. 09-30 and approved "Guidelines for Implementation of the City of Laguna Woods Water Efficient Landscape Ordinance" (Attachment B).

Discussion

Today's meeting is an opportunity for City Council action, as well as public input, on the proposed water efficient landscape regulations. The proposed ordinance is based heavily on the Orange County model water efficient landscape ordinance, with modifications made for regulatory clarity and formatting consistency with the Laguna Woods Municipal Code.

The differences between the State's 2009 and 2015 model water efficient landscape ordinances, as well as between the State's 2015 ordinance and the Orange County model water efficient landscape ordinance, are summarized in Attachment C.

The Orange County model water efficient landscape ordinance has formed the basis of ordinances adopted by the County of Orange and numerous cities, including Aliso Viejo, Costa Mesa, Dana Point, Laguna Beach, Laguna Hills, Laguna Niguel, Lake Forest, Mission Viejo, Newport Beach, and Rancho Santa Margarita.

Environmental Review

This project is categorically exempt under Section 15307 (Actions by Regulatory Agencies for Protection of Natural Resources) of the California Environmental Quality Act ("CEQA") guidelines.

Fiscal Impact

Funds to support this project are included in the City's budget.

Report Prepared With: Rebecca M. Pennington, Development Programs Analyst

- Attachments: A – Proposed Ordinance
 Exhibit A – Code Amendment Text
 B – Guidelines for Implementation
 C – Differences between Landscape Ordinances

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ORDINANCE NO. 16-XX

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF LAGUNA WOODS, CALIFORNIA, REPEALING CHAPTER 4.28 OF THE LAGUNA WOODS MUNICIPAL CODE AND ADOPTING A CODE AMENDMENT TO ADD A NEW CHAPTER 10.03 TO THE LAGUNA WOODS MUNICIPAL CODE RELATED TO WATER EFFICIENT LANDSCAPES

WHEREAS, California Constitution Article X, Section 2 and California Water Code Section 100 provide that because of conditions prevailing in the State of California (“State”), it is the declared policy of the State that the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, the waste or unreasonable use of water shall be prevented, and the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and the public welfare; and

WHEREAS, pursuant to California Water Code Section 106, it is declared policy of the State that the use of water for domestic use is the highest use of water and that the next highest use is for irrigation; and

WHEREAS, California Assembly Bill 1881 (“AB 1881”), enacted into law on September 28, 2008, required the State Department of Water Resources (“SDWR”) to update the State’s then-existing model water efficient landscape ordinance to provide guidelines for cities and counties to adopt local landscape irrigation ordinances as required by the law; and

WHEREAS, all cities and counties were required to either adopt the updated AB 1881 model water efficient landscape ordinance or adopt their own water efficient landscape ordinance that was at least as effective in conserving water; and

WHEREAS, the City Council adopted a water efficient landscape ordinance with findings that it was at least as effective in conserving water as the AB 1881 model water efficient landscape ordinance on December 16, 2009; and

WHEREAS, concurrent with its adoption of a water efficient landscape ordinance on December 16, 2009, the City Council approved Resolution No. 09-30, which established *Guidelines for Implementation of the Water Efficient Landscape Ordinance*; and

WHEREAS, on April 1, 2015, due to the drought, Governor Brown issued Executive Order B-29-15 and directed SDWR to further update the State’s model water efficient landscape ordinance by expedited regulation; and

WHEREAS, on July 15, 2015, the State adopted an updated model water efficient landscape ordinance, which cities and counties are either required to adopt or enforce, or adopt their own water efficient landscape ordinance that is at least as effective in conserving water; and

WHEREAS, when adopted, the proposed amendments to the Laguna Woods Municipal Code, as identified in Exhibit A attached hereto and incorporated herein by reference (“Code Amendment”), will establish regulations relating to water efficient landscapes in a manner that complies with the requirements of State law, Governor Brown’s Executive Order B-29-15, and the State’s revised model water efficient landscape ordinance; and

WHEREAS, the Community Development Director or his or her designee prepared an exhibit, including proposed language and terminology for the proposed Code Amendment, and any additional information and documents deemed necessary for the City Council to take action, and such exhibit was available for public inspection at City Hall and, upon request, was supplied to all persons desiring a copy, at least 10 days prior to the scheduled City Council public hearing date; and

WHEREAS, the Code Amendment is categorically exempt from the requirements of the California Environmental Quality Act (“CEQA”) pursuant to Section 15307 of Title 14 of the California Code of Regulations, in that the Code Amendment is authorized by state law to assure the maintenance, restoration, or enhancement of a natural resource where the regulatory process involves procedures for protection of the environment, and because it can be seen with certainty that the Code Amendment could not have a significant effect on the environment; and

WHEREAS, in conjunction with the public hearing on the Code Amendment, the City Council also considered a proposed *Guidelines for Implementation of the City of Laguna Woods Water Efficient Landscape Ordinance* document, a copy of which was included with the City Council’s agenda report for the Code Amendment, dated November 16, 2016; and

WHEREAS, on November 16, 2016, the City Council held a duly noticed public hearing on the Code Amendment at which it considered all of the information, evidence, and testimony presented, both written and oral.

THE CITY COUNCIL OF THE CITY OF LAGUNA WOODS DOES HEREBY ORDAIN AS FOLLOWS:

SECTION 1. The City Council hereby finds and determines that (i) each of the recitals to this Ordinance are true and correct, and are adopted herein as findings; (ii) the Code Amendment complies with all applicable requirements of State law, Governor Brown’s Executive Order B-29-15, and the State’s revised model water efficient landscape ordinance; (iii) the Code Amendment will not adversely affect the health, safety, or welfare of the residents within the community; (iv) the Code Amendment is in the public interest of the City of Laguna Woods; and, (v) the Code Amendment is consistent with the Laguna Woods General Plan and its various elements.

SECTION 2. The City Council hereby certifies that the Code Amendment is categorically exempt from the requirements of CEQA pursuant to Section 15307 of Title 14 of the California Code of Regulations.

SECTION 3. Chapter 4.28 (Water Efficient Landscapes) of the Laguna Woods Municipal Code is hereby repealed, in its entirety.

SECTION 4. A new Chapter 10.03 (Water Efficient Landscapes) of the Laguna Woods Municipal Code is hereby adopted to read as set forth in Exhibit A, attached to this Ordinance and incorporated herein by this reference (“Code Amendment”).

SECTION 5. This Ordinance shall take effect and be in full force and operation thirty (30) days after adoption.

SECTION 6. If any section, subsection, subdivision, paragraph, sentence, clause, or phrase added by this Ordinance, or any part thereof, is for any reason held to be unconstitutional or invalid or ineffective by any court of competent jurisdiction, such decision shall not affect the validity of effectiveness of the remaining portions of this Ordinance or any part thereof. The City Council hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause, or phrase thereof irrespective of the fact that any one or more subsections, subdivisions, paragraphs sentences, clauses, or phrases are declared unconstitutional, invalid, or ineffective.

SECTION 7. The Deputy City Clerk shall certify to the passage of this Ordinance and shall cause this Ordinance to be published or posted as required by law.

SECTION 8. All of the above-referenced documents and information have been and are on file with the City Clerk of the City.

PASSED, APPROVED AND ADOPTED this XX day of XX 2016.

NOEL HATCH, Mayor

ATTEST:

YOLIE TRIPPY, Deputy City Clerk

APPROVED AS TO FORM:

DAVID B. COSGROVE, City Attorney

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss.
CITY OF LAGUNA WOODS)

I, YOLIE TRIPPY, Deputy City Clerk of the City of Laguna Woods, do HEREBY CERTIFY that the foregoing **Ordinance No. 16-XX** was duly introduced and placed upon its first reading at a regular meeting of the City Council on the XX of XX 2016, and that thereafter, said Ordinance was duly adopted and passed at a regular meeting of the City Council on the XX day of XX 2016 by the following vote to wit:

AYES: COUNCILMEMBERS:
NOES: COUNCILMEMBERS:
ABSENT: COUNCILMEMBERS:

YOLIE TRIPPY, Deputy City Clerk

CODE AMENDMENT

A new Chapter 10.03 (“Water Efficient Landscapes”) is added to Title 10 (“Buildings and Construction”) of the Laguna Woods Municipal Code to read as follows:

CHAPTER 10.03. - WATER EFFICIENT LANDSCAPES

Sec. 10.03.010. - Findings.

(a) The State of California legislature has found that:

- (1) The waters of the state are of limited supply and are subject to ever increasing demands;
- (2) The continuation of California’s economic prosperity is dependent on the availability of adequate supplies of water for future uses;
- (3) It is the policy of the state to promote the conservation and efficient use of water and to prevent the waste of this valuable resource;
- (4) Landscapes are essential to the quality of life in California by providing areas for active and passive recreation and as an enhancement to the environment by cleaning air and water, preventing erosion, offering fire protection, and replacing ecosystems lost to development;
- (5) Landscape design, installation, maintenance, and management can and should be water efficient; and
- (6) Article X, Section 2 of the California Constitution specifies that the right to use water is limited to the amount reasonably required for the beneficial use to be served, and the right does not and shall not extend to waste or unreasonable method of use of water.

(b) The City has found that:

- (1) Orange County has an established, large reclaimed water infrastructure system;
- (2) Allocation-based and tiered water rate structures allow public agencies to document water use in landscapes;
- (3) Incentive-based water use efficiency programs have been actively implemented within Orange County since before 1991;
- (4) Current local design practices in new landscapes strive to achieve the intent of the state model water efficient landscape ordinance water use goals;

- (5) All water services within Laguna Woods are metered and billed based on volume of use;
- (6) Orange County is a leader in researching and promoting the use of smart irrigation controllers with more than 12,900 installations as of June 2009 and promotion of sustainable landscape transformation with more than 30 million square feet of turf removal;
- (7) All new irrigation controllers sold after 2012 within Orange County are smart irrigation controllers;
- (8) Landscape plan submittal and review has been a long standing practice in Laguna Woods: and
- (9) The average rainfall in Orange County is approximately 12 inches per year.
- (10) The local water purveyor is implementing budget-based, tiered-rate billing and/or enforcement of water waste prohibitions for all existing metered landscaped areas throughout its service area, which includes the Laguna Woods in its entirety.

Sec. 10.03.020. - Purpose and intent.

The purpose and intent of this chapter is to establish an alternative model acceptable under Governor Brown’s April 1, 2015 Drought Executive Order (B-19-25) as being at least as effective as the state model water efficient landscape ordinance in the context of conditions in Laguna Woods in order to:

- (1) Promote the benefits of consistent landscape ordinances with neighboring local and regional agencies;
- (2) Promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible;
- (3) Establish a structure for planning, designing, installing, and maintaining and managing water efficient landscapes in new construction and rehabilitated projects;
- (4) Establish provisions for water management practices and water waste prevention for existing landscapes;
- (5) Use water efficiently without waste by setting a maximum applied water allowance as an upper limit for water use and reduce water use to the lowest practical amount; and
- (6) Encourage the use of economic incentives that promote the efficient use of water, such as implementing a budget-based tiered-rate structure, providing rebate incentives and offering educational programs.

Sec. 10.03.030. - Definitions.

The following definitions shall govern the meaning of words and phrases used in this chapter and in the Guidelines:

(05) *Aggregate landscape areas* pertains to the areas undergoing development as one project or for production home neighborhoods or other situations where multiple parcels are undergoing development as one project, but will eventually be individually owned.

(10) *Applied water* means the portion of water supplied by the irrigation system to the landscape.

(15) *Budget-based tiered-rate structure* means tiered or block rates for irrigation accounts charged by the retail water agency in which the block definition for each customer is derived from lot size or irrigated area and the evapotranspiration requirements of landscaping.

(20) *Community aesthetics evaluation*. While not subject to a permit, plan check or design review, the community aesthetics evaluation may be performed to ensure the aesthetic standards of the community and irrigation efficiency intent is maintained.

(25) *Ecological restoration project* means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

(30) *Estimated applied water use* means the average annual total amount of water estimated to be necessary to keep plants in a healthy state, calculated as provided in the Guidelines. It is based on the reference evapotranspiration rate, the size of the landscape area, plant water use factors, and the relative irrigation efficiency of the irrigation system.

(35) *ET adjustment factor* or *ETAF* is equal to the plant factor divided by the irrigation efficiency factor for a landscape project, as described in the Guidelines. The ETAF is calculated in the context of local reference evapotranspiration, using site-specific plant factors and irrigation efficiency factors that influence the amount of water that needs to be applied to the specific landscaped area.

A combined plant mix with a site-wide average plant factor of 0.5 (indicating a moderate water need) and average irrigation efficiency of 0.71 produces an ET adjustment factor of $(0.7) = (0.5/0.71)$, which is the standard of water use efficiency

generally required by this chapter and the Guidelines, except that the ETAF for a special landscape area shall not exceed 1.0.

(40) *Guidelines* refers to the guidelines for implementation of this chapter, as adopted by the City, which describes procedures, calculations, and requirements for landscape projects subject to this chapter.

(45) *Hardscapes* means any durable material or feature (pervious and non-pervious) installed in or around a landscaped area, such as pavements or walls. Pools and other water features are considered part of the landscaped area and not considered hardscapes for purposes of this chapter.

(50) *Irrigation efficiency* means the measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The irrigation efficiency for purposes of this chapter are 0.75 for overhead spray devices and 0.81 for drip systems.

(55) *Landscaped area* means all the planting areas, turf areas, and water features in a landscape design plan subject to the maximum applied water allowance and estimated applied water use calculations. The landscaped area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other pervious or non-pervious hardscapes, and other non-irrigated areas designated for non-development (e.g., open spaces and existing native vegetation).

(60) *Landscape contractor* means a person licensed by the State of California to construct, maintain, repair, install, or subcontract the development of landscape systems.

(65) *Landscape documentation package* means the documents required to be provided to the City for review and approval of landscape design projects, as described in the Guidelines.

(70) *Landscape project* means total area of landscape in a project, as provided in the definition of “landscaped area,” meeting the requirements under Section 10.03.040 of this Code.

(75) *Local agency* means a city or county, including a charter city or charter county, that is authorized to implement, administer, and/or enforce any of the provisions of

this chapter. The local agency may be responsible for the enforcement or delegation of enforcement of this chapter including, but not limited to, design review, plan check, issuance of permits, and inspection of a landscape project.

(80) *Local water purveyor* means any entity, including a public agency, city, county, or private water company that provides retail water service.

(85) *Maximum applied water allowance* or *MAWA* means the upper limit of annual applied water for the established landscaped area as specified in section 2.2 of the Guidelines. It is based upon the area's reference evapotranspiration, the ET adjustment factor, and the size of the landscaped area. The estimated applied water use shall not exceed the maximum applied water allowance. $MAWA = (ET_o) (0.62) [(ETAF \times LA) + ((1-ETAF) \times SLA)]$

(90) *Mined-land reclamation projects* means any surface mining operation with a reclamation plan approved in accordance with the Surface Mining and Reclamation Act of 1975.

(95) *New construction* means, for the purposes of this chapter, a new building with a landscape or other new landscape such as a park, playground, or greenbelt without an associated building.

(100) *Non-pervious* means any surface or natural material that does not allow for the passage of water through the material and into the underlying soil.

(105) *Pervious* means any surface or material that allows the passage of water through the material and into the underlying soil.

(110) *Permit* means an authorizing document issued by local agencies for new construction or rehabilitated landscape.

(115) *Plant factor* or *plant water use factor* is a factor, when multiplied by ET_o , that estimates the amount of water needed by plants. For purposes of this chapter, the plant factor range for very low water use plants is 0 to 0.1; the plant factor range for low water use plants is 0 to 0.3; the plant factor range for moderate water use plants is 0.4 to 0.6; and the plant factor range for high water use plants is 0.7 to 1.0. Plant factors cited in this chapter are derived from the publication “Water Use Classification of Landscape Species.” Plant factors may also be obtained from horticultural researchers from academic institutions or professional associations as approved by the California Department of Water Resources (DWR).

(120) *Recycled water or reclaimed water* means treated or recycled waste water of a quality suitable for non-potable uses such as landscape irrigation and water features. This water is not intended for human consumption.

(125) *Reference evapotranspiration or ETo* means a standard measurement of environmental parameters which affect the water use of plants. ETo is given expressed in inches per day, month, or year as represented in Appendix A of the Guidelines, and is an estimate of the evapotranspiration of a large field of four- to seven-inch tall, cool-season grass that is well watered. Reference evapotranspiration is used as the basis of determining the Maximum Applied Water Allowances.

(130) *Rehabilitated landscape* means any re-landscaping project that meets the applicability criteria of Section 10.03.040(a) of this Code, where the modified landscape area is greater than 2,500 square feet.

(135) *Smart irrigation controller* means an automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data with non-volatile memory shall be required for irrigation scheduling in all irrigation systems, recommending U.S. EPA WaterSense labeled devices as applicable.

(140) *Special landscape area* means an area of the landscape dedicated solely to edible plants such as orchards and vegetable gardens, areas irrigated with recycled water, water features using recycled water, and recreational areas dedicated to active play such as parks, sports fields, golf courses, and where turf provides a playing surface.

(145) *Turf* means a ground cover surface of mowed grass. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Bermudagrass, Kikuyugrass, Seashore Paspalum, St. Augustinegrass, Zoysiagrass, and Buffalo grass are warm-season grasses.

(150) *Valve* means a device used to control the flow of water in an irrigation system.

(155) *Water feature* means a design element where open water performs an aesthetic or recreational function. Water features include ponds, lakes, waterfalls, fountains, artificial streams, spas, and swimming pools (where water is artificially supplied). The surface area of water features is included in the high water use hydrozone of the landscaped area. Constructed wetlands used for on-site wastewater treatment, habitat protection or storm water best management practices that are not irrigated and used

solely for water treatment or storm water retention are not water features and, therefore, are not subject to the water budget calculation.

Sec. 10.03.040. - Applicability.

(a) This chapter shall apply to the following landscape projects:

- (1) New landscape projects with an aggregate landscape area equal to or greater than 500 square feet, requiring a building or landscape permit, plan check, or design review;
- (2) Rehabilitated landscape projects with an aggregate landscaped area equal to or greater than 2,500 square feet, requiring a building or landscape permit, plan check, or design review;
- (3) New or rehabilitated landscape projects with an aggregate landscape area of 2,500 square feet or less may comply with the performance requirements of this chapter or conform to the prescriptive measures contained in Appendix A of the Guidelines;
- (4) New or rehabilitated landscape projects using treated or untreated graywater or rainwater capture on site, any lot or parcels within the project that has less than 2,500 square feet of landscape area and meets the lot or parcel's landscape water requirement (estimated total water use) entirely with the treated or untreated graywater or though stored rainwater capture on site is subject only to Appendix A of the Guidelines.

(b) Section 10.03.060(b) of this Code shall apply to:

- (1) All landscaped areas, whether installed prior to or after January 1, 2010; and
- (2) All landscaped areas installed after February 1, 2016 to which Section 10.03.040(a) of this Code is applicable.

(c) This chapter does not apply to:

- (1) Registered local, state, or federal historical sites;
- (2) Ecological restoration projects that do not require a permanent irrigation system;
- (3) Mined-land reclamation projects that do not require a permanent irrigation system; or
- (4) Plant collections, as part of botanical gardens and arboretums open to the public.

Sec. 10.03.050. - Implementation procedures.

(a) Prior to installation, a landscape documentation package shall be submitted to the City for review and approval of all landscape projects subject to the provisions of this chapter. Any landscape documentation package submitted to the City shall comply with the provisions of the Guidelines.

(b) The landscape documentation package shall include a certification by a professional appropriately licensed in the State of California stating that the landscape design and water use calculations have been prepared by or under the supervision of the licensed professional and are certified to be in compliance with the provisions of this chapter and the Guidelines.

(1) Landscape and irrigation plans shall be submitted to the City for review and approval with appropriate water use calculations.

(2) Water use calculations shall be consistent with calculations contained in the Guidelines and shall be provided to the local water purveyor, as appropriate, under procedures determined by the City.

(3) Verification of compliance of the landscape installation with the approved plans shall be obtained through a certification of completion in conjunction with a certificate of use and occupancy or permit final process, as provided in the Guidelines.

Sec. 10.03.060. - Landscape water use standards.

(a) For applicable landscape installation or rehabilitation projects subject to Section 10.03.040(a) of this Code, the estimated applied water use allowed for the landscaped area shall not exceed the MAWA calculated using an ET adjustment factor of 0.7, except for special landscaped areas where the MAWA is calculated using an ET adjustment factor of 1.0; or the design of the landscaped area shall otherwise be shown to be equivalently water-efficient in a manner acceptable to the City; as provided in the Guidelines.

(b) Irrigation of all landscaped areas shall be conducted in a manner conforming to the rules and requirements, and shall be subject to penalties and incentives for water conservation and water waste prevention as determined and implemented by the local water purveyor or as mutually agreed by local water purveyor and the City.

Sec. 10.03.070. - Delegation.

The City may delegate to, or enter into a contract with, a local agency to implement, administer, and/or enforce any of the provisions of this chapter on behalf of the City.

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GUIDELINES
FOR IMPLEMENTATION OF THE
CITY OF LAGUNA WOODS
WATER EFFICIENT LANDSCAPE
ORDINANCE

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1. Purpose and Applicability

1.1 Purpose

- (A) The primary purpose of these Guidelines is to provide procedural and design guidance for *project applicants* proposing landscape installation or rehabilitation projects that are subject to the requirements of the *Water Efficient Landscape Ordinance*. This document is also intended for use and reference by *City* staff in reviewing and approving designs and verifying compliance with the *Water Efficient Landscape Ordinance*. The general purpose of the *Water Efficient Landscape Ordinance* is to promote the design, installation, and maintenance of landscaping in a manner that conserves regional water resources by ensuring that landscaping projects are not unduly water-needy and that irrigation systems are appropriately designed and installed to minimize water waste.
- (B) Other regulations affecting landscape design and maintenance practices are potentially applicable and should be consulted for additional requirements. These regulations include but may not be limited to:
 - (1) State of California Assembly Bill 1881;
 - (2) National Pollutant Discharge Elimination Permits for the Municipal Separate Storm Sewer System;
 - (3) Orange County Fire Authority Regulations for Fuel Modification in the Landscape;
 - (4) Water Conservation and Drought Response Regulations of the Local Water Purveyor;
 - (5) Regulations of the Local Water Purveyor governing use of *Recycled Water*;
 - (6) Zoning Code;
 - (7) Building Code;
 - (8) Specific Plans, Master Plans, General Plan, or similar land use and planning documents; and
 - (9) Conditions of approval for a specific project

1.2 Applicability

- (A) The *Water Efficient Landscape Ordinance* and these Guidelines apply to all of the following landscape projects:

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- (1) New landscape projects with an *aggregate* landscape area equal to or greater than 500 square feet, requiring a building or landscape permit, plan check or design review;
 - (2) Rehabilitated landscape projects with an *aggregate* landscape area equal to or greater than 2,500 square feet, requiring a building or landscape permit, plan check or design review;
 - (3) New or rehabilitated landscape projects with an *aggregate* landscape area of 2,500 square feet or less may comply with the performance requirements of this ordinance or conform to the prescriptive measures contained in Appendix A ;
 - (4) New or rehabilitated projects using treated or untreated *graywater* or rainwater capture on site, any lot or parcels within the project that has less than 2,500 square feet of landscape area and meets the lot or parcel's landscape water requirement (Estimated Total Water Use) entirely with the treated or untreated *graywater* or though stored rainwater capture on site is subject only to Appendix A Section (5).
- (B) The requirements of the Guidelines may be partially or wholly waived, at the discretion of the *City* or its designee, for landscape rehabilitation projects that are limited to replacement plantings with equal or lower water needs and where the irrigation system is found to be designed, operable and programmed consistent with minimizing water waste in accordance with local water purveyor regulations.
- (C) Unless otherwise determined by the *City*, the *Water Efficient Landscape Ordinance* and these Guidelines do not apply to:
- (1) Registered local, state, or federal historical sites;
 - (2) Ecological restoration projects that do not require a permanent irrigation system;
 - (3) Mined-land reclamation projects that do not require a permanent irrigation system; or
 - (4) Plant collections, as part of botanical gardens, and arboretums open to the public.

2. Submittal Requirements for New Landscape Installations or Landscape Rehabilitation Projects

- (A) Discretionary approval is typically required for landscape projects that are subject to site plan reviews, or where a variance from a local building code is requested, or other procedural processes apply such that standard or special conditions of approval may be required by the *City*. Discretionary projects with conditions of

approval may be approved administratively by *City* staff, or acted on formally by the Planning Commission, *City* Council, or other jurisdictional authority. A typical standard condition of approval reads:

“Landscaping for the project shall be designed to comply with the City’s Water Efficient Landscape Ordinance and with the Guidelines for Implementation of the Water Efficient Landscape Ordinance.”

Landscape or *water features* that typically require a ministerial permit (i.e., a building, plumbing, electrical, or other similar permit), thereby triggering compliance with the Water Efficient Landscape Ordinance requirements independently of the need for discretionary approval include, but are not limited to, swimming pools, fountains or ponds, retaining walls, and overhead trellises.

2.2 Elements of the Landscape Documentation Package

- (A) A *Landscape Documentation Package* is required to be submitted by the *project applicant* for review and approval prior to the issuance of ministerial permits for landscape or *water features* by the *City*, and prior to start of construction. Unless otherwise directed by the *City*, the *Landscape Documentation Package* shall include the following elements either on plan sheets or supplemental pages as directed by the *City*:
- (1) Project Information, including, but not limited to, the following:
 - (a) Date;
 - (b) Project name;
 - (c) Project address, parcel, and/or lot number(s);
 - (d) Total *landscape area* (square feet) and rehabilitated *landscape area* (if applicable);
 - (e) Project type (e.g., new, rehabilitated, public, private, cemetery, homeowner-installed);
 - (f) Water supply type (e.g., potable, recycled, or well) and identification of the local retail water purveyor if the *project applicant* is not served by a private well;
 - (g) Checklist or index of all documents in the *Landscape Documentation Package*;
 - (h) Project contacts, including contact information for the *project applicant* and *property owner*;

ITEM 8.3 – Attachment B

- (i) *Certification of Design* in accordance with **Exhibit A** of these *Guidelines* that includes a *landscape professional's* professional stamp, as applicable, signature, contact information (including email and telephone number), license number, and date, certifying the statement that “The design of this project complies with the requirements of the *City's Water Efficient Landscape Ordinance*” and shall bear the signature of the *landscape professional* as required by law; and
 - (j) Any other information the *City* deems relevant for determining whether the landscape project complies with the *Water Efficient Landscape Ordinance* and these *Guidelines*.
- (2) *Maximum Applied Water Allowance (MAWA)* and *Estimated Applied Water Use (EAWU)* expressed as annual totals including, but not limited to, the following:
- (a) *Water Efficient Landscape Worksheet* (optional at discretion of the *City*) for the landscape project;
 - (b) *Hydrozone* information table (optional at the discretion of the *City*) for the landscape project; and
 - (c) Water budget calculations (optional at the discretion of the *City*) for the landscape project.
- (3) A soil management report or specifications, or specification provision requiring soil testing and amendment recommendations and implementation to be accomplished during construction of the landscape project.
- (4) A landscape design plan for the landscape project.
- (5) An irrigation design plan for the landscape project.
- (6) A grading design plan, unless grading information is included in the landscape design plan for the landscape project or unless the landscape project is limited to replacement planting and/or irrigation to rehabilitate an existing landscape area.

[Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.]

2.3 Water Efficient Landscape Calculations and Alternatives

- (A) The *project applicant* shall provide the calculated *Maximum Applied Water Allowance (MAWA)* and *Estimated Applied Water Use (EAWU)* for the landscape area as part of the *Landscape Documentation Package* submittal to the

City. The MAWA and EAWU shall be calculated based on completing the *Water Efficient Landscape Worksheets* (in accordance with the sample worksheets in **Appendix C**) which contain information on the *plant factor*, irrigation method, *irrigation efficiency* and area associated with each *hydrozone*. Calculations are then made to show that the *evapotranspiration adjustment factor* (ETAF) for the landscape project does not exceed a factor of 0.55 for residential areas and 0.45 for non-residential areas, exclusive of *Special Landscape Areas*. The ETAF for a landscape project is based on the *plant factors* and irrigation methods selected. The *Maximum Applied Water Allowance* is calculated based on the maximum ETAF allowed (0.55 for residential areas and 0.45 for non-residential areas) and expressed as annual gallons required. The EAWU is calculated based on the plants used and irrigation method selected for the landscape design.

- (B) The EAWU allowable for the landscape area shall not exceed the MAWA. The MAWA shall be calculated using an *evapotranspiration adjustment factor* (ETAF) of 0.55 for residential areas and 0.45 for non-residential areas, except for the portion of the MAWA applicable to any *Special Landscape Areas* within the landscape project, which shall be calculated using an ETAF of 1.0. Where the design of the landscape area can otherwise be shown to be equivalently water-efficient, the *project applicant* may submit alternative or abbreviated information supporting the demonstration that the annual EAWU is less than the MAWA, at the discretion of and for the review and approval of the local agency.
- (C) Water budget calculations shall adhere to the following requirements:
 - (1) The MAWA shall be calculated using the *Water Efficient Landscape Worksheets* and equation presented in **Appendix C**.
 - (2) The EAWU shall be calculated using the *Water Efficient Landscape Worksheet* and equations presented in **Appendix C**.
 - (3) For the calculation of the MAWA and EAWU, a *project applicant* shall use the *ETo* values from the closest location listed the *Reference Evapotranspiration* Table in **Appendix D**. For geographic areas not covered in **Appendix D**, data from other cities, or zip codes, located nearby in the same *reference evapotranspiration* zone may be used.
 - (4) For calculation of the EAWU, the *plant water use factor* shall be determined as appropriate to the project location from the *Water Use Efficiency of Landscape Species (WUCOLS)* Species Evaluation List or from horticultural researchers with academic institutions or professional associations as approved by the California Department of water Resources (DWR). The *plant factor* ranges from 0 to 0.1 for very low water use plants, 0.1 to 0.3 for low water use plants, 0.4 to 0.6 for moderate water use plants, and 0.7 to 1.0 for high water use plants.

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- (5) For calculating the *EAWU*, the *plant water use factor* shall be determined for each *valve hydrozone* based on the highest-water-use plant species within the zone. The *plant factor* for each *hydrozone* may be required to be further refined as a “*landscape coefficient*,” according to protocols defined in detail in the *WUCOLS* document, to reflect planting density and *microclimate* effects on water need at the option of the *project applicant* or the *City*.
- (6) For calculation of the *EAWU*, the area of a *water feature* shall be defined as a high water use *hydrozone* with a *plant factor* of 1.0.
- (7) For calculation of the *EAWU*, a temporarily irrigated *hydrozone* area, such as an area of highly drought-tolerant native plants that are not intended to be irrigated after they are fully established, shall be defined as a very low water use *hydrozone* with a *plant factor* of 0.1.
- (8) For calculation of the *MAWA*, the *ETAF* for *Special Landscape Areas (SLA)* shall be set at 1.0. For calculation of the *EAWU*, the *ETAF* for *SLA* shall be calculated as the *SLA plant factor* divided by the *SLA irrigation efficiency factor*.
- (9) *Irrigation efficiency (IE)* of the irrigation heads used within each *hydrozone* shall be assumed to be as follows, unless otherwise indicated by the irrigation equipment manufacturer’s specifications or demonstrated by the *project applicant*:

Irrigation Method	DU_{LQ}	DU_{LH}*	EU	IE**
Spray nozzles	65%	79%		71%
High efficiency spray nozzles	70%	82%		73%
Multi stream/Multi trajectory rotary (MSMT) nozzles	75%	85%		76%
Stream rotor nozzle	70%	82%		73%
Microspray	75%	85%		76%
Bubblers			85%	77%
Drip emitter			90%	81%
Subsurface drip			90%	81%

*DU_{LH} = .386 + (.614)(DU_{LQ})

** IE (spray) = (DU_{LH})(IME)

** IE (drip) = Emission uniformity (EU)(IME)

- (D) The *Maximum Applied Water Allowance* shall adhere to the following requirements:

- (1) The *Maximum Applied Water Allowance* shall be calculated using the equation presented in **Appendix C**. The *reference evapotranspiration (ET_o)* values used for this calculation are from the *Reference Evapotranspiration Table* in **Appendix D** and are for planning purposes only. For actual irrigation scheduling, automatic irrigation controllers are

required and shall use current *ETo* data, such as from the California Irrigation Management Information System (CIMIS), other equivalent data, or soil moisture sensor data.

2.4 Soil and Stormwater Management

- (A) All planted landscape areas are required to have friable soil to maximize retention and infiltration. On engineered slopes, only amended planting holes need meet this requirement.
- (B) In order to reduce *runoff* and encourage healthy plant growth, a soil management report shall be completed by the *project applicant*, or his/her designee, as follows:
 - (1) Submit soil samples to a certified agronomic soils laboratory for analysis and recommendations.
 - (a) Soil sampling shall be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants.
 - (b) The soil analysis may include, but is not limited to:
 - 1. soil texture;
 - 2. *infiltration rate* determined by laboratory test or soil texture *infiltration rate* table;
 - 3. pH;
 - 4. total soluble salts;
 - 5. sodium;
 - 6. percent organic matter; and
 - 7. recommendations.
 - (2) In projects with multiple landscape installations (i.e. production home developments or *common interest developments* that are installing landscaping) a soil sampling rate of 1 in 7 lots or approximately 15% will satisfy this requirement; evenly disbursed throughout the development. Large landscape projects shall sample at a rate equivalent to 1 in 7 lots or approximately 15% landscape area. The *project applicant*, or his/her designee, shall comply with one of the following:
 - (a) If significant mass grading is not planned, the soil analysis report shall be submitted to the local agency as part of the *Landscape Documentation Package*; or

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- (b) If significant mass grading is planned, the soil analysis report shall be submitted to the *City* as part of the *Certification of Completion*.
- (c) The soil analysis report shall be made available, in a timely manner, to the professionals preparing the landscape design plans and irrigation design plans in order to make any necessary adjustments to the design plans.
- (d) The *project applicant*, or his/her designee, shall submit documentation verifying implementation of soil analysis report recommendations to the local agency with the *Certification of Completion*.

[Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.]

- (C) It is strongly recommended that landscape areas be designed for capture and infiltration capacity that is sufficient to prevent *runoff* from impervious surfaces (i.e. roof and paved areas) from additional capacity as required by any applicable local, regional, state, or federal regulation and/or one of the following: the one inch, 24-hour rain event or the 85th percentile, 24-hour rain event.
- (D) It is recommended that storm water projects incorporate any of the following elements to improve on-site stormwater and dry weather *runoff* capture and use:
 - (1) Grade impervious surfaces, such as driveways, during construction to drain into vegetated areas.
 - (2) Minimize the area of impervious surfaces such as paved areas, roof, and concrete driveways.
 - (3) Incorporate *pervious* or porous surfaces (e.g. gravel, permeable pavers or blocks, *pervious* or porous concrete) that minimize *runoff*.
 - (4) Direct *runoff* from paved surfaces and roof areas into planting beds or landscape areas to maximize site water capture and reuse.
 - (5) Incorporate rain gardens, cisterns, and other rain harvesting or catchment systems.
 - (6) Incorporate infiltration beds, swales, basins, and drywells to capture stormwater and dry weather *runoff* and increase percolation into the soil.
 - (7) Consider constructed wetlands and ponds that retain water, equalize excess flow, and filter pollutants.

[Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.]

2.5 Landscape Design Plan

- (A) For the efficient use of water, a landscape shall be carefully designed and planned for the intended function of the project. The following design criteria shall be submitted as part of the *Landscape Documentation Package*.
- (1) Plant Material
 - (a) Any plant may be selected for the *landscape area* provided the *EAWU* in the *landscape area* does not exceed the *MAWA*. Methods to achieve water efficiency shall include one or more of the following:
 - (2) Protection and preservation of non-*invasive* water-conserving plant, tree and *turf* species;
 - (3) Selection of water-conserving plant, tree and *turf* species;
 - (4) Selection of plants based on local climate suitability, disease and pest resistance;
 - (5) Selection of trees based on applicable *City* and local tree ordinances or tree shading guidelines, and size at maturity as appropriate for the planting area; and
 - (6) Selection of plants from local and regional landscape program plant lists.
 - (7) Selection of plants from local Fuel Modification Plan Guidelines.
 - (B) Each *hydrozone* shall have plant materials with similar water use; with the exception of *hydrozones* with plants of mixed water use, as specified in Section 2.6(a)(2)(D) of these *Guidelines*.
 - (C) Plants shall be selected and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site. Methods to achieve water efficiency shall include one or more of the following:
 - (1) Use the *Sunset* Western Climate Zone System, or equivalent generally accepted models, which takes into account temperature, humidity, elevation, terrain, latitude, and varying degrees of continental and marine influence on local climate;
 - (2) Recognize the horticultural attributes of plants (i.e., mature plant size, *invasive* surface roots) to minimize damage to property or infrastructure (e.g., buildings, sidewalks, and power lines); allow for adequate soil volume for healthy root growth and

- (3) Consider the solar orientation for plant placement to maximize summer shade and winter solar gain.
 - (D) *Turf* is discouraged on slopes greater than 25% where the toe of the slope is adjacent to an impermeable hardscape and where 25% means 1 foot of vertical elevation change for every 4 feet of horizontal length (rise divided by run x 100 = slope percent).
 - (E) High water use plants, characterized by a *plant factor* of 0.7 to 1.0, are prohibited in street medians.
 - (F) A landscape design plan for projects in fire-prone areas and fuel modification zones shall comply with requirements of the local Fire Authority, where applicable. Refer to the local Fuel Modification Plan Guidelines. When conflicts between water conservation and fire safety design elements exist, the fire safety requirements shall have priority.
 - (G) The use of *invasive* plant species, such as those listed by the California Invasive Plant Council, is strongly discouraged.
 - (H) The architectural guidelines of a common interest development, which include community apartment projects, condominiums, planned developments, and stock cooperatives, shall not prohibit or include conditions that have the effect of prohibiting the use of water efficient plant species as a group.
- (1) Water Features
 - (a) Recirculating water systems shall be used for *water features*.
 - (b) Where available and consistent with public health guidelines, *recycled water* shall be used as a source for decorative *water features*.
 - (c) The surface area of a *water feature* shall be included in the high water use *hydrozone* area of the water budget calculation.
 - (d) Pool and spa covers are highly recommended.
 - (2) *Soil Preparation, Mulch* and Amendments
 - (a) Prior to planting of any materials, compacted soils shall be transformed to a friable condition. On engineered slopes, only amended planting holes need to meet this requirement.
 - (b) Soil amendments shall be incorporated according to the recommendations of the soil report and what is appropriate for plants selected.

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- (c) For landscape installations, compost at a rate of a minimum of four cubic yards per 1,000 square feet of permeable area shall be incorporated to a depth of six inches into the soil. Soils with greater than 6% organic matter in the top 6 inches of soil are exempt from adding compost and tilling.
 - (d) A minimum three inch (3") layer of *mulch* shall be applied on all exposed soil surfaces of planting areas except in *turf* areas, creeping or rooting groundcovers, or direct seeding applications where *mulch* is contraindicated. To provide habitat for beneficial insects and other wildlife, up to 5% of the landscape area may be left without *mulch*. Designated insect habitat must be included in the landscape design plan as such.
 - (e) Stabilizing mulching products shall be used on slopes that meet current engineering standards such as those detailed in the USDA/USAID Low-Volume Roads Engineering Best Management Practices Field Guide.
 - (f) The mulching portion of the seed/*mulch* slurry in hydro-seeded applications shall meet the mulching requirement.
 - (g) Organic *mulch* materials made from recycled or post-consumer shall take precedence over inorganic materials or virgin forest products unless the recycled post-consumer organic products are not locally available. Organic mulches are not required where prohibited by local fuel Modification Plan Guidelines or other applicable local ordinances.
- (I) The landscape design plan, at a minimum, shall:
- (1) Delineate and label each *hydrozone* by number, letter, or other method;
 - (2) Identify each *hydrozone* as low, moderate, high water, or mixed water use. Temporarily irrigated areas of the *landscape area* shall be included in the low water use *hydrozone* for the water budget calculation;
 - (3) Identify recreational areas;
 - (4) Identify areas permanently and solely dedicated to edible plants;
 - (5) Identify areas irrigated with *recycled water*;
 - (6) Identify type of *mulch* and application depth;
 - (7) Identify soil amendments, type, and quantity;
 - (8) Identify type and surface area of *water features*;

- (9) Identify *hardscapes* (*pervious* and *non-pervious*);
- (10) Identify location and installation details, and 24-hour retention or infiltration capacity of any applicable storm water best management practices that encourage on-site retention and infiltration of storm water. *Project applicants* shall refer to the local agency or regional Water Quality Control Board for information on any applicable stormwater technical requirements. Storm water best management practices are encouraged in the landscape design plan and examples are provided in Section 2.4(C).
- (11) Identify any applicable rain harvesting or catchment technologies (e.g., rain gardens, cisterns, etc.);
- (12) Contain the following statement: “I have complied with the criteria of the *Water Efficient Landscape Ordinance* and applied them for the efficient use of water in the landscape design plan;” and
- (13) Bear the signature of a California-licensed *landscape professional*.

[Note: Authority Cited: Section 65595, Reference: Section 65596, Government Code and Section 1351, Civil Code.]

2.6 Irrigation Design Plan

- (A) This section applies to landscape areas requiring permanent irrigation, not areas that require temporary irrigation solely for the plant establishment period. For the efficient use of water, an irrigation system shall meet all the requirements listed in this section and the manufacturer’s recommendations. The irrigation system and its related components shall be planned and designed to allow for proper installation, management, and maintenance. An irrigation design plan meeting the following design criteria shall be submitted as part of the *Landscape Documentation Package*.

- (1) System

- (a) Landscape water meters, defined as either a dedicated water service meter or private sub meter, shall be installed for all non-residential irrigated landscapes of 1,000 sq. ft. but not more than 5,000 sq. ft. (the level at which Water Code 535 applies) and residential irrigated landscapes of 5,000 sq. ft. or greater. A landscape water meter may be either:

1. A customer service meter dedicated to landscape use provided by the local water purveyor; or
2. A privately owned meter or sub meter.

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- (b) Automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data with non-volatile memory shall be required for irrigation scheduling in all irrigation systems, recommending U.S. EPA WaterSense labeled devices as applicable.
- (c) *Sensors* (rain, freeze, wind, etc.), either integral or auxiliary, that suspend or alter irrigation operation during unfavorable weather conditions shall be required on all irrigation systems, as appropriate for local climatic conditions. Irrigation should be avoided during windy or freezing weather or during rain.
- (d) If the water pressure is below or exceeds the recommended pressure of the specified irrigation devices, the installation of a pressure regulating device is required to ensure that the dynamic pressure at each emission device is within the manufacturer's recommended pressure range for optimal performance.
 - 1. If the static pressure is above or below the required dynamic pressure of the irrigation system, pressure-regulating devices such as inline pressure regulators, booster pumps, or other devices shall be installed to meet the required dynamic pressure of the irrigation system.
 - 2. *Static water pressure*, dynamic or *operating pressure*, and flow reading of the water supply shall be measured at the point of connection. These pressure and flow measurements shall be conducted at the design stage. If the measurements are not available at the design stage, the measurements shall be conducted at installation.
- (e) *Backflow prevention devices* shall be required to protect the water supply from contamination by the irrigation system. A *project applicant* shall refer to the applicable *City code* (i.e., public health) for additional backflow prevention requirements.
- (f) A *master shutoff valve* shall be as close as possible to the point of connection and is required on all projects; with the exception for landscapes that make use of technologies that allow for the individual control of sprinklers that are individually pressurized in a system equipped with low pressure shut down features.
- (g) *Flow sensors* that detect high flow conditions created by system damage or malfunction are required for all non-residential landscapes and residential landscapes of 5,000 sq. ft. or larger. The flow sensor must be in combination with a *master shut-off valve*.

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- (h) *Manual isolation valves* (such as a *gate valve*, *ball valve*, or *butterfly valve*) shall be required downstream of the point of connection of the water supply to minimize water loss in case of an emergency (such as a *main line* break) or routine repair.
- (i) The irrigation system shall be designed to prevent *runoff*, low head drainage, *overspray*, or other similar conditions where irrigation water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, *hardscapes*, roadways, or structures.
- (j) Relevant information from the soil management plan, such as soil type and *infiltration rate*, shall be utilized when designing irrigation systems.
- (k) The design of the irrigation system shall conform to the *hydrozones* of the landscape design plan.
- (l) All irrigation emission devices must meet the requirements set in the American National Standards Institute (ANSI) standard, American Society of Agricultural and Biological Engineers’/International Code Council’s (ASABE/ICC) 802-2014 “Landscape Irrigation Sprinkler and Emitter Standard, All *Sprinkler heads* installed in the landscape must document a *distribution uniformity* low quarter of 0.65 or higher using the protocol defined in ASBE/ICC 802-2014.
- (m) Average *irrigation efficiency* (IE) for the project shall be determined in accordance with the EAWU calculation sheet in **Appendix C**. Unless otherwise indicated by the irrigation equipment manufacturer’s specifications or demonstrated by the *project applicant*, the *irrigation efficiency* of the irrigation heads used within each *hydrozone* shall as listed in Section 2.3(C)(9).
- (n) It is highly recommended that the *project applicant* or local agency inquire with the local water purveyor about peak water operating demands (on the water supply system) or water restrictions that may impact the effectiveness of the irrigation system.
- (o) In *mulched* planting areas, the use of *low volume irrigation* (*drip or low volume overhead irrigation*) is required to maximize water infiltration into the root zone; with the exception of areas with fuel modification requirements and/or those that require plant establishment to comply with local grading ordinances.
- (p) *Sprinkler heads* and other emission devices shall have matched *precipitation rates*, unless otherwise directed by the manufacturer’s recommendations.

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- (q) Head to head coverage is recommended. However, sprinkler spacing shall be designed to achieve the highest possible *distribution uniformity* using the manufacturer's recommendations.
- (r) *Swing joint* components are required on all sprinklers subject to damage that are adjacent to *hardscapes* or in high traffic areas of *turf*.
- (s) *Check valves* or *anti-drain valves* are required on all *sprinkler heads* where low point drainage could occur.
- (t) Areas less than ten (10) feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no *runoff* or *overspray*.
- (u) *Overhead* irrigation shall not be permitted within 24 inches of any non-permeable surface. Allowable irrigation within the setback from non-permeable surfaces may include drip, drip line, or other low flow non-spray technology. The setback area may be planted or unplanted. The surfacing of the setback may be *mulch*, gravel, or other porous material. These restrictions may be modified if:
 1. the *landscape area* is adjacent to permeable surfacing and no *runoff* occurs; or
 2. the adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping; or
 3. the irrigation designer for the landscape project specifies an alternative design or technology, as part of the *Landscape Documentation Package*, and clearly demonstrates strict adherence to the irrigation system design criteria in Section 2.G (A)(1) hereof. Prevention of *overspray* and *runoff* must be confirmed during an *irrigation audit*.
 4. slopes greater than 25% shall not be irrigated with an irrigation system with a *application rate* exceeding 0.75 inches per hour. This restriction may be modified if the landscape designer of the landscape project specifies an alternative design or technology, as part of the *Landscape Documentation Package*, and clearly demonstrates no *runoff* or erosion will occur. Prevention of *runoff* and erosion must be confirmed during the *irrigation audit*.

(2) *Hydrozone*

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- (a) Each *valve* shall irrigate a *hydrozone* with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use.
- (b) *Sprinkler heads* and other emission devices shall be selected based on what is appropriate for the plant type within that *hydrozone*.
- (c) Where feasible, trees shall be placed on separate valves from shrubs, groundcovers, and *turf* to facilitate the appropriate irrigation of trees. The mature size and extent of the root zone shall be considered when designing irrigation for the tree.
- (d) Individual *hydrozones* that mix plants of moderate and low water use or moderate and high water use may be allowed if:
 - 1. The *plant factor* calculation is based on the proportions of the respective plant water uses and their respective *plant factors*;
or
 - 2. The *plant factor* of the higher water using plant is used for the calculations.
- (e) Individual *hydrozones* that mix high and low water use plants shall not be permitted.
- (f) On the landscape design plan and irrigation design plan, *hydrozone* areas shall be designated by number, letter, or other designation. On the irrigation design plan, designate the areas irrigated by each *valve* and assign a number to each *valve*.
- (g) The irrigation design plan, at a minimum, shall contain:
 - 1. the location and size of separate water meters for landscape;
 - 2. the location, type, and size of all components of the irrigation system, including controllers, main and *lateral lines*, *valves*, *sprinkler heads*, *moisture sensing devices*, rain switches, quick couplers, pressure regulators, and *backflow prevention devices*;
 - 3. *static water pressure* at the point of connection to the public water supply;
 - 4. *flow rate* (gallons per minute), application rate (inches per hour), and design *operating pressure* (pressure per square inch) for each *station*;
 - 5. irrigation schedule parameters necessary to program smart timers specified in the landscape design;

6. the following statement: “I have complied with the criteria of the *Water Efficient Landscape Ordinance* and applied them accordingly for the efficient use of water in the irrigation design plan;” and
7. the signature of a California-licensed *landscape professional*.

[Note: Authority Cited: Section 65595, Government Code.
Reference: Section 65596, Government Code.]

2.7 Grading Design Plan

- (A) For the efficient use of water, grading of a landscape project site shall be designed to minimize soil erosion, *runoff*, and water waste. Finished grading configuration of the *landscape area*, including pads, slopes, drainage, post-construction erosion control, and storm water control Best Management Practices, as applicable, shall be shown on the Landscape Plan unless this information is fully included in separate Grading Plans for the project, or unless the project is limited to replacement planting and/or irrigation to rehabilitate an existing *landscape area*.
- (B) The *project applicant* shall submit a landscape grading plan that indicates finished configurations and elevations of the *landscape area* including:
 - (1) Height of graded slopes;
 - (2) Drainage patterns;
 - (3) Pad elevations;
 - (4) Finish grade; and
 - (5) Storm water retention improvements, if applicable.
- (C) To prevent excessive erosion and *runoff*, it is highly recommended that the *project applicant*:
 - (1) Grade so that all irrigation and normal rainfall remains within property lines and does not drain on to non-permeable *hardscapes*;
 - (2) Avoid disruption of natural drainage patterns and undisturbed soil; and
 - (3) Avoid soil compaction in *landscape areas*.
- (D) The Grading Design Plan shall contain the following statement: “I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the grading design plan” and shall bear the signature of the *landscape professional*, as required by law.

[Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.]

2.8 Certification of Completion

- (A) Landscape project installation shall not proceed until the *Landscape Documentation Package* has been approved by the *City* and any ministerial permits required are issued.
- (B) The *project applicant* shall notify the *City* at the beginning of the installation work and at intervals, as necessary, for the duration of the landscape project work to schedule all required inspections.
- (C) *Certification of Completion* of the landscape project shall be obtained through a Certificate of Use and Occupancy or a *Permit Final*. The requirements for the Final Inspection and *Permit Closure* include submittal of:
 - (1) *A Landscape Installation Certificate of Completion* in the form included as **Appendix E** of these *Guidelines*, which shall include: (i) certification by a *landscape professional* that the *landscape project* has been installed per the approved *Landscape Documentation Package*; and (ii) the following statement: “The landscaping has been installed in substantial conformance to the design plans, and complies with the provisions of the *Water Efficient Landscape Ordinance* for the efficient use of water in the landscape.”
 - (a) Where there have been significant changes (as deemed by the local permitting agency) made in the field during construction, these “as-built” or record drawings shall be included with the certificate
 - (b) A diagram of the irrigation plan showing *hydrozones* shall be kept with the irrigation controller for subsequent management purposes.
 - (2) Documentation of the irrigation scheduling parameters used to set the *controller(s)*;
 - (3) An *irrigation audit* report from a local agency landscape irrigation auditor or third party *certified landscape irrigation auditor*, documentation of enrollment in regional or local water purveyor’s water conservation programs, and/or documentation that the MAWA and EAWU information for the *landscape project* has been submitted to the local water purveyor, may be required at the option of the *City*. Example Inspection Affidavit is included as **Appendix H**.
 - (a) Landscape audits shall not be conducted by the *person* who designed or installed the landscape.

- (b) In large projects or projects with multiple landscape installations (i.e. production home developments or *common interest developments*) an auditing rate of 1 in 7 lots or approximately 15% will satisfy this requirement.

[Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.]

2.9 Post-Installation Irrigation Scheduling

- (A) For the efficient use of water, all irrigation schedules shall be developed, managed, and evaluated to utilize the minimum amount of water required to maintain plant health. Irrigation schedules shall meet the following criteria:
 - (1) Irrigation scheduling shall be regulated by automatic irrigation controllers.
 - (2) *Overhead* irrigation shall be scheduled in accordance with the local water purveyor’s Water Conservation Ordinance. Operation of the irrigation system outside the normal *watering window* is allowed for auditing and system maintenance.

[Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.]

2.10 Post-Installation Landscape and Irrigation Maintenance

- (A) Landscapes shall be maintained to ensure water use efficiency in accordance with existing local agency code.

3. Provisions for Existing Landscapes

- (A) Irrigation of all *landscape areas* shall be conducted in a manner conforming to the rules and requirements and shall be subject to penalties and incentives for water conservation and water waste prevention, as determined and implemented by the *local water purveyor* and as may be mutually agreed by the *City*.
- (B) The *City* and/or the regional or *local water purveyor* may administer programs such as irrigation water use analyses, irrigation surveys and/or *irrigation audits*, tiered water rate structures, water budgeting by parcel, or other approaches to achieve landscape water use efficiency community-wide to a level equivalent to or less than would be achieved by applying a *MAWA* calculated with an ETAF of 0.8 to all *landscape areas* in the *City* over one acre in size.
- (C) The architectural guidelines of a *common interest development*, including apartments, condominiums, planned developments, and stock cooperatives, shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group.

[Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.]

4. Public Education

- (A) Publications. Education is a critical component to promote the efficient use of water in landscapes. The use of appropriate principles of design, installation, management, and maintenance that save water is encouraged in the community.
- (B) Model Homes. All model homes that are landscaped shall use signs and written information to demonstrate the principles of water efficient landscapes as described.
 - (1) Signs shall be used to identify the model as an example of a water efficient landscape featuring elements such as *hydrozones*, irrigation equipment, and others that contribute to the overall water efficient theme. Signage shall include information about the site water use as designed per the local ordinance; specify who designed and installed the site water efficient landscape; and demonstrate low water use approaches to landscaping such as using appropriate plants, alternative water sources, or rainwater catchment systems.
 - (2) Information shall be provided about designing, installing, managing, and maintaining water efficient landscapes.

[Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.]

Appendix A: Prescriptive Compliance Option

PRESCRIPTIVE COMPLIANCE OPTION

- (A) This appendix contains prescriptive requirements which may be used as a compliance option to the Ordinance.
- (B) Compliance with the following items is mandatory and must be documented in a landscape plan in order to use the prescriptive compliance option:
 - (1) Submit a *Landscape Documentation Package* which includes the following elements:
 - (a) Date
 - (b) *Project applicant*
 - (c) Project address (if available, parcel and/or lot number (s))
 - (d) Total landscape area (square feet), including a breakdown of *turf* and plant material
 - (e) Project type (e.g., new, rehabilitated, public, private, cemetery, homeowner-installed)
 - (f) Water supply type (e.g., potable, recycled, well) and identify the local retail water purveyor if the applicant is not served by a private well
 - (g) Contact information for the *project applicant* and property owner
 - (h) Applicant signature and date with statement, “I agree to comply with the requirements of the prescriptive compliance option to the MWELO”
 - (2) Incorporate compost at a rate of at least four cubic yards per 1,000 square feet to a depth of six inches into landscape area (unless contra-indicated by a soil test);
 - (3) Plant material shall comply with all of the following:
 - (a) For residential areas, install climate adapted plants that require occasional, little or no summer water (average *WUCOLS* plan factor 0.3) for 75% of the plant area excluding edibles and areas using *recycled water*; For non-residential areas, install climate adapted plants that require occasional, little or no summer water

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(average *WUCOLS* plan factor 0.3) for 100% of the plant area excluding edibles and areas using *recycled water*;

- (b) A minimum three inch (3”) layer of *mulch* shall be applied on all exposed soil surfaces of planting areas except in *turf* areas, creeping or rooting groundcovers, or direct seeding applications where *mulch* is contraindicated.
- (4) *Turf* shall comply with all of the following:
- (a) *Turf* shall not exceed 25% of the landscape area in residential areas, and *turf* shall not be planted in non-residential areas
 - (b) *Turf* shall not be planted on sloped areas which exceed a slope of 1 foot vertical elevation change for every 4 feet of horizontal length;
 - (c) *Turf* is prohibited in parkways less than 10 feet wide, unless the parkway is adjacent to a parking strip and used to enter and exit vehicles. Any *turf* in parkways must be irrigated by sub-surface irrigation, or by other technology that creates no *overspray* or *runoff*.
- (5) Irrigation systems shall comply with the following:
- (a) Automatic irrigation controllers are required and must use evapotranspiration or soil moisture sensor data
 - (b) Irrigation controllers shall be of a type which does not lose programming data in the event the primary power source is interrupted.
 - (c) Pressure regulators shall be installed on the irrigation system to ensure the dynamic pressure of the system is within the manufacturers recommended pressure range.
 - (d) Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be installed as close as possible to the point of connection of the water supply.
 - (e) All irrigation emission devices must meet the requirements set in the ANSI standard, ASABE/ICC802-2014. “Landscape irrigation Sprinkler and Emitter Standard.” All *Sprinkler heads* installed in the landscape must document a *distribution uniformity* low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.

ITEM 8.3 – Attachment B

- (C) At the time of final inspection, the permit applicant must provide the owner of the property with a certificate of completion, certificate of installation, irrigation schedule and a schedule of landscape and irrigation maintenance.

Appendix B: Certification of Landscape Design

CERTIFICATION OF LANDSCAPE DESIGN

I hereby certify that:

(1) I am a professional appropriately licensed in the State of California to provide professional landscape design services.

(2) The landscape design and water use calculations for the property located at _____
_____ (provide street address or parcel number(s)) were prepared by me or under my supervision.

(3) The landscape design and water use calculations for the identified property comply with the requirements of the City of _____ Water Efficient Landscape Ordinance (Municipal Code Sections _____) and the City of _____ Guidelines for Implementation of the City of _____ Water Efficient Landscape Ordinance.

(4) The information I have provided in this Certificate of Landscape Design is true and correct and is hereby submitted in compliance with the City of _____ Guidelines for Implementation of the City of _____ Water Efficient Landscape Ordinance.

Print Name

Date

Signature

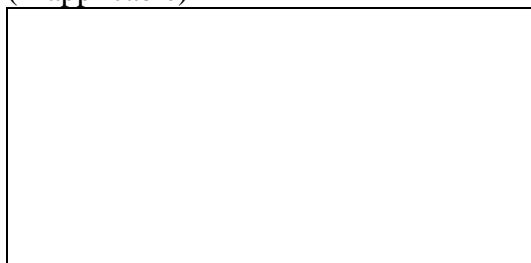
License Number

Address

Telephone

E-mail Address

Landscape Design Professional's Stamp
(If applicable)



Appendix C: Water Efficient Landscape Worksheet

WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filled out by the project applicant and it is a required item of the Landscape Documentation Package.

Reference Evapotranspiration (ET_o)^a: _____

Landscape Area Sector Type Residential
(select one): Non-Residential

	Hydrozone #/Planting Description	Location	Plant Factor ^b (PF)	Irrigation Method ^c	Irrigation Efficiency ^c (IE)	ETAF (PF/IE)	Landscape Area (sq-ft)	ETAF x Area	Estimated Total Water Use ^d (ETWU)
Regular Landscape Area									
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									

Average	Total	Total

Average ETAF for Regular Landscape Areas^e (circle one): In Compliance Not In Compliance

Special Landscape Area

SLA-1									
SLA-2									
SLA-3									
SLA-4									
SLA-5									

Totals

Total Landscape Area
 Site wide ETAF
 ETWU Total
 Maximum Allowed Water Allowance (MAWA)^f

WORKSHEET INFORMATION & EQUATIONS

^a Local monthly evapotranspiration rates are listed in Appendix D.

^b The following table can be used for common plant factors:

Plant Factor	PF
Very low water use plant	0.1
Low water use plant	0.2
Medium water use plant	0.5
High water use plant	0.8
Lawn	0.8
Pool, spa, or other water feature	1.0

^c *Irrigation efficiency* is derived from measurements and estimates of irrigation system characteristics and management practices. The minimum average *irrigation efficiency* for purposes of these *Guidelines* is 0.71. The following *irrigation efficiency* may be obtained for the listed irrigation heads with an *Irrigation Management Efficiency* of 90%:

Irrigation Method	IE
Spray nozzles	71%
High efficiency spray nozzles	73%
Multi stream/Multi trajectory rotary (MSMT) nozzles	76%
Stream rotor nozzle	73%
Microspray	76%
Bubblers	77%
Drip emitter	81%
Subsurface drip	81%

^d Estimated Total Water Use (ETWU) is the annual gallons required

$$ETWU = (ETo) \times (0.62) \times (ETAF \times \text{Area})$$

where, ETo = annual evapotranspiration rate in inches per year
 0.62 = factor used to convert inches per year to gallons per square foot
 ETAF = plant factor ÷ irrigation efficiency

^e Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas, and 0.45 or below for nonresidential areas.

^f Maximum Allowed Water Allowance (MAWA) is the annual gallons allowed

$$MAWA = (ETo) \times (0.62) \times [(ETAF \times LA) + ((1-ETAF) \times SLA)]$$

where, ETo = annual evapotranspiration rate in inches per year
 0.62 = factor used to convert inches per year to gallons per square foot
 ETAF = plant factor ÷ irrigation efficiency
 LA = total (site wide) landscape area in square feet
 SLA = total special landscape area

Appendix D: Reference Evapotranspiration Table

REFERENCE EVAPOTRANSPIRATION (ET_O) TABLE

City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total (inches per year)
Aliso Viejo	2.6	2.5	3.6	4.3	5.1	5.1	5.6	5.6	4.7	3.4	2.6	2.0	47.1
Anaheim	2.7	2.7	3.3	4.6	5.3	5.6	5.9	6.0	5.1	3.4	2.6	2.0	49.2
Atwood	2.7	2.8	3.5	4.9	5.6	6.2	6.5	6.5	5.5	3.6	2.7	2.0	52.5
Balboa	2.6	2.4	3.4	4.2	4.9	4.5	5.1	5.1	4.4	3.3	2.5	2.0	44.4
Balboa Island	2.6	2.4	3.4	4.2	4.9	4.6	5.2	5.2	4.5	3.3	2.5	2.0	44.7
Brea	2.7	2.8	3.4	4.8	5.5	6.0	6.4	6.4	5.4	3.6	2.7	2.0	51.8
Buena Park	2.6	2.5	3.6	4.4	5.3	5.3	6.0	5.8	4.9	3.5	2.5	2.0	48.4
Capistrano Beach	2.6	2.5	3.5	4.2	5.0	4.7	5.3	5.3	4.6	3.3	2.5	2.0	45.4
Corona Del Mar	2.6	2.5	3.4	4.2	4.9	4.6	5.2	5.2	4.5	3.3	2.5	2.0	44.9
Costa Mesa	2.6	2.5	3.5	4.2	5.0	4.8	5.4	5.3	4.6	3.3	2.5	2.0	45.6
Coto De Caza	2.6	2.5	3.7	4.5	5.5	5.6	6.2	6.1	5.1	3.6	2.6	2.0	49.8
Cypress	2.6	2.5	3.5	4.3	5.2	5.1	5.7	5.6	4.7	3.4	2.5	2.0	47.2
Dana Point	2.6	2.5	3.5	4.2	4.9	4.7	5.2	5.2	4.5	3.3	2.5	2.0	45.1
El Modena	2.7	2.7	3.4	4.7	5.4	5.9	6.2	6.2	5.3	3.5	2.7	2.0	50.7
Foothill Ranch	2.6	2.5	3.7	4.5	5.5	5.6	6.3	6.1	5.1	3.6	2.6	2.0	50.1
Fountain Valley	2.7	2.6	3.2	4.4	4.9	5.0	5.3	5.4	4.8	3.2	2.6	2.0	46.0
Fullerton	2.7	2.7	3.3	4.6	5.3	5.7	6.0	6.0	5.2	3.4	2.6	2.0	49.7
Garden Grove	2.7	2.7	3.2	4.5	5.0	5.2	5.5	5.6	4.9	3.3	2.6	2.0	47.2
Huntington Beach	2.6	2.5	3.4	4.2	4.9	4.7	5.3	5.2	4.5	3.3	2.5	2.0	45.0
Irvine (North)	2.6	2.5	3.7	4.5	5.4	5.5	6.1	6.0	5.0	3.6	2.6	2.1	49.5
Irvine (South)	2.6	2.5	3.6	4.4	5.3	5.2	5.8	5.7	4.8	3.4	2.6	2.0	47.9

ITEM 8.3 – Attachment B

City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total (inches per year)
La Habra	2.6	2.5	3.7	4.5	5.6	5.6	6.4	6.2	5.1	3.6	2.6	2.0	50.4
La Palma	2.6	2.5	3.6	4.4	5.3	5.2	5.8	5.7	4.8	3.4	2.5	2.0	47.8
Ladera Ranch	2.6	2.5	3.6	4.4	5.3	5.3	5.9	5.8	4.9	3.5	2.6	2.1	48.4
Laguna (South)	2.6	2.5	3.5	4.3	5.1	4.9	5.5	5.5	4.7	3.4	2.5	2.0	46.5
Laguna Beach	2.6	2.5	3.5	4.3	5.1	4.9	5.5	5.4	4.6	3.4	2.5	2.0	48.4
Laguna Niguel	2.6	2.5	3.5	4.3	5.1	4.9	5.5	5.5	4.7	3.4	2.5	2.0	46.5
Laguna Woods	2.6	2.5	3.6	4.4	5.3	5.2	5.8	5.7	4.9	3.5	2.6	2.0	48.0
Lake Forest	2.6	2.5	3.7	4.4	5.4	5.4	6.1	5.9	5.0	3.5	2.6	2.1	49.2
Lido Isle	2.6	2.4	3.4	4.2	4.9	4.6	5.1	5.1	4.4	3.3	2.5	2.0	44.4
Los Alamitos	2.6	2.5	3.5	4.3	5.1	4.9	5.5	5.4	4.6	3.4	2.5	2.0	46.4
Midway City	2.6	2.5	3.5	4.3	5.1	4.9	5.5	5.5	4.7	3.4	2.5	2.0	46.5
Mission Viejo	2.6	2.5	3.7	4.4	5.4	5.4	6.0	5.9	4.9	3.5	2.6	2.0	48.9
Monarch Bay	2.6	2.5	3.5	4.2	4.9	4.7	5.2	5.2	4.5	3.3	2.5	2.0	45.1
Newport Beach	2.6	2.5	3.5	4.2	5.0	4.7	5.3	5.3	4.5	3.3	2.5	2.0	45.4
Orange	2.7	2.7	3.3	4.6	5.3	5.7	6.0	6.0	5.2	3.4	2.7	2.0	49.7
Placentia	2.7	2.7	3.4	4.7	5.4	5.9	6.2	6.2	5.3	3.5	2.7	2.0	50.9
Rancho Santa Margarita	2.6	2.5	3.7	4.4	5.5	5.5	6.1	6.0	5.0	3.6	2.6	2.0	49.5
Rossmoor	2.6	2.5	3.5	4.3	5.1	4.9	5.5	5.4	4.6	3.4	2.5	2.0	46.4
San Clemente	2.6	2.5	3.5	4.3	5.1	4.9	5.4	5.4	4.7	3.4	2.6	2.0	46.4
San Juan Capistrano	2.6	2.5	3.6	4.4	5.4	5.4	6.0	5.9	4.9	3.5	2.6	2.0	48.8
Santa Ana	2.6	2.6	3.4	4.5	5.2	5.3	5.7	5.7	4.9	3.4	2.6	2.0	47.8
Seal Beach	2.6	2.5	3.4	4.2	5.0	4.7	5.3	5.3	4.5	3.3	2.5	2.0	45.4
Silverado Canyon	2.6	2.5	3.7	4.5	5.6	5.8	6.5	6.3	5.2	3.6	2.6	2.0	51.0
Stanton	2.6	2.5	3.5	4.3	5.2	5.1	5.7	5.6	4.7	3.4	2.5	2.0	47.4

ITEM 8.3 – Attachment B

City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total (inches per year)
Sunset Beach	2.6	2.5	3.4	4.2	5.0	4.7	5.3	5.2	4.5	3.3	2.5	2.0	45.0
Surfside	2.6	2.5	3.4	4.2	5.0	4.7	5.3	5.2	4.5	3.3	2.5	2.0	45.0
Trabuco Canyon	2.6	2.5	3.7	4.5	5.5	5.6	6.2	6.1	5.1	3.6	2.6	2.0	49.8
Tustin	2.7	2.7	3.3	4.6	5.3	5.6	5.9	5.9	5.1	3.4	2.7	2.0	49.2
Villa Park	2.7	2.7	3.4	4.7	5.4	5.9	6.2	6.2	5.3	3.5	2.7	2.0	50.8
Westminster	2.6	2.5	3.5	4.3	5.1	4.9	5.5	5.5	4.7	3.4	2.5	2.0	46.5
Yorba Linda	2.7	2.8	3.5	4.9	5.7	6.3	6.6	6.6	5.6	3.7	2.7	2.0	53.1

* The values in this table were derived from California Irrigation Management Information System (CIMIS) Spatial CIMIS data by zip code. Cities with multiple zip codes present monthly averages.

Appendix E: Certificate of Completion

LANDSCAPE INSTALLATION CERTIFICATE OF COMPLETION

I hereby certify that:

(1) I am a professional appropriately licensed in the State of California to provide professional landscape design services for: _____
_____ (project name, mailing address and telephone).

(2) The landscape project for the property located at _____
_____ (provide street address or parcel number(s)) was installed by me or under my supervision.

(3) The landscaping for the identified property has been installed in substantial conformance with the approved Landscape Documentation Package and complies with the requirements of the City of _____ Water Efficient Landscape Ordinance (Municipal Code Sections _____) and the City of _____ Guidelines for Implementation of the City of _____ Water Efficient Landscape Ordinance for the efficient use of water in the landscape.

(4) The following elements are attached hereto:

- a. Irrigation scheduling parameters used to set the controller;
- b. Landscape and irrigation maintenance schedule;
- c. Irrigation audit report; and
- d. Soil analysis report, if not submitted with Landscape Documentation Package, and documentation verifying implementation of the soil report recommendations.

(5) The site installation complies with the following:

- a. The required irrigation system has been installed according to approved plans and specifications and if applicable, any prior approved irrigation system alternatives.

_____ Yes _____ No

- b. Sprinklers comply with ASABE/ICC 802-2014 Landscape Irrigation Sprinkler & Emitter Standard.

_____ Yes _____ No

(6) The information I have provided in this Landscape Installation Certificate of Completion is true and correct and is hereby submitted in compliance with the City of _____ Guidelines for Implementation of the City of _____ Water Efficient Landscape Ordinance.

ITEM 8.3 – Attachment B

Print Name

Date

Signature

License Number

Address

Telephone

E-mail Address

Landscape Design Professional's Stamp
(If Appropriate)

Appendix F: Definitions

DEFINITIONS

The terms used in these Guidelines have the meaning set forth below:

“*Aggregate*” area pertains to production home neighborhoods, *common interest developments*, or other situations where multiple parcels are undergoing landscape development as one project, but may eventually be individually owned or maintained.

“*Backflow prevention device*” means a safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

“*Check valve*” or “*anti-drain valve*” means a valve located under a *sprinkler head*, or other location in the irrigation system, to hold water in the system to prevent drainage from *sprinkler heads* when the sprinkler is off.

“*Certified Landscape Irrigation Auditor*” means a *person* certified to perform landscape irrigation audits by an accredited academic institution, a professional trade organization or other program such as the US Environmental Protection Agency’s WaterSense irrigation auditor certification program and Irrigation Association’s Certified Landscape Irrigation Auditor program.

“*Certification of Design*” means the certification included as Exhibit E of these Guidelines that must be included in the *Landscape Documentation Package* pursuant to Section 2.1 of these Guidelines.

“*City*” means the *City* of Laguna Woods or its authorized designee.

“*Common interest developments*” means community apartment projects, condominium projects, planned developments, and stock cooperatives per Civil Code Section 1351

“*Distribution Uniformity*” or “*DU*” is a measure of how uniformly an irrigation head applies water to a specific target area and theoretically ranges from zero to 100 percent.

“*Drip*” irrigation means any non-spray *low volume irrigation* system utilizing emission devices with a *flow rate* measured in gallons per hour. *Low volume irrigation* systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

“*Emitter*” means a *drip* irrigation emission device that delivers water slowly from the system to the soil.

“*Estimated Applied Water Use*” or “*EAWU*” means the annual total amount of water estimated to keep plants in a healthy state. It is based on factors such as *reference evapotranspiration rate*, the size of the *landscape area*, *plant water use factors*, and the *irrigation efficiency* within each *hydrozone*.

“*Evapotranspiration adjustment factor*” or “*ETAF*” of 0.55 for residential areas and 0.45 for non-residential areas, that, when applied to *reference evapotranspiration*, adjusts for *plant factors* and *irrigation efficiency*, two major influences upon the amount of water that needs to be applied to the landscape. The ETAF for new and existing (non-rehabilitated) Special Landscape Area shall not exceed 1.0. The ETAF for existing non-rehabilitated landscapes is 0.8.

“*Evapotranspiration rate*” means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.

“*Flow rate*” means the rate at which water flows through pipes, *valves* and emission devices, measured in gallons per minute, gallons per hour, or cubic feet per second.

“*Hardscapes*” means any durable material or feature (*pervious* and *non-pervious*) installed in or around a *landscape area*, such as pavements or walls. Pools and other *water features* are considered part of the *landscape area* and not considered *hardscapes* for purposes of these Guidelines.

“*Graywater*” means a system intreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthy processing, manufacturing, or operating wastes. *Graywater* includes, but is not limited to, wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines. And laundry tubs, but does not include wastewater from kitchen sinks or dishwashers as per the Health and Safety Code (Section 17922.12). *Graywater* systems promote the efficient use of water and are encouraged to assist in on-site landscape irrigation. All *graywater* systems shall conform to the California Plumbing Code (Title 24, Part 5, Chapter 16) and any applicable local ordinance standards.

“*Hydrozone*” means a portion of the *landscape area* having plants with similar water needs and typically irrigated by one *valve/controller station*. A *hydrozone* may be irrigated or non-irrigated.

“*Infiltration rate*” means the rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).

“*Invasive*” plants species or “*noxious*” means species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources. *Invasive plant species* may be regulated by county agricultural agencies as *noxious species*.

“*Irrigation audit*” means an in-depth evaluation of the performance of an irrigation system conducted by a *Certified Landscape Irrigation Auditor*. An *irrigation audit* includes, but is not limited to: inspection, system tune-up, system test with *distribution uniformity* or emission uniformity, reporting *overspray* or *runoff* that causes overland flow, and preparation of an irrigation schedule.

“*Irrigation Management Efficiency*” or “*IME*” means the measurement used to calculate the *irrigation efficiency* of the irrigation system for a landscaped project. A 90% IME can be

achieved by using evapotranspiration controllers, soil moisture sensors, and other methods that will adjust irrigation run times to meet plant water needs.

“*Irrigation efficiency*” or “*IE*” means the measurement of the amount of water beneficially used divided by the amount of water applied to a *landscape area*. *Irrigation efficiency* is derived from measurements and estimates of irrigation system characteristics and management practices. The minimum average *irrigation efficiency* for purposes of these *Guidelines* is 0.71. Greater *irrigation efficiency* can be expected from well designed and maintained systems. The following *irrigation efficiency* may be obtained for the listed irrigation heads with an IME of 90%:

Irrigation Method	DU_{LQ}	DU_{LH}*	EU	IE**
Spray nozzles	65%	79%		71%
High efficiency spray nozzles	70%	82%		73%
Multi stream/Multi trajectory rotary (MSMT) nozzles	75%	85%		76%
Stream rotor nozzle	70%	82%		73%
Microspray	75%	85%		76%
Bubblers			85%	77%
Drip emitter			90%	81%
Subsurface drip			90%	81%

*DU_{LH} = .386 + (.614)(DU_{LQ})

** IE (spray) = (DU_{LH})(IME)

** IE (drip) = Emission uniformity (EU)(IME)

“*Landscape coefficient*” (*K_L*) is the product of a *plant factor* multiplied by a density factor and a *microclimate* factor. The *landscape coefficient* is derived to estimate water loss from irrigated *landscape areas* and *special landscape areas*.

“*Landscape Documentation Package*” means the package of documents that a *project applicant* is required to submit to the *City* pursuant to Section 2.1 of these *Guidelines*.

“*Landscape Installation Certificate of Completion*” means the certificate included as Exhibit F of these *Guidelines* that must be submitted to the *City* pursuant to Section 2.7(a)(1) of hereof.

“*Landscape professional*” means a licensed *landscape architect*, licensed landscape contractor, or any other *person* authorized to design a landscape pursuant to Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the California Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the California Food and Agriculture Code.

“*Landscape area*” means all the planting areas, *turf* areas, and *water features* in a landscape design plan subject to the *Maximum Applied Water Allowance* and *Estimated Applied Water Use* calculations. The *landscape area* does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other *pervious* or *non-pervious hardscapes*, and other non-irrigated areas designated for non-development (e.g., open spaces and existing native vegetation).

“*Lateral line*” means the water delivery pipeline that supplies water to the *emitters* or sprinklers from the *valve*.

“*Low volume irrigation*” means the application of irrigation water at low pressure through a system of tubing or *lateral lines* and low volume *emitters* such as drip, drip lines, and bubblers. *Low volume irrigation* systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

“*Low volume overhead irrigation*” means aboveground irrigation heads with an upper flow limit of 0.5 GPM.

“*Main line*” means the pressurized pipeline that delivers water from the water source to the *valve* or outlet.

“*Manual Isolation Valve*” means a valve such as a gate valve, ball valve, or butterfly valve installed downstream of the point of connection of the water supply to shutdown water flow through mainline piping for routine maintenance and emergency repair.

“*Master shut-off valve*” an electronic valve such as a solenoid valve installed as close as possible to the point of connection and is used in conjunction with a flow sensor and flow monitoring controller technology to automatically shutdown system wide water flow in the event of high flow conditions such as mainline pipe break.

“*Maximum Applied Water Allowance*” or “*MAWA*” means the upper limit of annual applied water for the established *landscape area*, as specified in Section 2.2 of these *Guidelines*. It is based upon the area’s *reference evapotranspiration*, the *ETAF*, and the size of the *landscape area*. The *Estimated Applied Water Use* shall not exceed the *Maximum Applied Water Allowance*.

“*Microclimate*” means the climate of a small, specific area that may contrast with the climate of the overall landscape area due to factors such as wind, sun exposure, plant density, or proximity to reflective surfaces.

“*Mulch*” means any organic material such as leaves, bark, straw or compost, or inorganic mineral materials such as rocks, gravel, or decomposed granite left loose and applied to the soil surface for the beneficial purposes of reducing evaporation, suppressing weeds, moderating soil temperature, and preventing soil erosion.

“*Non-pervious*” means any surface or natural material that does not allow for the passage of water through the material and into the underlying soil.

“*Operating pressure*” means the pressure at which the parts of an irrigation system of sprinklers are designed to operate at by the manufacturer

“*Overspray*” means the irrigation water which is delivered beyond the target area.

“*Person*” means any natural person, firm, joint venture, joint stock company, partnership, public or private association, club, company, corporation, business trust, organization, public or private agency, government agency or institution, school district, college, university, any other user of water provided by the *City* or the *local water purveyor*, or the manager, lessee, agent, servant, officer, or employee of any of them or any other entity which is recognized by law as the subject of rights or duties.

“*Pervious*” means any surface or material that allows the passage of water through the material and into the underlying soil.

“*Plant factor*” or “*plant water use factor*” is a factor, when multiplied by *ET_o*, that estimates the amount of water needed by plants. For purposes of this *Water Efficient Landscape Ordinance*, the *plant factor* range for low water use plants is 0 to 0.3; the *plant factor* range for moderate water use plants is 0.4 to 0.6; and the *plant factor* range for high water use plants is 0.7 to 1.0. *Plant factors* cited in these *Guidelines* are derived from the Department of Water Resources 2000 publication “Water Use Classification of Landscape Species.”

“*Precipitation rate*” means the rate of application of water measured in inches per hour.

“*Project applicant*” means the *person* submitting a *Landscape Documentation Package* required under Section 2.1 to request a permit, plan check, or design review from the local agency. A *project applicant* may be the property owner or his or her designee.

“*Property owner*” or “*owner*” means the record owner of real property as shown on the most recently issued equalized assessment roll.

“*Reference evapotranspiration*” or “*ET_o*” means a standard measurement of environmental parameters which affect the water use of plants. *ET_o* is given expressed in inches per day, month, or year as represented in Appendix C of these *Guidelines*, and is an estimate of the evapotranspiration of a large field of four to seven-inch tall, cool-season grass that is well watered. *Reference evapotranspiration* is used as the basis of determining the *Maximum Applied Water Allowances*.

“*Recycled water*” or “*reclaimed water*” means treated or recycled waste water of a quality suitable for non-potable uses such as landscape irrigation and *water features*. This water is not intended for human consumption.

“*Runoff*” means water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape area. For example, *runoff* may result from water that is applied at too great a rate (application rate exceeds *infiltration rate*) or when there is a slope.

“*Special Landscape Areas*” or “*SLA*” means an area of the landscape dedicated solely to edible plants such as orchards and vegetable gardens, areas irrigated with *recycled water*, *water features* using *recycled water*, and areas dedicated to active play such as community pools and spas, parks, sports fields, golf courses, and where *turf* provides a playing surface.

“*Sprinkler head*” means a device which delivers water through a nozzle.

“*Static water pressure*” means the pipeline or municipal water supply pressure when water is not flowing.

“*Station*” means an area served by one *valve* or by a set of *valves* that operate simultaneously.

“*Swing joint*” means an irrigation component that provides a leak-free connection between the emission device and lateral pipeline to allow movement in any direction and to prevent equipment damage.

“*Turf*” means a ground cover surface of mowed grass. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Bermudagrass, Kikuyugrass, Seashore Paspalum, St. Augustinegrass, Zoysiagrass, and Buffalo grass are warm-season grasses.

“*Valve*” means a device used to control the flow of water in an irrigation system.

“*Water Efficient Landscape Ordinance*” means City Ordinance No. 16-XX.

“*Water Efficient Landscape Worksheets*” means the worksheets required to be completed pursuant to Section 2.2 of these *Guidelines* and which are included in Appendix B hereof.

“*Water feature*” means a design element where open water performs an aesthetic or recreational function. *Water features* include ponds, lakes, waterfalls, fountains, artificial streams, spas, and swimming pools (where water is artificially supplied). The surface area of *water features* is included in the high water use *hydrozone* of the *landscape area*. Constructed wetlands used for on-site wastewater treatment, habitat protection, or storm water best management practices that are not irrigated and used solely for water treatment or storm water retention are not *water features* and, therefore, are not subject to the water budget calculation.

“*Watering window*” means the time of day irrigation is allowed.

“*WUCOLS*” means the Water Use Classification of Landscape published by the University of California Cooperative Extension, the Department of Water Resources, and the Bureau of Reclamation, 2000. www.owue.water.ca.gov/docs/wucols00

Appendix G: Irrigation Plan Checklist

This is a voluntary compliance tool template developed by the Irrigation Association.

IRRIGATION PLAN CHECKLIST

Please complete the following checklist by checking all appropriate categories under APPLICANT column, indicating compliance with these content requirements. All submitted plans shall contain the following information:

LANDSCAPE PLAN NUMBER: _____

NAME OF PROJECT: _____

Applicant		Planner
<input type="checkbox"/>	1. Prevailing winds	<input type="checkbox"/>
<input type="checkbox"/>	2. Slope aspect and degree of slope	<input type="checkbox"/>
<input type="checkbox"/>	3. Soil type and infiltration rate	<input type="checkbox"/>
<input type="checkbox"/>	4. Vegetation type	<input type="checkbox"/>
<input type="checkbox"/>	5. Microclimates	<input type="checkbox"/>
<input type="checkbox"/>	6. Expansive or hazardous soil conditions	<input type="checkbox"/>
<input type="checkbox"/>	7. Water harvesting potential	<input type="checkbox"/>
<input type="checkbox"/>	8. Available water supply, including non-potable and recycled water	<input type="checkbox"/>
All pertinent system information is indicated, including:		
<input type="checkbox"/>	9. Irrigation zones substantially corresponding to hydrozones on the landscape plan and labeled by precipitation rates and method of application	<input type="checkbox"/>
<input type="checkbox"/>	10. Water meters	<input type="checkbox"/>
<input type="checkbox"/>	11. Tap-in location	<input type="checkbox"/>
<input type="checkbox"/>	12. Static water pressure at the point of connection	<input type="checkbox"/>
<input type="checkbox"/>	13. System controller	<input type="checkbox"/>
<input type="checkbox"/>	14. Rain sensor/shut-off device	<input type="checkbox"/>
<input type="checkbox"/>	15. Backflow preventers	<input type="checkbox"/>
<input type="checkbox"/>	16. Shut-off valves and zone control valves	<input type="checkbox"/>
<input type="checkbox"/>	17. Main line and lateral piping	<input type="checkbox"/>
<input type="checkbox"/>	18. Sprinkler heads	<input type="checkbox"/>
<input type="checkbox"/>	19. Bubblers and drip irrigation tubing runs	<input type="checkbox"/>
<input type="checkbox"/>	20. Type and size of main irrigation system components	<input type="checkbox"/>
<input type="checkbox"/>	21. Total required operating pressure for each control valve/zone	<input type="checkbox"/>
<input type="checkbox"/>	22. Graphic depiction of the locations of irrigation system components	<input type="checkbox"/>
<input type="checkbox"/>	23. Total required operating pressure for each control valve/zone	<input type="checkbox"/>
<input type="checkbox"/>	24. Any supplemental stormwater and/or runoff harvesting	<input type="checkbox"/>
System design is in conformance with the following standards:		
<input type="checkbox"/>	25. Certification of Professional Qualifications, attached	<input type="checkbox"/>
<input type="checkbox"/>	26. Pedestrian surfaces located on plan	<input type="checkbox"/>
<input type="checkbox"/>	27. Equipment installed flush with grade for safety	<input type="checkbox"/>
<input type="checkbox"/>	28. Compliance with local codes	<input type="checkbox"/>
<input type="checkbox"/>	29. Overspray onto impervious areas minimized	<input type="checkbox"/>

Appendix H: Inspection Affidavit

This is a voluntary compliance tool template developed by the Irrigation Association.

IRRIGATION INSPECTION AFFIDAVIT

(To be submitted in conformance with Code Section 309.C)

Irrigation Plan File No: _____ Name of Project: _____

Irrigation Plan Designer: _____ Inspector: _____

Date(s) of Inspection: _____

This project was inspected within the limits of customary access for compliance with the approved irrigation plan on file in City Planning. At least two (2) inspections were conducted. The findings are as follows:

	(Check One)	<u>Yes</u>	<u>No</u>
A. Inspection during construction to check main line in open trench:			
1. Location of main line conforms to as-built plan		_____	_____
2. Size of main line conforms to plan		_____	_____
3. Depth of main line conforms to plan		_____	_____
4. Main line condition is undamaged		_____	_____
5. Main line pressure tested with water and meter to check for visible leaks		_____	_____
6. Specific observations attached if needed		_____	_____
B. Inspection after completion of system installation prior to seeding or sodding:			
1. Settling along trenches is absent		_____	_____
2. System components (i.e., controller, backflow preventer, rain sensor, etc.) installed as specified		_____	_____
3. Rotary heads pressure tested		_____	_____
4. System activated for observation of compliance		_____	_____
5. Landscape components are not blocking application		_____	_____
6. Each station complies with design / as-built plan		_____	_____
7. Matched precipitation rates provided by zone		_____	_____
8. As-built plan provided to owner		_____	_____
9. Specific observations attached as needed		_____	_____

I hereby certify that I am qualified to submit this irrigation inspection affidavit based on the qualification indicated below: (check one)

Certified Irrigation Designer certified by The Irrigation Association, indicate year of certification _____

State: _____ Licensed No. _____

State Agency Phone No. (_____) _____

Name
(PRINT)

Signature

Date

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Differences between Landscape Ordinances

(Prepared by the Metropolitan Water District of Orange County)

The purpose of this document is to summarize the differences between the 2009 State Model Ordinance and 2015 State Model Ordinance and the 2015 State Model Ordinance and OC Model Ordinance.

2009 State Model Ordinance and 2015 State Model Ordinance –

- Requires reporting of implementation and enforcement to DWR by Dec. 31, 2015 and annually thereafter
 - DWR shall provide information on local compliance to the State Board who may consider further regulations and enforcement to promote compliance
 - DWR to provide technical assistance and grant funding priority for agencies in compliance
- Landscape Threshold Subject to Ordinance
 - New construction reduced to 500 ft²
 - Previous size thresholds
 - 2500 ft² for public and private development
 - 5000 ft² for owner built custom homes
 - Rehabilitated landscape projects
 - 2,500 ft² requiring a building or landscape permit, plan check, or design review
- Efficient Irrigation Systems - Additional requirements
 - Dedicated landscape water meters or sub meters (in alignment with CalGreen)
 - Residential landscape areas over 5000 ft²
 - Non-residential areas over 1000 ft²
 - Minimum width of turf irrigated with overhead irrigation from 8 to 10 feet
 - Areas of turf below this threshold must be irrigated with subsurface drip or other technology
 - Pressure regulators and master valves
 - Sprinkles must meet specific standards (i.e. PR ≤ 1.0 in/hr or DULQ ≥ 0.75)
- Flow sensors that detect and report high flow conditions due to broken pipes, etc.
- Graywater Usage (§492.15) new section
 - Encourages the installation of graywater systems to provide on-site landscape irrigation water
 - All graywater systems shall conform to any applicable local ordinance standards and the California Plumbing Code (Title 24, Part 5, Chapter 16)
- Soil Preparation
 - This addition of organic matter and tillage increases the ability of soil to capture and hold stormwater.
- Stormwater Management (§492.16) revised section
 - To maximize water retention and infiltration
 - Planted landscape areas required to have friable soil
- Compost application
 - 6 in deep at a rate of 4 yd³/1000 ft² (unless contraindicated by soil test)
- Limiting the Portion of Landscapes that can be Covered in Turf
 - The landscape water budget (Maximum Applied Water Allowance) was reduced from 70% of the reference evaporation (ET_o) to:
 - 50% for residential areas
 - This reduces the area that can be planted to turf in the residential landscapes from 33% to 25%

ITEM 8.3 – Attachment C

- 40% of ETo for non-residential areas
 - This does not provide enough water to permit the planting of turf.
- Turf installation is permitted when it is used for specific functions and purposes
 - The landscape ordinance water budget provides extra water allowances for functional turf (sports, recreational, picnic areas and areas irrigated with recycled water)
 - No turf will be allowed in street medians or in parkways Unless the parkways is next to a parking strip and a flat surface is required to enter and exit vehicles.

2015 State Model Ordinance and OC Model Ordinance –

- The OC Model ordinance breaks out the State Model Ordinance into an Ordinance document and a Guidelines document.
 - This allows for easier refinements to the guidelines over time without the need to readopt the Ordinance Document each time.
 - These documents are templates which include a variety of callout boxes to help the city identify areas of local concern or variability.
- More refined definitions to provide better clarity of technical terms.
- The OC model provides many more types of spray irrigation applications with normally accepted distribution uniformities in both Lower Quartile and Lower Half calculations.
 - We provide a table with LQ, LH and ultimately, the Irrigation Efficiency. The purpose for all three is to allow a designer to know the irrigation efficiency regardless of how a manufacturer provides the value.
 - The OC model is more realistic with standard overhead spray Irrigation Efficiency than the State but also provides more options that are higher than the minimum State value of .75.
- Expanded Evapotranspiration zones from three cities representing all of OC to a comprehensive listing of cities. This listing can be found within the Appendix Section of the Guidelines Document. Additionally MWDOC and AACOC have partnered with Signature Control System, Inc. to assist city staff by providing access to evapotranspiration data at the zip code level.
- The OC Model is accompanied by an Excel worksheet to help designers and planners evaluate compliance utilizing a unified approach. This worksheet can be found at: <http://www.ocwatersmart.com/commercial/resources>
- The OC model includes the following example documents as part of the Appendices within the Guidelines Document: Certification of Landscape Design, Certificate of Completion, and Inspection Affidavit.
- The inclusion of the Community Aesthetics Evaluation concept. While not subject to a permit, plan check or design review, the Community Aesthetics Evaluation may be performed to ensure the aesthetic standards of the community and irrigation efficiency intent is maintained.

Refer to the MWEL0 2015 Revision Fact Sheet for more information at:

<http://www.water.ca.gov/wateruseefficiency/landscapeordinance/docs/MWEL0%202015%20Revision%20Fact%20Sheet.pdf>

8.4
CITY COUNCIL ORGANIZATION –
OFFICE OF THE MAYOR
(NO REPORT)

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8.5

**CITY COUNCIL ORGANIZATION –
OFFICE OF THE MAYOR PRO TEM
(NO REPORT)**

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8.6
INVESTMENT POLICY REVIEW COMMITTEE
APPOINTMENTS

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City of Laguna Woods

Agenda Report

TO: Honorable Mayor and City Councilmembers

FROM: Christopher Macon, City Manager

FOR: December 21, 2016 Regular Meeting

SUBJECT: Investment Policy Review Committee Appointments

Recommendation

Appoint two members of the City Council to serve on a standing Investment Policy Review Committee from January 1, 2017 through December 31, 2017, in accordance with Administrative Policy 2.2 (Investment of Financial Assets).

Background

On November 18, 2015, acting on a recommendation from the now former Ad Hoc Investment Policy Update Committee (Mayor Pro Tem Hatch and Councilmember Horne) and staff, the City Council adopted Administrative Policy 2.2 (Investment of Financial Assets). Section 2.2.04 of Administrative Policy 2.2 provides for the appointment of an Investment Policy Review Committee as follows:

“Investment Policy Review Committee of the City Council

The City Council shall appoint two of its members to serve on an Investment Policy Review Committee for calendar year terms commencing on January 1 of each year. The Investment Policy Review Committee shall be responsible for conducting at least biannual reviews of the adequacy and effectiveness of this Administrative Policy and preparing related recommendations for City Council consideration.

The Investment Policy Review Committee shall be considered a standing committee, subject to all applicable provisions of the Ralph M. Brown Act.”

Discussion

Today's meeting is an opportunity for City Council discussion and direction, as well as public comments, regarding appointments to the Investment Policy Review Committee. Once appointed, terms would begin on January 1, 2017 and conclude on December 31, 2017. The Committee would meet at least twice during that time.

Fiscal Impact

Staff and administrative support for the Investment Policy Review Committee is included in the City's budget.

Report Prepared With: Margaret Cady, CPA, Administrative Services Director/City Treasurer

8.7
CITY COUNCIL REGIONAL APPOINTMENT
(*NO REPORT*)

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