Chapter 9-47

LANDSCAPE WATER EFFICIENCY

Sections:

9-47.010 Purpose.

The State Legislature has found that:

A. The waters of the state are of limited supply and are subject to ever-increasing demands;

B. The continuation of California's economic prosperity is dependent on the availability of adequate supplies of water for future uses;

C. 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;

D. 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;

E. Landscape design, installation, maintenance, and management can and should be water efficient; and

F. 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.

(Ord. 2016-1 § 5 (Exh. A) (part))

9-47.020 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 five hundred (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 two thousand five hundred (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 two thousand five hundred (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 projects using treated or untreated graywater or rainwater capture on site, any lot or parcels within the project that has less than two thousand five hundred (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 through stored rainwater capture on site is subject only to Appendix A of the Guidelines.

B. Section 9-47.040B 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 subsection A of this section is applicable.

C. This chapter shall 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.

(Ord. 2016-1 § 5 (Exh. A) (part); Ord. 2009-7 § 2 (part). Formerly 9-47.010)

9-47.030 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 its Guidelines.

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

2. 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.
(Ord. 2016-1 § 5 (Exh. A) (part); Ord. 2009-7 § 2 (part). Formerly 9-47.020)

9-47.040 Landscape water use standards.

A. For applicable landscape installation or rehabilitation projects subject to Section 9-47.020A, the estimated applied water use allowed for the landscaped area shall not exceed the MAWA calculated using an ET adjustment factor of 0.55 for residential areas and 0.45 for nonresidential areas, 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 local agency.
(Ord. 2016-1 § 5 (Exh. A) (part); Ord. 2009-7 § 2 (part). Formerly 9-47.030)

9-47.050 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.
(Ord. 2016-1 § 5 (Exh. A) (part); Ord. 2009-7 § 2 (part). Formerly 9-47.040)

9-47.060 Definitions.

As used in this chapter:

"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.

"Applied water" means the portion of water supplied by the irrigation system to the landscape.

"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.

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.

"Ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

"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.

"Evapotranspiration adjustment factor" or "ETAF" of 0.55 for residential areas and 0.45 for nonresidential 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 (nonrehabilitated) special landscape area shall not exceed 1.0. The ETAF for existing nonrehabilitated landscapes is 0.8.

"Guidelines" refers to the Guidelines for Implementation of Chapter 9-47, as adopted by the City, which describes procedures, calculations, and requirements for landscape projects subject to this chapter.

"Hardscapes" means any durable material or feature (pervious and nonpervious) 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.

"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 is 0.75 for overhead spray devices and 0.81 for drip systems.

"Landscape contractor" means a person licensed by the state of California to construct, maintain, repair, install, or subcontract the development of landscape systems.

"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.

"Landscape project" means total area of landscape in a project, as provided in the definition of "landscaped area," meeting the requirements under Section 9-47.020.

"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 esti-

mated 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 nonpervious hardscapes, and other nonirrigated areas designated for nondevelopment (e.g., open spaces and existing native vegetation).

"Local agency" means a local water purveyor or 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.

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

"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 = (ETo) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]

"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.

"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.

"Nonpervious" means any surface or natural material that does not allow for the passage of water through the material and into the underlying soil.

"Permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscape.

"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 ETo, 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).

"Recycled water" or "reclaimed water" means treated or recycled waste water of a quality suitable for nonpotable uses such as landscape irrigation and water features. This water is not intended for human consumption.

"Reference evapotranspiration" or "ETo" means a standard measurement of environmental parameters which affect the water use of plants. ETo is 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.

"Rehabilitated landscape" means any re-landscaping project that meets the applicability criteria of Section 9-47.020 where the modified landscape area is greater than two thousand five hundred (2,500) square feet.

"Smart irrigation controller" means an automatic irrigation controller utilizing either evapotranspiration or soil moisture sensor data with nonvolatile memory that shall be required for irrigation scheduling in all irrigation systems, recommending U.S. EPA WaterSense labeled devices as applicable.

"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.

"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 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. (Ord. 2016-1 § 5 (Exh. A) (part); Ord. 2009-7 § 2 (part). Formerly 9-47.050)

ORDINANCE NO. 2016-1

AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY

WHEREAS, in 1992, the State of California enacted the Water Conservation in Landscaping Act, (AB 325) requiring cities and counties throughout the state to adopt water efficient landscape ordinances. To assist local agencies, the Department of Water Resources (DWR) developed a model water efficient landscape ordinance (MWELO) that established water efficient landscape design standards for urban landscapes; and

WHEREAS, in 2006, Governor Schwarzenegger signed Assembly Bill 1881 (Laird, Water Conservation) amending the Water Conservation in the Landscape Act directing DWR to update the original MWELO and required cities and counties to update local landscape ordinances by January 1, 2010; and

WHEREAS, the City of Laguna Hills adopted Ordinance No. 2009-7 codified as Chapter 9-47 of the Laguna Hills Municipal Code to comply with AB 1881, and adopted guidelines implementing Ordinance No. 2009-7; and

WHEREAS, due to the on-going drought conditions within California, Governor Brown issued Executive Order (EO B-29-15) on April 1, 2015, directing DWR to update the MWELO by July 15, 2015 to increase water efficiency standards for new and existing landscapes through more efficient irrigation systems, greywater usage, onsite storm water capture and limiting the portion of landscaping that can be covered in turf; and

WHEREAS, on July 15, 2015, the California Water Commission (CWC) adopted revisions to the California Code of Regulations Title 23, Division 2, Chapter 2.7 "Model Water Efficient Landscape Ordinance", which requires cities and counties to adopt local or regional water efficient landscape ordinances that are at least as effective as the updated MWELO; and

WHEREAS, the Association of California Cities – Orange County (ACC-OC), the Municipal Water District of Orange County (MWDOC) and Building Industry Association, Orange County (BIAOC) formed a stakeholder group that developed a regional ordinance that is at least effective as the updated MWELO that includes a greater degree of local data than the state MWELO, provides a checklist and online worksheet to make the process and calculations to enhance the implementation effectiveness of the revised MWELO,

and adds guidelines and definitions that provide a greater level of certainty for applicants and staff; and

WHEREAS, the proposed Ordinance No. 2016-1 is consistent with the model regional ordinance developed under the guidance of the ACC-OC, MWDOC, and BIAOC; and

WHEREAS, the State Legislature has found that:

(a) The waters of the state are of limited supply and are subject to ever increasing demands;

(b) The continuation of California's economic prosperity is dependent on the availability of adequate supplies of water for future uses;

(c) 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;

(d) 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;

(e) Landscape design, installation, maintenance, and management can and should be water efficient; and

(f) 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.

WHEREAS, Orange County has an established, large reclaimed water infrastructure system; and

WHEREAS, allocation-based and tiered water rate structures allow public agencies to document water use in landscapes; and

WHEREAS, incentive-based water use efficiency programs have been actively implemented within Orange County since before 1991; and

WHEREAS, current local design practices in new landscapes strive to achieve the intent of the state MWELO water use goals; and

WHEREAS, all water services within the City are metered and billed based on volume of use; and

WHEREAS, 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; and

WHEREAS, all new irrigation controllers sold after 2012 within Orange County were smart irrigation controllers; and

WHEREAS, landscape plan submittal and review has been a long standing practice in Laguna Hills; and

WHEREAS, the average rainfall in Orange County is approximately 12 inches per year; and

WHEREAS, the El Toro Water District and the Moulton Niguel Water District are the water utility districts serving the City of Laguna Hills and both districts implement a 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 City of Laguna Hills in its entirety; and

WHEREAS, the City properly noticed the public hearing concerning the adoption of this Ordinance pursuant to Government Code section 6061 and as required under Government Code section 65090; and

WHEREAS, the City Council of the City of Laguna Hills has considered information presented on the proposed Ordinance by City Staff, the public, and other interested parties at a Public Hearing held on February 9, 2016.

THE CITY COUNCIL OF THE CITY OF LAGUNA HILLS, CALIFORNIA, DOES HEREBY ORDAIN AS FOLLOWS:

SECTION 1. The above recitals are true and correct, and are incorporated herein by reference.

SECTION 2. Consistent with the above recitals, the purpose of the City's Water Efficient Landscape Ordinance is to establish an alternative model acceptable under Governor Brown's April 1, 2015 Drought Executive Order (EO-B-19-25) as being at least as effective as the state MWELO in the context of conditions in the City 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.

SECTION 3. The proposed Ordinance No. 2016-1 is exempt from environmental review under the California Environmental Quality Act ("CEQA") (California Public Resources Code Section 21000 et seq.), because pursuant to Section 15307 of the state's CEQA Guidelines (14 Cal. Code Regs., § 15307), this Ordinance is covered by the CEQA Categorical Exemption for actions taken to assure the maintenance, restoration, enhancement, or protection of a natural resource where the regulatory process involves procedures for the protection of the environment. The adoption of this Ordinance will result in the enhancement and protection of water resources in the City, and will not result in cumulative adverse environmental impacts. It is therefore exempt from the provisions of CEQA.

SECTION 4. In accordance with Section 9-92.080 of the Laguna Hills Municipal Code, the required findings by the City for approval of the proposed Zone Text Amendment have been met and made as follows:

1. That the amendment or plan is consistent with the intent of the goals and policies of the General Plan as a whole, and is not inconsistent with any element thereof:

   The City's Conservation and Open Space Element of the General Plan adopted July 2009 includes Goals and Policies that support the management of natural resources, including water. Goal 1 of the Conservation and Open Space Element provides the following:

   Goal COS-1: Manage limited resources so that future generations can enjoy the environmental and scenic wealth this community has to offer.

Goal COS-1 is supported by the following policies under Water Supply and Quality:

Policy COS-1.1: Reduce water consumption by encouraging the use of low water use landscaping, water efficient plumbing, and water reclamation techniques in public and private projects.

Policy COS-1.2: Coordinate with regional water service providers to plan for emergency water services and drought.

Policy COS-1.3: Encourage the use of natural drainage improvements to retain and detain stormwater runoff, minimizing volume and pollutant concentrations.

Policy COS-1.4: Promote the use of LID standards in the design of new development and redevelopment.

Policy COS-1.5: Support the expansion of reclaimed water for irrigation of public and private landscaping.

The proposed zoning text amendment incorporates elements of each policy by limiting water use in certain new or rehabilitated landscapes and encouraging alternative methods of landscape and irrigation. The proposed Ordinance encourages the use of drought tolerant plant material, provides for the use of "greywater" and recycled water as part of project's irrigation design, provides for the incorporation of LID, and other stormwater management techniques in landscape design to minimize the use of potable water, thus conserving and managing the City's limited water resources. While the goals and policies of the Conservation and Open Space Element directly address water conservation, other policies contained in various elements of the general plan also support concepts of sustainable development, conservation, and resource management including:

Policy LU-3.7: Support the upgrade of existing buildings and landscapes for energy efficiency, water conservation, and runoff reduction.

Policy LU-4.5: Continue to plant and maintain attractive drought tolerant and native landscaping that enhances the character of Laguna Hills.

Policy COS-3.1: Continue to preserve important native trees and plant new low water use landscaping and trees.

Policy CSF-5.1: Work closely with local and regional water suppliers and distributors to ensure that high-quality water is available for the community.

Policy CSF-5.2: Actively promote water conservation by residents, businesses and organizations.

Policy S-6.2: Require that new development and redevelopment minimize stormwater and urban runoff into drainage facilities by incorporating on-site design features such as detention basins, water features, or other suitable strategies. Where feasible, support the use of common detention facilities serving more than one development.

Therefore, the proposed zoning text amendment is consistent with the General Plan.

2. That the amendment or plan is necessary to prescribe reasonable controls and standards for affected land uses to ensure compatibility and integrity of those uses with other established uses.

   The proposed zoning text amendment adopts regulations approved on July 15, 2015 by the California Water Commission revising the state's MWELO in response to Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15). The amendment provides for the reduction of water use in landscapes consistent with the new regulations found in 23 CCR 490.1 et al. The regulations ensure the City is implementing the requirements set forth by the state.

3. That the amendment or plan is necessary to provide reasonable property development rights while protecting environmentally sensitive land uses and species.

   The proposed zoning text amendment adopts regulations approved on July 15, 2015 by the California Water Commission revising the state's MWELO in response to Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15). The amendment provides for the reduction of water use in landscapes consistent with the new regulations found in 23 CCR 490.1 *et al.* The regulations ensure the City is implementing the requirements set forth by the state. The proposed ordinance and guidelines do not diminish the development rights of any property, but rather implement landscape and irrigation requirements that ensure the efficient use of water resources.

4. That the plan or amendment is necessary to correct discrepancies in standards or policies within the plan area or land use category.

The proposed zoning text amendment revises the City's water efficient landscape requirements that were adopted in 2010, adopting the state's regulations as set forth in AB 1881 enacted in 2006 (Laird, Water Conservation). The proposed amendment is necessary to update the newer water efficient landscape standards adopted by the state on July 15, 2015.

5. That the plan or amendment is necessary to protect the general health, safety, or general welfare of the community as a whole.

The proposed zoning text amendment requires the use of certain water conservation methods and techniques in landscape and irrigation design to conserve the City's water supply.

SECTION 5. Title 9 of the City of Laguna Hills Municipal Code (Zoning and Subdivisions), is hereby revised by amending and restating Chapter 9-47 in its entirety with a new Chapter 9-47 as set forth in Exhibit "A" which is attached to this Ordinance.

SECTION 6. This Ordinance shall take effect on March 25, 2016, the 31st day following the adoption of this Ordinance by the City Council.

SECTION 7. Upon the effective date of this Ordinance, the provisions hereof shall supersede any inconsistent or conflicting provisions of the Laguna Hills Municipal Code.

SECTION 8. If any section, subsection, subdivision, sentence, clause, phrase, or portion of this Ordinance is, for any reason, held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance and each section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more section, subsection, subdivision, sentence, clause, phrase, or portion thereof be declared invalid or unconstitutional.

SECTION 9. The City Clerk shall certify to the adoption of this Ordinance and cause the same to be posted at the duly designated posting places within the City and published once within fifteen days after passage and adoption as may be required by law; or, in the alternative, the City Clerk may cause to be published a summary of this Ordinance and a certified copy of the text of this Ordinance shall be posted in the Office of the City Clerk five days prior to the date of adoption of this Ordinance; and, within fifteen days after adoption, the City Clerk shall cause to be published, the aforementioned summary and shall post a certified copy of this Ordinance, together with the vote for and against the same, in the Office of the City Clerk.

PASSED, APPROVED, AND ADOPTED this 23rd day of February, 2016.

BARBARA D. KOGERMAN, MAYOR

ATTEST:

MELISSA AU-YEUNG, CITY CLERK

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss
CITY OF LAGUNA HILLS)

I, Melissa Au-Yeung, City Clerk of the City of Laguna Hills, California, DO HEREBY CERTIFY that the foregoing Ordinance No. 2016-1 was duly introduced and placed upon its first reading at a Regular Meeting of the City Council on the 9th day of February, 2016, and that thereafter, said Ordinance was duly adopted and passed at a Regular Meeting of the City Council held on the 23rd day of February, 2016, by the following vote, to wit:

AYES: Council Members Carruth, Gilbert, Mayor Pro Tempore Sedgwick and Mayor Kogerman

NOES: None

ABSENT: Council Member Blount

ABSTAIN: None

(SEAL)

MELISSA AU-YEUNG, CITY CLERK

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss
CITY OF LAGUNA HILLS)

AFFIDAVIT OF POSTING
AND PUBLICATION

MELISSA AU-YEUNG, being first duly sworn, deposes and says:

That she is the duly appointed and qualified City Clerk of the City of Laguna Hills;

That in compliance with State Laws of the State of California, ORDINANCE NO. 2016-1, being:

> AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY

on the 14th day of February, 2016, was published in summary in The Orange County Register and on the 4th day of March, 2016, was published in summary in the Saddleback Valley News; and was, in compliance with City Resolution No. 2004-05-25-2, on the 4th day of March, 2016, caused to be posted in three places in the City of Laguna Hills, to wit:

Laguna Hills City Hall
Laguna Hills Community Center
Courtyard at La Paz Center

MELISSA AU-YEUNG, CITY CLERK
Laguna Hills, California

EXHIBIT A

Chapter 9-47

Landscape Water Efficiency

Sections:

9-47.010 Purpose.

The State Legislature has found that:

a) The waters of the state are of limited supply and are subject to ever increasing demands;

b) The continuation of California's economic prosperity is dependent on the availability of adequate supplies of water for future uses;

c) 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;

d) 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;

e) Landscape design, installation, maintenance, and management can and should be water efficient; and

f) 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.

9-47.020 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 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 chapter or conform to the prescriptive measures contained in Appendix A of the Guidelines;

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 through stored rainwater capture on site is subject only to Appendix A of the Guidelines.

B. Section 9-47.040(B) of the Landscape Water Use Standards of this Water Efficient Landscape Ordinance 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 9-47.020(A) is applicable.

C. This chapter shall 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.

9-47.030 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 its Guidelines.

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

2. 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.

9-47.040 Landscape Water Use Standards.

A. For applicable landscape installation or rehabilitation projects subject to Section 9-47.020(A) of this chapter, the Estimated Applied Water Use allowed for the landscaped area shall not exceed the MAWA calculated using an ET adjustment factor of 0.55 for residential areas and 0.45 for non-residential areas, 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 local agency.

9-47.050 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.

9-47.060 Definitions.

As used in this chapter:

"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.

"Applied water" means the portion of water supplied by the irrigation system to the landscape.

"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.

"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.

"Ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

"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.

"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.

"Guidelines" refers to the Guidelines for Implementation of Chapter 9-47, as adopted by the City, which describes procedures, calculations, and requirements for landscape projects subject to this Water Efficient Landscape Ordinance.

"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.

"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 Water Efficient Landscape Ordinance are 0.75 for overhead spray devices and 0.81 for drip systems.

"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).

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

"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.

"Landscape project" means total area of landscape in a project, as provided in the definition of "landscaped area," meeting the requirements under Section 9-47.020 of this chapter.

"Local agency" means a local water purveyor or 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.

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

"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 = (ETo) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]

"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.

"New construction" means, for the purposes of this Water Efficient Landscape Ordinance, a new building with a landscape or other new landscape such as a park, playground, or greenbelt without an associated building.

"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.

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

"Permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscape.

"Plant factor" or "plant water use factor" is a factor, when multiplied by ETo, that estimates the amount of water needed by plants. For purposes of this Water Efficient Landscape Ordinance, 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 Water Efficient Landscape Ordinance 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).

"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.

"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.

"Rehabilitated landscape" means any re-landscaping project that meets the applicability criteria of Section 9-47.020 where the modified landscape area is greater than 2,500 square feet.

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

"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.

"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 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.

AFFIDAVIT OF PUBLICATION

STATE OF CALIFORNIA,)
) ss.
County of Orange)

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of **The Orange County Register**, a newspaper of general circulation, published in the city of Santa Ana, County of Orange, and which newspaper has been adjudged to be a newspaper of general circulation by the Superior Court of the County of Orange, State of California, under the date of November 19, 1905, Case No. A-21046, that the notice, of which the annexed is a true printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

February 14, 2016

"I certify (or declare) under the penalty of perjury under the laws of the State of California that the foregoing is true and correct":

Executed at Santa Ana, Orange County, California, on

Date: February 14, 2016

Signature

The Orange County Register
625 N. Grand Ave.
Santa Ana, CA 92701
(714) 796-2209

PROOF OF PUBLICATION

CITY OF LAGUNA HILLS
PUBLIC NOTICE
ORDINANCE SUMMARY

NOTICE IS HEREBY GIVEN that on February 09, 2016, the City Council of the City of Laguna Hills, California, introduced an Ordinance entitled:

AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY.

The proposed Ordinance will amend and restate chapter 9-47 of the Laguna Hills Municipal Code regarding Landscape Water Efficiency.

A certified copy of the complete text of the Ordinance is posted and may be read in the City Clerk's Department, 24035 El Toro Road, Laguna Hills, and/or a copy may be obtained from the Office at a nominal charge.

Dated this 12th day of February 2016.

/s/Melissa Au-Yeung

MELISSA AU-YEUNG, CITY CLERK
City of Laguna Hills

Published: Orange County Register Feb. 14, 2016 R-277 10137058

CITY OF LAGUNA HILLS

NOTICE OF TRANSMITTAL - LEGAL PUBLICATIONS

TO: **THE REGISTER**
Sandra Campos, Legal Advertising Coordinator

FOR PUBLICATION ON: **SUNDAY, FEBRUARY 14, 2016**

DOCUMENT TO BE PUBLISHED: **ORDINANCE SUMMARY - INTRODUCTION OF ORDINANCE ZONING TEXT AMENDMENT NO. 1-16-3425, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY AND ADOPTION OF UPDATED GUIDELINES FOR THE IMPLEMENTATION OF THE CITY OF LAGUNA HILLS WATER EFFICIENT LANDSCAPE ORDINANCE**

PROOF OF PUBLICATION: **Please send to:**

Melissa Au-Yeung, City Clerk
Laguna Hills City Hall
24035 El Toro Road
Laguna Hills, California 92653
(949) 707-2635

AUTHORIZED BY: _____ **DATE:** 2/12/16

Ordinance Introduction	February 09, 2016
Date Notice Published	February 14, 2016
Date Notice Posted in Designated Posting Places (3)	February 12, 2016

CITY OF LAGUNA HILLS
PUBLIC NOTICE
ORDINANCE SUMMARY

NOTICE IS HEREBY GIVEN that on February 09, 2016, the City Council of the City of Laguna Hills, California, introduced an Ordinance entitled:

AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY.

The proposed Ordinance will amend and restate chapter 9-47 of the Laguna Hills Municipal Code regarding Landscape Water Efficiency.

A certified copy of the complete text of the Ordinance is posted and may be read in the City Clerk's Department, 24035 El Toro Road, Laguna Hills, and/or a copy may be obtained from the Office at a nominal charge.

Dated this 12th day of February 2016.

MELISSA AU-YEUNG, CITY CLERK
City of Laguna Hills

STATE OF CALIFORNIA)
COUNTY OF ORANGE) SS
CITY OF LAGUNA HILLS)

AFFIDAVIT OF POSTING
AND PUBLICATION

MELISSA AU-YEUNG, being first duly sworn, deposes and says that she is the duly appointed and qualified City Clerk of the City of Laguna Hills and that by February 10, 2016 at 5:00 p.m., she caused a certified copy of:

> An Ordinance of the City of Laguna Hills, California, amending and restating Chapter 9-47 of Title 9 of the Laguna Hills Municipal Code regarding Landscape Water Efficiency,

to be posted in the City Clerk's Department; that on February 14, 2016, a copy of the above Notice was published in the O.C. Register newspaper; and, that by February 12, 2016, at 5:00 p.m., she caused the above Notice to be posted in three (3) public places in the City of Laguna Hills, to wit: Laguna Hills City Hall, Laguna Hills Community Center, and the Courtyard at La Paz Center.

MELISSA AU-YEUNG, CITY CLERK

AFFIDAVIT OF PUBLICATION

STATE OF CALIFORNIA,)
) ss.
County of Orange)

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the **Saddleback Valley News,** a newspaper that has been adjudged to be a newspaper of general circulation by the Superior Court of the County of Orange, State of California, on December 7, 1976, Case No. A-86742 in and for the South Orange County Judicial District, County of Orange, State of California; that the notice, of which the annexed is a true printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

January 29, 2016

"I certify (or declare) under the penalty of perjury under the laws of the State of California that the foregoing is true and correct":

Executed at Santa Ana, Orange County, California, on

Date: January 29, 2016

Signature

Saddleback Valley News
625 N. Grand Ave.
Santa Ana, CA 92701
(714) 796-2209

RECEIVED
FEB 03 2016
CITY OF LAGUNA HILLS

PROOF OF PUBLICATION

CITY OF LAGUNA HILLS
NOTICE OF CITY COUNCIL PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the City Council of the City of Laguna Hills will conduct a public hearing to consider the following:

Zoning Text Amendment No. 1-16-3425, amending Title 9 of the Laguna Hills Municipal Code (Zoning and Subdivisions) amending and restating Chapter 9-47 (Landscape Water Efficiency) in its entirety in accordance with Governor Brown's executive order of April 1, 2015 (EO B-29-15), and adoption of revised guidelines for the implementation of the City of Laguna Hills Water Efficient Landscape Ordinance.

ENVIRONMENTAL:

The adoption of the proposed ordinance and associated Guidelines will result in increased water conservation throughout the City by requiring the use of drought-tolerant plant materials, improved irrigation design, improved landscape installation techniques, and increased use of greywater in landscape design. As a result of these outcomes, the proposed ordinance and implementing Guidelines will result in the protection of the state's water resources. Therefore the adoption of the ordinance and the associated Guidelines are exempt from the requirements of the California Environmental Quality Act, California Public Resources Section 21000 et seq. ("CEQA") and CEQA's implementing guidelines, pursuant to Section 15307 of Chapter 3, Title 14, of the California Code of Regulations.

DATE AND TIME OF HEARING: February 9, 2016, 7:00 p.m., or as soon thereafter as possible.

LOCATION OF HEARING: City Council Chamber
24035 El Toro Road
Laguna Hills, California 92653

INVITATION TO BE HEARD:
All interested persons will be given an opportunity to comment on this item at the public hearing. In addition, written comments may be submitted to the City Council prior to the hearing, mailed to 24035 El Toro Road, Laguna Hills, California 92653, Attention: City Clerk. Please reference hearing title and date of hearing in any correspondence.

If you wish to challenge the above in court, the challenge will be limited only to those issues you or someone else raised at the public hearing or in written correspondence delivered to the City Clerk at, or prior to, the public hearing described in this notice.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, you should contact the office of the City Clerk at (949) 707-2635. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to assure accessibility to this meeting.

The file pertaining to this item is available for public review at the Planning Department of the City of Laguna Hills. The agenda report for this item will be available Friday afternoon, February 5, 2016, and a copy may be obtained on the City of Laguna Hills website or from the City Clerk's Department. Prior to coming to City Hall, you may wish to contact the City Clerk's Department to ensure a copy of the report is available for distribution. For further information, you may contact: David Chantarangsu, Community Development Director, at (949) 707-2670 or dchantarangsu@lagunahillsca.gov.

/s/Melissa Au-Yeung
MELISSA AU-YEUNG, CITY CLERK
City of Laguna Hills

Publish: Saddleback Valley News January 29, 2016 10130792

CITY OF LAGUNA HILLS
NOTICE OF PLANNING AGENCY PUBLIC HEARING

NOTICE OF TRANSMITTAL - LEGAL PUBLICATIONS

TO: SADDLEBACK VALLEY NEWS
Michael Collins, Legal Advertising

FOR PUBLICATION ON: January 29, 2016

DOCUMENT TO BE PUBLISHED: PUBLIC HEARING NOTICE – ZONING TEXT AMENDMENT NO. 1-16-3425

PROOF OF PUBLICATION: Please send to:

Melissa Au-Yeung, Assistant to the City Manager
Laguna Hills City Hall
24035 El Toro Road
Laguna Hills, California 92653
(949) 707-2630

AUTHORIZED BY _____ DATE: 1/22/16

Date of Public Hearing February 9, 2016

Date Notice Published January 29, 2016

Date Notice Mailed n/a

Date Notice Posted in Designated Posting Places (3) January 29, 2016

CITY OF LAGUNA HILLS
NOTICE OF CITY COUNCIL PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the City Council of the City of Laguna Hills will conduct a public hearing to consider the following:

Zoning Text Amendment No. 1-16-3425, amending Title 9 of the Laguna Hills Municipal Code (Zoning and Subdivisions) amending and restating Chapter 9-47 (Landscape Water Efficiency) in its entirety in accordance with Governor Brown's executive order of April 1, 2015 (EO B-29-15), and adoption of revised guidelines for the implementation of the City of Laguna Hills Water Efficient Landscape Ordinance.

ENVIRONMENTAL:

The adoption of the proposed ordinance and associated Guidelines will result in increased water conservation throughout the City by requiring the use of drought-tolerant plant materials, improved irrigation design, improved landscape installation techniques, and increased use of greywater in landscape design. As a result of these outcomes, the proposed ordinance and implementing Guidelines will result in the protection of the state's water resources. Therefore the adoption of the ordinance and the associated Guidelines are exempt from the requirements of the California Environmental Quality Act, California Public Resources Section 21000 et seq. ("CEQA") and CEQA's implementing guidelines, pursuant to Section 15307 of Chapter 3, Title 14, of the California Code of Regulations.

DATE AND TIME OF HEARING: February 9, 2016, 7:00 p.m., or as soon thereafter as possible

LOCATION OF HEARING: City Council Chamber
24035 El Toro Road
Laguna Hills, California 92653

INVITATION TO BE HEARD:

All interested persons will be given an opportunity to comment on this item at the public hearing. In addition, written comments may be submitted to the City Council prior to the hearing, mailed to 24035 El Toro Road, Laguna Hills, California 92653, Attention: City Clerk. Please reference hearing title and date of hearing in any correspondence.

If you wish to challenge the above in court, the challenge will be limited only to those issues you or someone else raised at the public hearing or in written correspondence delivered to the City Clerk at, or prior to, the public hearing described in this notice.

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The file pertaining to this item is available for public review at the Planning Department of the City of Laguna Hills. The agenda report for this item will be available Friday afternoon, February 5, 2016, and a copy may be obtained on the City of Laguna Hills website or from the City Clerk's Department. Prior to coming to City Hall, you may wish to contact the City Clerk's Department to ensure a copy of the report is available for distribution.

For further information, you may contact: David Chantarangsu, Community Development Director, at (949) 707-2670 or dchantarangsu@lagunahillsca.gov.

MELISSA AU-YEUNG, CITY CLERK
City of Laguna Hills

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss
CITY OF LAGUNA HILLS)

AFFIDAVIT OF POSTING
AND PUBLICATION

MELISSA AU-YEUNG, being first duly sworn, deposes and says that she is the duly appointed and qualified City Clerk of the City of Laguna Hills; and that on the 29th day of January 2016, the attached Notice, being:

> Zoning Text Amendment No. 1-16-3425, amending Title 9 of the Laguna Hills Municipal Code (Zoning and Subdivisions) amending and restating Chapter 9-47 (Landscape Water Efficiency) in its entirety in accordance with Governor Brown's executive order of April 1, 2015 (EO B-29-15), and adoption of revised guidelines for the implementation of the City of Laguna Hills Water Efficient Landscape Ordinance.

was published in the Saddleback Valley News; and was, in compliance with City Resolution No. 2004-05-25-2, on the 29th day of January 2016, caused to be posted in three places in the City of Laguna Hills, to wit:

Laguna Hills City Hall
Laguna Hills Community Center
Courtyard at La Paz Center

MELISSA AU-YEUNG, CITY CLERK
City of Laguna Hills

CITY OF LAGUNA HILLS
ORDINANCE SUMMARY CERTIFICATION

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

I, MELISSA AU-YEUNG, City Clerk of the City of Laguna Hills, California, DO HEREBY CERTIFY that the attached is a true and correct copy of:

AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY.

This Ordinance was introduced by the City Council of the City of Laguna Hills, California, at a regular meeting thereof on the 9th day of February 2016, by the following vote:

AYES: Council Members Carruth, Gilbert, Mayor Pro Tempore Sedgwick, and Mayor Kogerman

NOES: Council Member Blount

ABSENT: None

ABSTAIN: None

MELISSA AU-YEUNG, CITY CLERK

Dated this 10th day of February 2016.

ORDINANCE NO. 2016-___

AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY

WHEREAS, in 1992, the State of California enacted the Water Conservation in Landscaping Act, (AB 325) requiring cities and counties throughout the state to adopt water efficient landscape ordinances. To assist local agencies, the Department of Water Resources (DWR) developed a model water efficient landscape ordinance (MWELO) that established water efficient landscape design standards for urban landscapes; and

WHEREAS, in 2006, Governor Schwarzenegger signed Assembly Bill 1881 (Laird, Water Conservation) amending the Water Conservation in the Landscape Act directing DWR to update the original MWELO and required cities and counties to update local landscape ordinances by January 1, 2010; and

WHEREAS, the City of Laguna Hills adopted Ordinance No. 2009-7 codified as Chapter 9-47 of the Laguna Hills Municipal Code to comply with AB 1881, and adopted guidelines implementing Ordinance No. 2009-7; and

WHEREAS, due to the on-going drought conditions within California, Governor Brown issued Executive Order (EO B-29-15) on April 1, 2015, directing DWR to update the MWELO by July 15, 2015 to increase water efficiency standards for new and existing landscapes through more efficient irrigation systems, greywater usage, onsite storm water capture and limiting the portion of landscaping that can be covered in turf; and

WHEREAS, on July 15, 2015, the California Water Commission (CWC) adopted revisions to the California Code of Regulations Title 23, Division 2, Chapter 2.7 "Model Water Efficient Landscape Ordinance", which requires cities and counties to adopt local or regional water efficient landscape ordinances that are at least as effective as the updated MWELO; and

WHEREAS, the Association of California Cities – Orange County (ACC-OC), the Municipal Water District of Orange County (MWDOC) and Building Industry Association, Orange County (BIAOC) formed a stakeholder group that developed a regional ordinance that is at least effective as the updated MWELO that includes a greater degree of local data than the state MWELO, provides a checklist and online worksheet to make the process and calculations to enhance the implementation effectiveness of the revised MWELO,

and adds guidelines and definitions that provide a greater level of certainty for applicants and staff; and

WHEREAS, the proposed Ordinance No. 2016-__ is consistent with the model regional ordinance developed under the guidance of the ACC-OC, MWDOC, and BIAOC; and

WHEREAS, the State Legislature has found that:

(a) The waters of the state are of limited supply and are subject to ever increasing demands;

(b) The continuation of California's economic prosperity is dependent on the availability of adequate supplies of water for future uses;

(c) 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;

(d) 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;

(e) Landscape design, installation, maintenance, and management can and should be water efficient; and

(f) 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.

WHEREAS, Orange County has an established, large reclaimed water infrastructure system; and

WHEREAS, allocation-based and tiered water rate structures allow public agencies to document water use in landscapes; and

WHEREAS, incentive-based water use efficiency programs have been actively implemented within Orange County since before 1991; and

WHEREAS, current local design practices in new landscapes strive to achieve the intent of the state MWELO water use goals; and

WHEREAS, all water services within the City are metered and billed based on volume of use; and

WHEREAS, 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; and

WHEREAS, all new irrigation controllers sold after 2012 within Orange County were smart irrigation controllers; and

WHEREAS, landscape plan submittal and review has been a long standing practice in Laguna Hills; and

WHEREAS, the average rainfall in Orange County is approximately 12 inches per year; and

WHEREAS, the El Toro Water District and the Moulton Niguel Water District are the water utility districts serving the City of Laguna Hills and both districts implement a 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 City of Laguna Hills in its entirety; and

WHEREAS, the City properly noticed the public hearing concerning the adoption of this Ordinance pursuant to Government Code section 6061 and as required under Government Code section 65090; and

WHEREAS, the City Council of the City of Laguna Hills has considered information presented on the proposed Ordinance by City Staff, the public, and other interested parties at a Public Hearing held on February 9, 2016.

THE CITY COUNCIL OF THE CITY OF LAGUNA HILLS, CALIFORNIA, DOES HEREBY ORDAIN AS FOLLOWS:

SECTION 1. The above recitals are true and correct, and are incorporated herein by reference.

SECTION 2. Consistent with the above recitals, the purpose of the City's Water Efficient Landscape Ordinance is to establish an alternative model acceptable under Governor Brown's April 1, 2015 Drought Executive Order (EO-B-19-25) as being at least as effective as the state MWELO in the context of conditions in the City 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.

SECTION 3. The proposed Ordinance No. 2016-__ is exempt from environmental review under the California Environmental Quality Act ("CEQA") (California Public Resources Code Section 21000 et seq.), because pursuant to Section 15307 of the state's CEQA Guidelines (14 Cal. Code Regs., § 15307), this Ordinance is covered by the CEQA Categorical Exemption for actions taken to assure the maintenance, restoration, enhancement, or protection of a natural resource where the regulatory process involves procedures for the protection of the environment. The adoption of this Ordinance will result in the enhancement and protection of water resources in the City, and will not result in cumulative adverse environmental impacts. It is therefore exempt from the provisions of CEQA.

SECTION 4. In accordance with Section 9-92.080 of the Laguna Hills Municipal Code, the required findings by the City for approval of the proposed Zone Text Amendment have been met and made as follows:

1. That the amendment or plan is consistent with the intent of the goals and policies of the General Plan as a whole, and is not inconsistent with any element thereof:

   The City's Conservation and Open Space Element of the General Plan adopted July 2009 includes Goals and Policies that support the management of natural resources, including water. Goal 1 of the Conservation and Open Space Element provides the following:

   Goal COS-1: Manage limited resources so that future generations can enjoy the environmental and scenic wealth this community has to offer.

Goal COS-1 is supported by the following policies under Water Supply and Quality:

Policy COS-1.1: Reduce water consumption by encouraging the use of low water use landscaping, water efficient plumbing, and water reclamation techniques in public and private projects.

Policy COS-1.2: Coordinate with regional water service providers to plan for emergency water services and drought.

Policy COS-1.3: Encourage the use of natural drainage improvements to retain and detain stormwater runoff, minimizing volume and pollutant concentrations.

Policy COS-1.4: Promote the use of LID standards in the design of new development and redevelopment.

Policy COS-1.5: Support the expansion of reclaimed water for irrigation of public and private landscaping.

The proposed zoning text amendment incorporates elements of each policy by limiting water use in certain new or rehabilitated landscapes and encouraging alternative methods of landscape and irrigation. The proposed Ordinance encourages the use of drought tolerant plant material, provides for the use of "greywater" and recycled water as part of project's irrigation design, provides for the incorporation of LID, and other stormwater management techniques in landscape design to minimize the use of potable water, thus conserving and managing the City's limited water resources. While the goals and policies of the Conservation and Open Space Element directly address water conservation, other policies contained in various elements of the general plan also support concepts of sustainable development, conservation, and resource management including:

Policy LU-3.7: Support the upgrade of existing buildings and landscapes for energy efficiency, water conservation, and runoff reduction.

Policy LU-4.5: Continue to plant and maintain attractive drought tolerant and native landscaping that enhances the character of Laguna Hills.

Policy COS-3.1: Continue to preserve important native trees and plant new low water use landscaping and trees.

Policy CSF-5.1: Work closely with local and regional water suppliers and distributors to ensure that high-quality water is available for the community.

Policy CSF-5.2: Actively promote water conservation by residents, businesses and organizations.

Policy S-6.2: Require that new development and redevelopment minimize stormwater and urban runoff into drainage facilities by incorporating on-site design features such as detention basins, water features, or other suitable strategies. Where feasible, support the use of common detention facilities serving more than one development.

Therefore, the proposed zoning text amendment is consistent with the General Plan.

2. That the amendment or plan is necessary to prescribe reasonable controls and standards for affected land uses to ensure compatibility and integrity of those uses with other established uses.

   The proposed zoning text amendment adopts regulations approved on July 15, 2015 by the California Water Commission revising the state's MWELO in response to Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15). The amendment provides for the reduction of water use in landscapes consistent with the new regulations found in 23 CCR 490.1 *et al.* The regulations ensure the City is implementing the requirements set forth by the state.

3. That the amendment or plan is necessary to provide reasonable property development rights while protecting environmentally sensitive land uses and species.

   The proposed zoning text amendment adopts regulations approved on July 15, 2015 by the California Water Commission revising the state's MWELO in response to Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15). The amendment provides for the reduction of water use in landscapes consistent with the new regulations found in 23 CCR 490.1 *et al.* The regulations ensure the City is implementing the requirements set forth by the state. The proposed ordinance and guidelines do not diminish the development rights of any property, but rather implement landscape and irrigation requirements that ensure the efficient use of water resources.

4. That the plan or amendment is necessary to correct discrepancies in standards or policies within the plan area or land use category.

The proposed zoning text amendment revises the City's water efficient landscape requirements that were adopted in 2010, adopting the state's regulations as set forth in AB 1881 enacted in 2006 (Laird, Water Conservation). The proposed amendment is necessary to update the newer water efficient landscape standards adopted by the state on July 15, 2015.

5. That the plan or amendment is necessary to protect the general health, safety, or general welfare of the community as a whole.

The proposed zoning text amendment requires the use of certain water conservation methods and techniques in landscape and irrigation design to conserve the City's water supply.

SECTION 5. Title 9 of the City of Laguna Hills Municipal Code (Zoning and Subdivisions), is hereby revised by amending and restating Chapter 9-47 in its entirety with a new Chapter 9-47 as set forth in Exhibit "A" which is attached to this Ordinance.

SECTION 6. This Ordinance shall take effect on _____, 2016, the 31st day following the adoption of this Ordinance by the City Council.

SECTION 7. Upon the effective date of this Ordinance, the provisions hereof shall supersede any inconsistent or conflicting provisions of the Laguna Hills Municipal Code.

SECTION 8. If any section, subsection, subdivision, sentence, clause, phrase, or portion of this Ordinance is, for any reason, held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance and each section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more section, subsection, subdivision, sentence, clause, phrase, or portion thereof be declared invalid or unconstitutional.

SECTION 9. The City Clerk shall certify to the adoption of this Ordinance and cause the same to be posted at the duly designated posting places within the City and published once within fifteen days after passage and adoption as may be required by law; or, in the alternative, the City Clerk may cause to be published a summary of this Ordinance and a certified copy of the text of this Ordinance shall be posted in the Office of the City Clerk five days prior to the date of adoption of this Ordinance; and, within fifteen days after adoption, the City Clerk shall cause to be published, the aforementioned summary and shall post a certified copy of this Ordinance, together with the vote for and against the same, in the Office of the City Clerk.

PASSED, APPROVED, AND ADOPTED this ____ day of _____, 2016.

_____
BARBARA KOGERMAN, MAYOR

ATTEST:

_____
MELISSA AU-YEUNG, CITY CLERK

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss
CITY OF LAGUNA HILLS)

I, Melissa Au-Yeung, City Clerk of the City of Laguna Hills, California, DO HEREBY CERTIFY that the foregoing Ordinance No. _____ was duly introduced and placed upon its first reading at a Regular Meeting of the City Council on the _____ day of _____, 2016, and that thereafter, said Ordinance was duly adopted and passed at a Regular Meeting of the City Council held on the _____ day of _____, 2016, by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

(SEAL)

_____
MELISSA AU-YEUNG, CITY CLERK

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss
CITY OF LAGUNA HILLS)

AFFIDAVIT OF POSTING
AND PUBLICATION

MELISSA AU-YEUNG, being first duly sworn, deposes and says:

That she is the duly appointed and qualified City Clerk of the City of Laguna Hills;

That in compliance with State Laws of the State of California, ORDINANCE NO. _____, being:

> AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY

on the _____ day of _____, 2016, was published in summary in The Register and on the _____ day of _____, 2016, was published in summary in the Saddleback Valley News; and was, in compliance with City Resolution No. _____, on the _____ day of _____, 2016, caused to be posted in three places in the City of Laguna Hills, to wit:

Laguna Hills City Hall
Laguna Hills Community Center
Courtyard at La Paz Center

_____
MELISSA AU-YEUNG, CITY CLERK
Laguna Hills, California

EXHIBIT A

Chapter 9-47

Landscape Water Efficiency

Sections:

9-47.010 Purpose.

The State Legislature has found that:

a) The waters of the state are of limited supply and are subject to ever increasing demands;

b) The continuation of California's economic prosperity is dependent on the availability of adequate supplies of water for future uses;

c) 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;

d) 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;

e) Landscape design, installation, maintenance, and management can and should be water efficient; and

f) 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.

9-47.020 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 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 chapter or conform to the prescriptive measures contained in Appendix A of the Guidelines;

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 through stored rainwater capture on site is subject only to Appendix A of the Guidelines.

B. Section 9-47.040(B) of the Landscape Water Use Standards of this Water Efficient Landscape Ordinance 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 9-47.020(A) is applicable.

C. This chapter shall 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.

9-47.030 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 its Guidelines.

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

2. 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.

9-47.040 Landscape Water Use Standards.

A. For applicable landscape installation or rehabilitation projects subject to Section 9-47.020(A) of this chapter, the Estimated Applied Water Use allowed for the landscaped area shall not exceed the MAWA calculated using an ET adjustment factor of 0.55 for residential areas and 0.45 for non-residential areas, 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 local agency.

9-47.050 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.

9-47.060 Definitions.

As used in this chapter:

"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.

"Applied water" means the portion of water supplied by the irrigation system to the landscape.

"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.

"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.

"Ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

"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.

"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.

"Guidelines" refers to the Guidelines for Implementation of Chapter 9-47, as adopted by the City, which describes procedures, calculations, and requirements for landscape projects subject to this Water Efficient Landscape Ordinance.

"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.

"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 Water Efficient Landscape Ordinance are 0.75 for overhead spray devices and 0.81 for drip systems.

"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).

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

"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.

"Landscape project" means total area of landscape in a project, as provided in the definition of "landscaped area," meeting the requirements under Section 9-47.020 of this chapter.

"Local agency" means a local water purveyor or 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.

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

"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 = (ETo) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]

"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.

"New construction" means, for the purposes of this Water Efficient Landscape Ordinance, a new building with a landscape or other new landscape such as a park, playground, or greenbelt without an associated building.

"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.

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

"Permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscape.

"Plant factor" or "plant water use factor" is a factor, when multiplied by ETo, that estimates the amount of water needed by plants. For purposes of this Water Efficient Landscape Ordinance, 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 Water Efficient Landscape Ordinance 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).

"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.

"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.

"Rehabilitated landscape" means any re-landscaping project that meets the applicability criteria of Section 9-47.020 where the modified landscape area is greater than 2,500 square feet.

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

"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.

"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 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.

RESOLUTION NO. 2016-02-09-2

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAGUNA HILLS, CALIFORNIA, APPROVING THE 2016 GUIDELINES FOR IMPLEMENTATION OF THE CITY OF LAGUNA HILLS WATER EFFICIENT LANDSCAPE ORDINANCE

The City Council of the City of Laguna Hills, California, hereby finds, determines, declares, and resolves as follows:

WHEREAS, in compliance with Assembly Bill 1881 (Laird, Water Conservation) the City Council adopted Ordinance 2009-7 on December 8, 2009 implementing the state Model Water Efficient Landscape Ordinance (MWELO) and adopted by minute order a document entitled: "Guidelines for Implementation of the City of Laguna Hills Water Efficient Landscape Ordinance" (hereinafter "2009 Guidelines"), which provided technical assistance to staff and the public for the purpose of implementing the City's MWELO; and

WHEREAS, due to the on-going drought conditions within California, Governor Brown issued Executive Order (EO B-29-15) on April 1, 2015, directing the California Department of Water Resources to update the MWELO to increase water efficiency standards for new and existing landscapes through more efficient irrigation systems, greywater usage, onsite storm water capture and limiting the portion of landscaping that can be covered in turf; and

WHEREAS, on July 15, 2015, the California Water Commission (CWC) adopted revisions to the California Code of Regulations Title 23, Division 2, Chapter 2.7 "Model Water Efficient Landscape Ordinance", which requires the City to update its 2009 Guidelines to ensure consistency with the updated requirements of the state MWELO; and

WHEREAS, the proposed 2016 Guidelines for Implementation of the City of Laguna Hills Water Efficient Landscape Ordinance ("2016 Guidelines") are incorporated by reference into the updated City of Laguna Hills Water Efficient Landscape Ordinance, which has been prepared to comply with the requirements of Governor Brown's Executive Order (EO B-29-15) and the state MWELO; and

WHEREAS, the purpose of the proposed 2016 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 updated Water Efficient Landscape Ordinance.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF LAGUNA HILLS, CALIFORNIA, DOES RESOLVE, DECLARE, DETERMINE, AND ORDER AS FOLLOWS:

SECTION 1. The Guidelines for Implementation of the City of Laguna Hills Water Efficient Landscape Ordinance adopted by the City Council by minute action on December 8, 2009 are hereby repealed in their entirety.

SECTION 2. The 2016 Guidelines for Implementation of the City of Laguna Hills Water Efficient Landscape Ordinance and their Appendices (A-H), attached hereto as Exhibit A, are hereby approved and adopted.

SECTION 3. Effective Date. This Resolution shall take effect upon the effective date of Ordinance No. 2016-1.

PASSED, APPROVED, AND ADOPTED this 9th day of February 2016.

Barbara D. Kogerman

BARBARA D. KOGERMAN, MAYOR

ATTEST:

MELISSA AU-YEUNG, CITY CLERK

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss
CITY OF LAGUNA HILLS)

I, Melissa Au-Yeung, City Clerk of the City of Laguna Hills, California, DO HEREBY CERTIFY that the foregoing is a true and correct copy of Resolution No. 2016-02-09-2 adopted by the City Council of the City of Laguna Hills, California, at a Regular Meeting thereof held on the 9th day of February, 2016, by the following vote:

AYES:	Council Members Carruth, Gilbert, Mayor Pro Tempore Sedgwick, and Mayor Kogerman
NOES:	Council Member Blount
ABSENT:	None
ABSTAIN:	None

(SEAL)

MELISSA AU-YEUNG, CITY CLERK

EXHIBIT A

GUIDELINES

FOR IMPLEMENTATION OF THE CITY OF LAGUNA HILLS WATER EFFICIENT LANDSCAPE ORDINANCE (CHAPTER 9-47)

TABLE OF CONTENTS

Section **Page No.**

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 City's Water Efficient Landscape Ordinance found at Chapter 9-47 of the Laguna Hills Municipal Code. This document is also intended for use and reference by City staff in reviewing and approving designs and verifying compliance with Chapter 9-47. The general purpose of Chapter 9-47 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 Permit 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 El Toro Water District or Moulton Niguel Water District;

(5) Regulations of the El Toro Water District and/or Moulton Niguel Water District governing use of Recycled Water;

(6) Title 9 of the Laguna Hills Municipal Code (Zoning and Subdivisions);

(7) Title 10 of the Laguna Hills Municipal Code (Buildings and Construction);

(8) The City of Laguna Hills General Plan, and

(9) Conditions of approval for a specific project

1.2 Applicability

(A) Chapter 9-47 of the Laguna Hills Municipal Code and these Guidelines apply to all of 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 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 Chapter 9-47 of the Laguna Hills Municipal Code 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, and fountains or ponds.

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;

(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.

(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 (ETo) 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

(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 plant species, such as those listed by the California Invasive Plat 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.

(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.

(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.

(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.

(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

(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 Chapter 9-47 of the Laguna Hills Municipal Code 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 Chapter 9-47 of the Laguna Hills Municipal 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.]

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

(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.

(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 (ETo)[a]: _____

Landscape Area Sector Type (select one): [ ] Residential [ ] 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

$$ETWU = (ETo) \times (0.62) \times (ETAF \times Area)$$

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

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

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

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

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.

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 _____ 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 form 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 evaportranspiration 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 Title16 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 ETo, 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 "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 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 Ordinance No. _____, adopted by the City Council on February 9, 2016, and codified in the Municipal Code in Chapter 9-47 of the Laguna Hills Municipal Code.

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

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) Yes	No
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

City of Laguna Hills
City Council Meeting Agenda
Staff Report

DATE: FEBRUARY 9, 2016

TO: MAYOR AND COUNCIL MEMBERS

FROM: DAVID CHANTARANGSU, AICP
COMMUNITY DEVELOPMENT DIRECTOR

ISSUE: ZONING TEXT AMENDMENT NO. 1-16-3425, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY AND ADOPTION OF UPDATED GUIDELINES FOR THE IMPLEMENTATION OF THE CITY OF LAGUNA HILLS WATER EFFICIENT LANDSCAPE ORDINANCE

RECOMMENDATION: THAT THE CITY COUNCIL: (1) CONDUCT A PUBLIC HEARING; (2) INTRODUCE FOR FIRST READING, READ BY TITLE ONLY, AND WAIVE FURTHER READING OF AN ORDINANCE ENTITLED: "AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY;" AND (3) ADOPT A RESOLUTION ENTITLED: "A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAGUNA HILLS, CALIFORNIA, APPROVING THE 2016 GUIDELINES FOR IMPLEMENTATION OF THE CITY OF LAGUNA HILLS WATER EFFICIENT LANDSCAPE ORDINANCE."

SUMMARY:

In response to Governor Brown's declared state of emergency due to severe drought conditions and his Executive Order (EO B-29-15) to update the state's Model Water Efficient Landscape Ordinance (MWELO), cities throughout California are required to update their landscape ordinances. The revised model ordinance creates increased water efficiency standards for new and retrofitted 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. It also requires reporting on the implementation and enforcement of the new requirements to the state.

Major changes from the current ordinance include a reduction in the square footage above which landscape projects are subject to the ordinance. The threshold size was reduced from 2,500 square feet to 500 square feet for new residential, commercial, industrial, and institutional projects. Projects will be subject to the new requirements if landscape

renovations are included as part of property improvements subject to a building permit, or if landscape renovations are part of a zoning approval such as a Site Development Permit. Attachment 3 contains a summary of the proposed changes from the current MWELO requirements.

BACKGROUND:

In 1992, the State of California enacted the Water Conservation in Landscaping Act (AB 325) requiring the adoption of a water efficient landscape ordinance by cities and counties throughout the state. In response, the City adopted Ordinance No. 2009-7, which established the City's requirements for water efficiency in landscape design in line with the model provided in AB 325. These requirements are codified in Chapter 9-47 of the Laguna Hills Municipal Code (LHMC).

With the drought conditions at emergency levels, Governor Brown issued an Executive Order (EO B-29-15) on April 1, 2015, directing the Department of Water Resources (DWR) to update the State Model Water 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 landscaping that can be covered in turf. On July 15, 2015, the California Water Commission (CWC) adopted revisions to the California Code of Regulations Title 23, Division 2, Chapter 2.7 "Model Water Efficient Landscape Ordinance." In this approval, the CWC also adopted the requirement that cities adopt an ordinance being at least as effective as the new MWELO.

Staff is recommending City Council adopt the regional approach which was crafted by ACC-OC and its stakeholder group which included the Orange County Building Industry Association, local water purveyors, south Orange County cities, and other interested stakeholders. The proposed revisions are "at least as effective as" the state MWELO. In this regard, the ACC-OC process has resulted in the development of highly detailed climate information that landscape and irrigation designers could use in preparing their project plans. In addition, the ACC-OC approach provides a checklist and online worksheet to make the process and calculations to enhance the implementation effectiveness of the revised MWELO, and adds guidelines and definitions that provide a greater level of certainty for applicants and staff.

The following describes the significant revisions to the MWELO adopted by the state which are also included in the ACC-OC's work effort:

- Project Size Applicability: Landscape area thresholds that trigger compliance with the Ordinance have been reduced. New residential, commercial, industrial, and public development projects that include landscape areas of 500 square feet or more are subject to the Ordinance. The previous landscape size threshold for new development projects was 2,500 square feet. The size threshold for existing

landscapes remains unchanged at 2,500 square feet. Only rehabilitated landscapes that are associated with a building permit or part of a zoning approval are subject to the new provisions.

- Prescriptive Compliance Option: A simplified landscape plan submittal is offered as an option for projects with landscape areas between 500 square feet and 2,500 square feet or for projects that use greywater. The Prescriptive Compliance checklist is outlined in "Appendix A" of the "Guidelines for Implementation of the Landscape Ordinance," which is included in Attachment 2.

- Definitions: Clarified and expanded definitions of technical terms have been incorporated into the Ordinance and Guidelines.

- Water Budget: The maximum amount of water that can be applied to the total project landscape area is reduced. This reduction limits the amount of high water use plants, such as cool season turf/grass, that can be used in projects. The water limit effectively reduces the amount of turf to approximately 25% of the residential landscape areas and makes the use of turf in nonresidential projects infeasible. Special function areas such as active recreation landscapes, edible gardens, and landscapes that use recycled water are given an increased water allowance.

- Landscape Design Plan: Prior to planting, 4 yards of compost must be incorporated per 1,000 square feet of permeable area. Compacted soils must be transformed to a friable state. The depth of mulch was increased from 2 to 3 inches.

- Irrigation Design Plan: Dedicated landscape water meters or submeters are required for residential landscapes over 5,000 square feet and for nonresidential landscapes over 1,000 square feet. The minimum width of areas that can be overhead irrigated was increased from 8 feet to 10 feet. Landscape areas less than 10 feet wide must be irrigated with subsurface drip or other alternative system that does not produce spray or runoff. The revised Ordinance requires the irrigation auditor to be a local agency auditor or third party auditor to reduce conflicts of interest.

- Public Education: New model homes that are required to provide water efficient landscapes are also required to provide signage demonstrating low water use approaches to landscaping.

- Reporting: Local agencies are required to report on their ordinance implementation and enforcement efforts to DWR on an annual basis.

CONCLUSION:

DWR estimates that a typical California landscape will use 12,000 gallons less a year or 20 percent less than allowed by the 2009 ordinance. Commercial landscapes will cut water use by 35%. Over the next three years, it is predicted that 472,000 new homes associated with 20,000 acres of landscape will be built in California. With proper implementation and enforcement by local agencies, the state anticipates that the new MWELO will lead to substantial water savings.

FISCAL IMPACT:

None

CEQA FINDINGS:

The adoption of the proposed Ordinance and Resolution approving the associated guidelines are exempt from environmental review under the California Environmental Quality Act ("CEQA") (California Public Resources Code Section 21000 et seq.), because pursuant to Section 15307 of the state's CEQA Guidelines (14 Cal. Code Regs., § 15307), the Ordinance and Resolution approving the associated Guidelines are covered by the CEQA Categorical Exemption for actions taken to assure the maintenance, restoration, enhancement, or protection of a natural resource where the regulatory process involves procedures for the protection of the environment. The adoption of the Ordinance and associated guidelines will result in the enhancement and protection of water resources in the City, and will not result in cumulative adverse environmental impacts.

ATTACHMENTS:

- Attachment 1 – Ordinance No. 2016-02-09-____
- Attachment 2 – Resolution Approving the 2016 Guidelines for Implementation of City of Laguna Hills Water Efficient Landscape Ordinance
- Attachment 3 –Summary of Changes

ZTA 1-16-3425
Attachment #1
Ordinance

ORDINANCE NO. 2016-___

AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY

WHEREAS, in 1992, the State of California enacted the Water Conservation in Landscaping Act, (AB 325) requiring cities and counties throughout the state to adopt water efficient landscape ordinances. To assist local agencies, the Department of Water Resources (DWR) developed a model water efficient landscape ordinance (MWELO) that established water efficient landscape design standards for urban landscapes; and

WHEREAS, in 2006, Governor Schwarzenegger signed Assembly Bill 1881 (Laird, Water Conservation) amending the Water Conservation in the Landscape Act directing DWR to update the original MWELO and required cities and counties to update local landscape ordinances by January 1, 2010; and

WHEREAS, the City of Laguna Hills adopted Ordinance No. 2009-7 codified as Chapter 9-47 of the Laguna Hills Municipal Code to comply with AB 1881, and adopted guidelines implementing Ordinance No. 2009-7; and

WHEREAS, due to the on-going drought conditions within California, Governor Brown issued Executive Order (EO B-29-15) on April 1, 2015, directing DWR to update the MWELO by July 15, 2015 to increase water efficiency standards for new and existing landscapes through more efficient irrigation systems, greywater usage, onsite storm water capture and limiting the portion of landscaping that can be covered in turf; and

WHEREAS, on July 15, 2015, the California Water Commission (CWC) adopted revisions to the California Code of Regulations Title 23, Division 2, Chapter 2.7 "Model Water Efficient Landscape Ordinance", which requires cities and counties to adopt local or regional water efficient landscape ordinances that are at least as effective as the updated MWELO; and

WHEREAS, the Association of California Cities – Orange County (ACC-OC), the Municipal Water District of Orange County (MWDOC) and Building Industry Association, Orange County (BIAOC) formed a stakeholder group that developed a regional ordinance that is at least effective as the updated MWELO that includes a greater degree of local data than the state MWELO, provides a checklist and online worksheet to make the process and calculations to enhance the implementation effectiveness of the revised MWELO,

and adds guidelines and definitions that provide a greater level of certainty for applicants and staff; and

WHEREAS, the proposed Ordinance No. 2016-__ is consistent with the model regional ordinance developed under the guidance of the ACC-OC, MWDOC, and BIAOC; and

WHEREAS, the State Legislature has found that:

(a) The waters of the state are of limited supply and are subject to ever increasing demands;

(b) The continuation of California's economic prosperity is dependent on the availability of adequate supplies of water for future uses;

(c) 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;

(d) 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;

(e) Landscape design, installation, maintenance, and management can and should be water efficient; and

(f) 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.

WHEREAS, Orange County has an established, large reclaimed water infrastructure system; and

WHEREAS, allocation-based and tiered water rate structures allow public agencies to document water use in landscapes; and

WHEREAS, incentive-based water use efficiency programs have been actively implemented within Orange County since before 1991; and

WHEREAS, current local design practices in new landscapes strive to achieve the intent of the state MWELO water use goals; and

WHEREAS, all water services within the City are metered and billed based on volume of use; and

WHEREAS, 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; and

WHEREAS, all new irrigation controllers sold after 2012 within Orange County were smart irrigation controllers; and

WHEREAS, landscape plan submittal and review has been a long standing practice in Laguna Hills; and

WHEREAS, the average rainfall in Orange County is approximately 12 inches per year; and

WHEREAS, the El Toro Water District and the Moulton Niguel Water District are the water utility districts serving the City of Laguna Hills and both districts implement a 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 City of Laguna Hills in its entirety; and

WHEREAS, the City properly noticed the public hearing concerning the adoption of this Ordinance pursuant to Government Code section 6061 and as required under Government Code section 65090; and

WHEREAS, the City Council of the City of Laguna Hills has considered information presented on the proposed Ordinance by City Staff, the public, and other interested parties at a Public Hearing held on February 9, 2016.

THE CITY COUNCIL OF THE CITY OF LAGUNA HILLS, CALIFORNIA, DOES HEREBY ORDAIN AS FOLLOWS:

SECTION 1. The above recitals are true and correct, and are incorporated herein by reference.

SECTION 2. Consistent with the above recitals, the purpose of the City's Water Efficient Landscape Ordinance is to establish an alternative model acceptable under Governor Brown's April 1, 2015 Drought Executive Order (EO-B-19-25) as being at least as effective as the state MWELO in the context of conditions in the City 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.

SECTION 3. The proposed Ordinance No. 2016-__ is exempt from environmental review under the California Environmental Quality Act ("CEQA") (California Public Resources Code Section 21000 et seq.), because pursuant to Section 15307 of the state's CEQA Guidelines (14 Cal. Code Regs., § 15307), this Ordinance is covered by the CEQA Categorical Exemption for actions taken to assure the maintenance, restoration, enhancement, or protection of a natural resource where the regulatory process involves procedures for the protection of the environment. The adoption of this Ordinance will result in the enhancement and protection of water resources in the City, and will not result in cumulative adverse environmental impacts. It is therefore exempt from the provisions of CEQA.

SECTION 4. In accordance with Section 9-92.080 of the Laguna Hills Municipal Code, the required findings by the City for approval of the proposed Zone Text Amendment have been met and made as follows:

1. That the amendment or plan is consistent with the intent of the goals and policies of the General Plan as a whole, and is not inconsistent with any element thereof:

   The City's Conservation and Open Space Element of the General Plan adopted July 2009 includes Goals and Policies that support the management of natural resources, including water. Goal 1 of the Conservation and Open Space Element provides the following:

   Goal COS-1: Manage limited resources so that future generations can enjoy the environmental and scenic wealth this community has to offer.

Goal COS-1 is supported by the following policies under Water Supply and Quality:

Policy COS-1.1: Reduce water consumption by encouraging the use of low water use landscaping, water efficient plumbing, and water reclamation techniques in public and private projects.

Policy COS-1.2: Coordinate with regional water service providers to plan for emergency water services and drought.

Policy COS-1.3: Encourage the use of natural drainage improvements to retain and detain stormwater runoff, minimizing volume and pollutant concentrations.

Policy COS-1.4: Promote the use of LID standards in the design of new development and redevelopment.

Policy COS-1.5: Support the expansion of reclaimed water for irrigation of public and private landscaping.

The proposed zoning text amendment incorporates elements of each policy by limiting water use in certain new or rehabilitated landscapes and encouraging alternative methods of landscape and irrigation. The proposed Ordinance encourages the use of drought tolerant plant material, provides for the use of "greywater" and recycled water as part of project's irrigation design, provides for the incorporation of LID, and other stormwater management techniques in landscape design to minimize the use of potable water, thus conserving and managing the City's limited water resources. While the goals and policies of the Conservation and Open Space Element directly address water conservation, other policies contained in various elements of the general plan also support concepts of sustainable development, conservation, and resource management including:

Policy LU-3.7: Support the upgrade of existing buildings and landscapes for energy efficiency, water conservation, and runoff reduction.

Policy LU-4.5: Continue to plant and maintain attractive drought tolerant and native landscaping that enhances the character of Laguna Hills.

Policy COS-3.1: Continue to preserve important native trees and plant new low water use landscaping and trees.

Policy CSF-5.1: Work closely with local and regional water suppliers and distributors to ensure that high-quality water is available for the community.

Policy CSF-5.2: Actively promote water conservation by residents, businesses and organizations.

Policy S-6.2: Require that new development and redevelopment minimize stormwater and urban runoff into drainage facilities by incorporating on-site design features such as detention basins, water features, or other suitable strategies. Where feasible, support the use of common detention facilities serving more than one development.

Therefore, the proposed zoning text amendment is consistent with the General Plan.

2. That the amendment or plan is necessary to prescribe reasonable controls and standards for affected land uses to ensure compatibility and integrity of those uses with other established uses.

   The proposed zoning text amendment adopts regulations approved on July 15, 2015 by the California Water Commission revising the state's MWELO in response to Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15). The amendment provides for the reduction of water use in landscapes consistent with the new regulations found in 23 CCR 490.1 *et al.* The regulations ensure the City is implementing the requirements set forth by the state.

3. That the amendment or plan is necessary to provide reasonable property development rights while protecting environmentally sensitive land uses and species.

   The proposed zoning text amendment adopts regulations approved on July 15, 2015 by the California Water Commission revising the state's MWELO in response to Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15). The amendment provides for the reduction of water use in landscapes consistent with the new regulations found in 23 CCR 490.1 *et al.* The regulations ensure the City is implementing the requirements set forth by the state. The proposed ordinance and guidelines do not diminish the development rights of any property, but rather implement landscape and irrigation requirements that ensure the efficient use of water resources.

4. That the plan or amendment is necessary to correct discrepancies in standards or policies within the plan area or land use category.

The proposed zoning text amendment revises the City's water efficient landscape requirements that were adopted in 2010, adopting the state's regulations as set forth in AB 1881 enacted in 2006 (Laird, Water Conservation). The proposed amendment is necessary to update the newer water efficient landscape standards adopted by the state on July 15, 2015.

5. That the plan or amendment is necessary to protect the general health, safety, or general welfare of the community as a whole.

   The proposed zoning text amendment requires the use of certain water conservation methods and techniques in landscape and irrigation design to conserve the City's water supply.

SECTION 5. Title 9 of the City of Laguna Hills Municipal Code (Zoning and Subdivisions), is hereby revised by amending and restating Chapter 9-47 in its entirety with a new Chapter 9-47 as set forth in Exhibit "A" which is attached to this Ordinance.

SECTION 6. This Ordinance shall take effect on _____, 2016, the 31st day following the adoption of this Ordinance by the City Council.

SECTION 7. Upon the effective date of this Ordinance, the provisions hereof shall supersede any inconsistent or conflicting provisions of the Laguna Hills Municipal Code.

SECTION 8. If any section, subsection, subdivision, sentence, clause, phrase, or portion of this Ordinance is, for any reason, held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance and each section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more section, subsection, subdivision, sentence, clause, phrase, or portion thereof be declared invalid or unconstitutional.

SECTION 9. The City Clerk shall certify to the adoption of this Ordinance and cause the same to be posted at the duly designated posting places within the City and published once within fifteen days after passage and adoption as may be required by law; or, in the alternative, the City Clerk may cause to be published a summary of this Ordinance and a certified copy of the text of this Ordinance shall be posted in the Office of the City Clerk five days prior to the date of adoption of this Ordinance; and, within fifteen days after adoption, the City Clerk shall cause to be published, the aforementioned summary and shall post a certified copy of this Ordinance, together with the vote for and against the same, in the Office of the City Clerk.

PASSED, APPROVED, AND ADOPTED this ____ day of _____, 2016.

_____
BARBARA KOGERMAN, MAYOR

ATTEST:

_____
MELISSA AU-YEUNG, CITY CLERK

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss
CITY OF LAGUNA HILLS)

I, Melissa Au-Yeung, City Clerk of the City of Laguna Hills, California, DO HEREBY CERTIFY that the foregoing Ordinance No. _____ was duly introduced and placed upon its first reading at a Regular Meeting of the City Council on the _____ day of _____, 2016, and that thereafter, said Ordinance was duly adopted and passed at a Regular Meeting of the City Council held on the _____ day of _____, 2016, by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

(SEAL)

_____
MELISSA AU-YEUNG, CITY CLERK

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss
CITY OF LAGUNA HILLS)

AFFIDAVIT OF POSTING
AND PUBLICATION

MELISSA AU-YEUNG, being first duly sworn, deposes and says:

That she is the duly appointed and qualified City Clerk of the City of Laguna Hills;

That in compliance with State Laws of the State of California, ORDINANCE NO. _____, being:

AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY

on the _____ day of _____, 2016, was published in summary in The Register and on the _____ day of _____, 2016, was published in summary in the Saddleback Valley News; and was, in compliance with City Resolution No. _____, on the _____ day of _____, 2016, caused to be posted in three places in the City of Laguna Hills, to wit:

Laguna Hills City Hall
Laguna Hills Community Center
Courtyard at La Paz Center

_____
MELISSA AU-YEUNG, CITY CLERK
Laguna Hills, California

EXHIBIT A

Chapter 9-47

Landscape Water Efficiency

Sections:

9-47.010 Purpose.

The State Legislature has found that:

a) The waters of the state are of limited supply and are subject to ever increasing demands;

b) The continuation of California's economic prosperity is dependent on the availability of adequate supplies of water for future uses;

c) 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;

d) 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;

e) Landscape design, installation, maintenance, and management can and should be water efficient; and

f) 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.

9-47.020 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 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 chapter or conform to the prescriptive measures contained in Appendix A of the Guidelines;

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 through stored rainwater capture on site is subject only to Appendix A of the Guidelines.

B. Section 9-47.040(B) of the Landscape Water Use Standards of this Water Efficient Landscape Ordinance 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 9-47.020(A) is applicable.

C. This chapter shall 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.

9-47.030 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 its Guidelines.

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

2. 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.

9-47.040 Landscape Water Use Standards.

A. For applicable landscape installation or rehabilitation projects subject to Section 9-47.020(A) of this chapter, the Estimated Applied Water Use allowed for the landscaped area shall not exceed the MAWA calculated using an ET adjustment factor of 0.55 for residential areas and 0.45 for non-residential areas, 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 local agency.

9-47.050 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.

9-47.060 Definitions.

As used in this chapter:

"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.

"Applied water" means the portion of water supplied by the irrigation system to the landscape.

"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.

"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.

"Ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

"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.

"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.

"Guidelines" refers to the Guidelines for Implementation of Chapter 9-47, as adopted by the City, which describes procedures, calculations, and requirements for landscape projects subject to this Water Efficient Landscape Ordinance.

"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.

"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 Water Efficient Landscape Ordinance are 0.75 for overhead spray devices and 0.81 for drip systems.

"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).

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

"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.

"Landscape project" means total area of landscape in a project, as provided in the definition of "landscaped area," meeting the requirements under Section 9-47.020 of this chapter.

"Local agency" means a local water purveyor or 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.

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

"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 = (ETo) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]

"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.

"New construction" means, for the purposes of this Water Efficient Landscape Ordinance, a new building with a landscape or other new landscape such as a park, playground, or greenbelt without an associated building.

"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.

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

"Permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscape.

"Plant factor" or "plant water use factor" is a factor, when multiplied by ETo, that estimates the amount of water needed by plants. For purposes of this Water Efficient Landscape Ordinance, 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 Water Efficient Landscape Ordinance 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).

"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.

"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.

"Rehabilitated landscape" means any re-landscaping project that meets the applicability criteria of Section 9-47.020 where the modified landscape area is greater than 2,500 square feet.

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

"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.

"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 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.

ZTA 1-16-3425
Attachment #2
Resolution & Guidelines

RESOLUTION NO. 2016-

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAGUNA HILLS, CALIFORNIA, APPROVING THE 2016 GUIDELINES FOR IMPLEMENTATION OF THE CITY OF LAGUNA HILLS WATER EFFICIENT LANDSCAPE ORDINANCE

The City Council of the City of Laguna Hills, California, hereby finds, determines, declares, and resolves as follows:

WHEREAS, in compliance with Assembly Bill 1881 (Laird, Water Conservation) the City Council adopted Ordinance 2009-7 on December 8, 2009 implementing the state Model Water Efficient Landscape Ordinance (MWELO) and adopted by minute order a document entitled: "Guidelines for Implementation of the City of Laguna Hills Water Efficient Landscape Ordinance" (hereinafter "2009 Guidelines"), which provided technical assistance to staff and the public for the purpose of implementing the City's MWELO; and

WHEREAS, due to the on-going drought conditions within California, Governor Brown issued Executive Order (EO B-29-15) on April 1, 2015, directing the California Department of Water Resources to update the MWELO to increase water efficiency standards for new and existing landscapes through more efficient irrigation systems, greywater usage, onsite storm water capture and limiting the portion of landscaping that can be covered in turf; and

WHEREAS, on July 15, 2015, the California Water Commission (CWC) adopted revisions to the California Code of Regulations Title 23, Division 2, Chapter 2.7 "Model Water Efficient Landscape Ordinance", which requires the City to update its 2009 Guidelines to ensure consistency with the updated requirements of the state MWELO; and

WHEREAS, the proposed 2016 Guidelines for Implementation of the City of Laguna Hills Water Efficient Landscape Ordinance ("2016 Guidelines") are incorporated by reference into the updated City of Laguna Hills Water Efficient Landscape Ordinance, which has been prepared to comply with the requirements of Governor Brown's Executive Order (EO B-29-15) and the state MWELO; and

WHEREAS, the purpose of the proposed 2016 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 updated Water Efficient Landscape Ordinance.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF LAGUNA HILLS, CALIFORNIA, DOES RESOLVE, DECLARE, DETERMINE, AND ORDER AS FOLLOWS:

SECTION 1. The Guidelines for Implementation of the City of Laguna Hills Water Efficient Landscape Ordinance adopted by the City Council by minute action on December 8, 2009 are hereby repealed in their entirety.

SECTION 2. The 2016 Guidelines for Implementation of the City of Laguna Hills Water Efficient Landscape Ordinance and their Appendices (A-H), attached hereto as Exhibit A, are hereby approved and adopted.

SECTION 3. Effective Date. This Resolution shall take effect upon the effective date of Ordinance No. 2016-____.

PASSED, APPROVED, AND ADOPTED this 9th day of February 2016.

_____
BARBARA KOGERMAN, MAYOR

ATTEST:

_____
MELISSA AU-YEUNG, CITY CLERK

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss
CITY OF LAGUNA HILLS)

I, Melissa Au-Yeung, City Clerk of the City of Laguna Hills, California, DO HEREBY CERTIFY that the foregoing is a true and correct copy of Resolution No. _____ adopted by the City Council of the City of Laguna Hills, California, at a Regular Meeting thereof held on the _____ day of _____, 2016, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

(SEAL)

_____
MELISSA AU-YEUNG, CITY CLERK

EXHIBIT A

GUIDELINES

FOR IMPLEMENTATION OF THE CITY OF LAGUNA HILLS WATER EFFICIENT LANDSCAPE ORDINANCE (CHAPTER 9-47)

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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 City's Water Efficient Landscape Ordinance found at Chapter 9-47 of the Laguna Hills Municipal Code. This document is also intended for use and reference by City staff in reviewing and approving designs and verifying compliance with Chapter 9-47. The general purpose of Chapter 9-47 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 Permit 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 El Toro Water District or Moulton Niguel Water District;

(5) Regulations of the El Toro Water District and/or Moulton Niguel Water District governing use of Recycled Water;

(6) Title 9 of the Laguna Hills Municipal Code (Zoning and Subdivisions);

(7) Title 10 of the Laguna Hills Municipal Code (Buildings and Construction);

(8) The City of Laguna Hills General Plan, and

(9) Conditions of approval for a specific project

1.2 Applicability

(A) Chapter 9-47 of the Laguna Hills Municipal Code and these Guidelines apply to all of 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 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 Chapter 9-47 of the Laguna Hills Municipal Code 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, and fountains or ponds.

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;

(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.

(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 (ETo) 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

(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 plant species, such as those listed by the California Invasive Plat 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.

(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.

(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.

(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.

(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

(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 Chapter 9-47 of the Laguna Hills Municipal Code 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 Chapter 9-47 of the Laguna Hills Municipal 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.]

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

(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.

(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 (ETo)[a]: _____

Landscape Area Sector Type (select one): [ ] Residential [ ] 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

$$ETWU = (ETo) \times (0.62) \times (ETAF \times Area)$$

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

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

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

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

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

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.

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 _____ 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 form 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 evaportranspiration 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 Title16 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 ETo, 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 "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 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 Ordinance No. _____, adopted by the City Council on February 9, 2016, and codified in the Municipal Code in Chapter 9-47 of the Laguna Hills Municipal Code.

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

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) Yes	No
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 _____

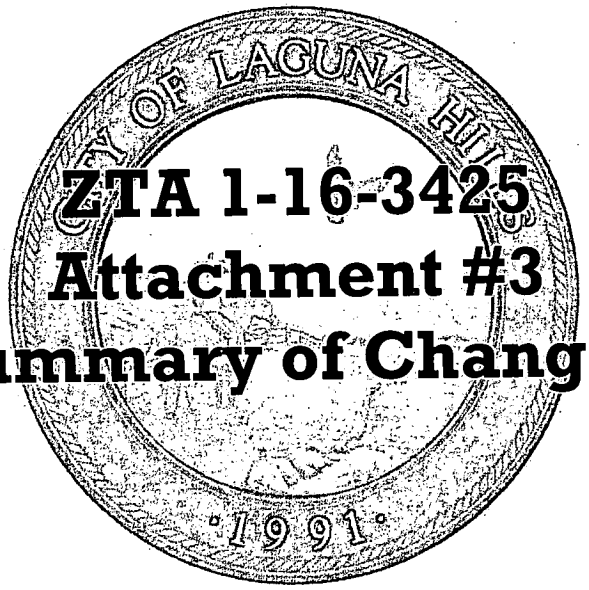
State: _____ Licensed No. _____

State Agency Phone No. (_____) _____

_____ _____

Name (PRINT) Signature

Date



ZTA 1-16-3425
Attachment #3
Summary of Changes

Applicability

	NEW 2015 WELO	2009 WELO	WHAT DOES IT MEAN?
New Development Landscape Area	500–2,500 sf: Prescriptive compliance optional (Appendix D) ≥ 2500 sf: Full compliance	2,500 sf or 5,000 sf	Increased applicability. Prescriptive compliance is easier for small projects.
Existing Development Landscape Area	≥ 2500 sf	≥ 2,500 sf	No change
Graywater or Rainwater Satisfied ETWU	Prescriptive compliance optional. Appendix D (b) (5) irrigation system requirements only.	None	Requires only the irrigation section of Appendix D instead of the entire Appendix D. StopWaste recommends adding compost and mulch requirements for graywater/rainwater landscapes.

Water Budget Changes

	NEW 2015 WELO	2009 WELO	WHAT DOES IT MEAN?
Residential ET Adjustment Factor	0.55	0.70	DWR states that high water use plants are reduced from 33% to 25% of the landscaped area. Water budget is flexible. Possible water use combinations include: • 75% low (0.3) and 25% high (0,8) • 51% very low (0.1) and 49% high (0.8) with all drip • 100% moderate (0.4)
Non-residential ET Adjustment Factor	0.45	0.70	DWR states high water use plants are reduced from 33% to infeasible. Water budget is flexible. Possible water use combinations include: • 90% low (0.3) and 10% high (0.8) • 63% very low (0.1) and 37% high (0.8) with all drip • 70% low (0,3) and 30% moderate (0.5) Unlimited special landscape areas including recreational lawns are still allowed.

Water Budget Changes Continued

	NEW 2015 WELO	2009 WELO	WHAT DOES IT MEAN?
Irrigation Efficiency	Projects can now use a different IE for each hydrozone: 0.81 for drip 0.75 for spray	0.71 average	Water budget calculations will now easily accommodate projects that install products with a mix of irrigation efficiencies.
Plant Factor Source	WUCOLS or other sources as approved by DWR	Derived from WUCOLS	More accurate representation of plant water use.
Plant Factor Range	0 to 0.1 very low 0.1 to 0.3 low	0 to 0.3 low	Separates very low and low water use designations.
Recreational Area	Excludes private single family areas	Vague for residential areas.	Residential lawn can no longer be considered a special landscape area and is therefore limited to 25% of landscape.

Landscape Design Plan

	NEW 2015 WELO	2009 WELO	WHAT DOES IT MEAN?
Medians	High water use plants, 0.7 to 1.0 are prohibited in medians.	None	No turf with a plant factor of 0.7 to 1.0 or other high water use plants in medians.
Compost	Incorporate a minimum of 4CY/1000 sf compost	None	4 CY/1000 sf compost or 1.3 inches compost required. Meets Bay-Friendly Basics requirements, although some jurisdictions have higher requirements.
Mulch Layer	3 in. mulch Recommends local recycled mulch Exemptions for 5% bee habitat	2 in. mulch	3" of mulch are required. Meets Bay-Friendly Basics requirements.
Mulch Layer Type	Organic mulch from recycled materials takes precedent over inorganic mulch	No statement on mulch type	Requires recycled content organic mulch unless there are no local feedstocks or prohibited by Local Fuel Modification Plan.

Irrigation Design Plan

	NEW 2015 WELO	2009 WELO	WHAT DOES IT MEAN?
Water Meters or Submeter	Non-residential ≥ 1,000 sf Residential ≥ 5,000 sf	All projects ≥ 5,000 sf	Lower threshold to require a meter or submeter for non-residential.
Pressure Regulators	Pressure regulating device required if pressure is under or over recommended pressure for irrigation device used.	None	Pressure regulators required if appropriate.
Flow Sensors	Required for all non-residential ≥ 5,000 sf	Recommended	Required flow sensors for non-residential.
Master Valves	Required	None	Master valves required.
Efficiency Requirements	Emission devices must meet the national standard.	None	Sprinklers must have a DU (distribution uniformity) of 0.65 or higher and meet additional national standards.
Low Volume/ Subsurface Irrigation	Subsurface irrigation required in areas less than 10 ft.	Low volume irrigation required in areas less than 8 ft.	Increased requirement from 8 ft. to 10 ft. and changed to subsurface irrigation.

Certification of Completion

	NEW 2015 WELO	2009 WELO	WHAT DOES IT MEAN?
Hydrozone Diagram	Hydrozone diagram in controller required.	None	Diagram with hydrozones shall be kept with irrigation controller.
Maintenance Schedule	Added topdressing compost.	Regular maintenance schedule.	Maintenance schedule has new requirement for topdressing compost.

Irrigation Audits

	NEW 2015 WELO	2009 WELO	WHAT DOES IT MEAN?
Irrigation Audits	Audit must be a third party. Irrigation Auditor Certification Program or Watersense program. Audit of 15% of production homes required.	Audits are required.	Increased auditor qualifications and made production home audits more reasonable.

Reporting Requirements

	NEW 2015 WELO	2009 WELO	WHAT DOES IT MEAN?
Reporting Requirements	Reports due March 1, 2016 and January 31 of each year thereafter.	None	Yearly reporting requirements. • 1st year is confirming adoption and compliance. • 2nd year and after is on implementation and includes total square feet, number and types of new and retrofit landscapes, descriptions of enforcement, barriers, and more.

CITY OF LAGUNA HILLS
ORDINANCE SUMMARY CERTIFICATION

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

I, MELISSA AU-YEUNG, City Clerk of the City of Laguna Hills, California, DO HEREBY CERTIFY that the attached is a true and correct copy of:

ORDINANCE NO. 2016-1

AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY

This Ordinance was adopted by the City Council of the City of Laguna Hills, California, at a regular meeting thereof on the 23rd day of February 2016, by the following vote:

AYES: Council Members Carruth, Gilbert, Mayor Pro Tempore Sedgwick and Mayor Kogerman

NOES: None

ABSENT: Council Member Blount

MELISSA AU-YEUNG, CITY CLERK

Dated this 24th day of February 2016

ORDINANCE NO. 2016-1

AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY

WHEREAS, in 1992, the State of California enacted the Water Conservation in Landscaping Act, (AB 325) requiring cities and counties throughout the state to adopt water efficient landscape ordinances. To assist local agencies, the Department of Water Resources (DWR) developed a model water efficient landscape ordinance (MWELO) that established water efficient landscape design standards for urban landscapes; and

WHEREAS, in 2006, Governor Schwarzenegger signed Assembly Bill 1881 (Laird, Water Conservation) amending the Water Conservation in the Landscape Act directing DWR to update the original MWELO and required cities and counties to update local landscape ordinances by January 1, 2010; and

WHEREAS, the City of Laguna Hills adopted Ordinance No. 2009-7 codified as Chapter 9-47 of the Laguna Hills Municipal Code to comply with AB 1881, and adopted guidelines implementing Ordinance No. 2009-7; and

WHEREAS, due to the on-going drought conditions within California, Governor Brown issued Executive Order (EO B-29-15) on April 1, 2015, directing DWR to update the MWELO by July 15, 2015 to increase water efficiency standards for new and existing landscapes through more efficient irrigation systems, greywater usage, onsite storm water capture and limiting the portion of landscaping that can be covered in turf; and

WHEREAS, on July 15, 2015, the California Water Commission (CWC) adopted revisions to the California Code of Regulations Title 23, Division 2, Chapter 2.7 "Model Water Efficient Landscape Ordinance", which requires cities and counties to adopt local or regional water efficient landscape ordinances that are at least as effective as the updated MWELO; and

WHEREAS, the Association of California Cities – Orange County (ACC-OC), the Municipal Water District of Orange County (MWDOC) and Building Industry Association, Orange County (BIAOC) formed a stakeholder group that developed a regional ordinance that is at least effective as the updated MWELO that includes a greater degree of local data than the state MWELO, provides a checklist and online worksheet to make the process and calculations to enhance the implementation effectiveness of the revised MWELO,

and adds guidelines and definitions that provide a greater level of certainty for applicants and staff; and

WHEREAS, the proposed Ordinance No. 2016-1 is consistent with the model regional ordinance developed under the guidance of the ACC-OC, MWDOC, and BIAOC; and

WHEREAS, the State Legislature has found that:

(a) The waters of the state are of limited supply and are subject to ever increasing demands;

(b) The continuation of California's economic prosperity is dependent on the availability of adequate supplies of water for future uses;

(c) 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;

(d) 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;

(e) Landscape design, installation, maintenance, and management can and should be water efficient; and

(f) 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.

WHEREAS, Orange County has an established, large reclaimed water infrastructure system; and

WHEREAS, allocation-based and tiered water rate structures allow public agencies to document water use in landscapes; and

WHEREAS, incentive-based water use efficiency programs have been actively implemented within Orange County since before 1991; and

WHEREAS, current local design practices in new landscapes strive to achieve the intent of the state MWELO water use goals; and

WHEREAS, all water services within the City are metered and billed based on volume of use; and

WHEREAS, 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; and

WHEREAS, all new irrigation controllers sold after 2012 within Orange County were smart irrigation controllers; and

WHEREAS, landscape plan submittal and review has been a long standing practice in Laguna Hills; and

WHEREAS, the average rainfall in Orange County is approximately 12 inches per year; and

WHEREAS, the El Toro Water District and the Moulton Niguel Water District are the water utility districts serving the City of Laguna Hills and both districts implement a 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 City of Laguna Hills in its entirety; and

WHEREAS, the City properly noticed the public hearing concerning the adoption of this Ordinance pursuant to Government Code section 6061 and as required under Government Code section 65090; and

WHEREAS, the City Council of the City of Laguna Hills has considered information presented on the proposed Ordinance by City Staff, the public, and other interested parties at a Public Hearing held on February 9, 2016.

THE CITY COUNCIL OF THE CITY OF LAGUNA HILLS, CALIFORNIA, DOES HEREBY ORDAIN AS FOLLOWS:

SECTION 1. The above recitals are true and correct, and are incorporated herein by reference.

SECTION 2. Consistent with the above recitals, the purpose of the City's Water Efficient Landscape Ordinance is to establish an alternative model acceptable under Governor Brown's April 1, 2015 Drought Executive Order (EO-B-19-25) as being at least as effective as the state MWELO in the context of conditions in the City 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.

SECTION 3. The proposed Ordinance No. 2016-1 is exempt from environmental review under the California Environmental Quality Act ("CEQA") (California Public Resources Code Section 21000 et seq.), because pursuant to Section 15307 of the state's CEQA Guidelines (14 Cal. Code Regs., § 15307), this Ordinance is covered by the CEQA Categorical Exemption for actions taken to assure the maintenance, restoration, enhancement, or protection of a natural resource where the regulatory process involves procedures for the protection of the environment. The adoption of this Ordinance will result in the enhancement and protection of water resources in the City, and will not result in cumulative adverse environmental impacts. It is therefore exempt from the provisions of CEQA.

SECTION 4. In accordance with Section 9-92.080 of the Laguna Hills Municipal Code, the required findings by the City for approval of the proposed Zone Text Amendment have been met and made as follows:

1. That the amendment or plan is consistent with the intent of the goals and policies of the General Plan as a whole, and is not inconsistent with any element thereof:

   The City's Conservation and Open Space Element of the General Plan adopted July 2009 includes Goals and Policies that support the management of natural resources, including water. Goal 1 of the Conservation and Open Space Element provides the following:

   Goal COS-1: Manage limited resources so that future generations can enjoy the environmental and scenic wealth this community has to offer.

Goal COS-1 is supported by the following policies under Water Supply and Quality:

Policy COS-1.1: Reduce water consumption by encouraging the use of low water use landscaping, water efficient plumbing, and water reclamation techniques in public and private projects.

Policy COS-1.2: Coordinate with regional water service providers to plan for emergency water services and drought.

Policy COS-1.3: Encourage the use of natural drainage improvements to retain and detain stormwater runoff, minimizing volume and pollutant concentrations.

Policy COS-1.4: Promote the use of LID standards in the design of new development and redevelopment.

Policy COS-1.5: Support the expansion of reclaimed water for irrigation of public and private landscaping.

The proposed zoning text amendment incorporates elements of each policy by limiting water use in certain new or rehabilitated landscapes and encouraging alternative methods of landscape and irrigation. The proposed Ordinance encourages the use of drought tolerant plant material, provides for the use of "greywater" and recycled water as part of project's irrigation design, provides for the incorporation of LID, and other stormwater management techniques in landscape design to minimize the use of potable water, thus conserving and managing the City's limited water resources. While the goals and policies of the Conservation and Open Space Element directly address water conservation, other policies contained in various elements of the general plan also support concepts of sustainable development, conservation, and resource management including:

Policy LU-3.7: Support the upgrade of existing buildings and landscapes for energy efficiency, water conservation, and runoff reduction.

Policy LU-4.5: Continue to plant and maintain attractive drought tolerant and native landscaping that enhances the character of Laguna Hills.

Policy COS-3.1: Continue to preserve important native trees and plant new low water use landscaping and trees.

Policy CSF-5.1: Work closely with local and regional water suppliers and distributors to ensure that high-quality water is available for the community.

Policy CSF-5.2: Actively promote water conservation by residents, businesses and organizations.

Policy S-6.2: Require that new development and redevelopment minimize stormwater and urban runoff into drainage facilities by incorporating on-site design features such as detention basins, water features, or other suitable strategies. Where feasible, support the use of common detention facilities serving more than one development.

Therefore, the proposed zoning text amendment is consistent with the General Plan.

2. That the amendment or plan is necessary to prescribe reasonable controls and standards for affected land uses to ensure compatibility and integrity of those uses with other established uses.

   The proposed zoning text amendment adopts regulations approved on July 15, 2015 by the California Water Commission revising the state's MWELO in response to Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15). The amendment provides for the reduction of water use in landscapes consistent with the new regulations found in 23 CCR 490.1 et al. The regulations ensure the City is implementing the requirements set forth by the state.

3. That the amendment or plan is necessary to provide reasonable property development rights while protecting environmentally sensitive land uses and species.

   The proposed zoning text amendment adopts regulations approved on July 15, 2015 by the California Water Commission revising the state's MWELO in response to Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15). The amendment provides for the reduction of water use in landscapes consistent with the new regulations found in 23 CCR 490.1 *et al.* The regulations ensure the City is implementing the requirements set forth by the state. The proposed ordinance and guidelines do not diminish the development rights of any property, but rather implement landscape and irrigation requirements that ensure the efficient use of water resources.

4. That the plan or amendment is necessary to correct discrepancies in standards or policies within the plan area or land use category.

The proposed zoning text amendment revises the City's water efficient landscape requirements that were adopted in 2010, adopting the state's regulations as set forth in AB 1881 enacted in 2006 (Laird, Water Conservation). The proposed amendment is necessary to update the newer water efficient landscape standards adopted by the state on July 15, 2015.

5. That the plan or amendment is necessary to protect the general health, safety, or general welfare of the community as a whole.

   The proposed zoning text amendment requires the use of certain water conservation methods and techniques in landscape and irrigation design to conserve the City's water supply.

SECTION 5. Title 9 of the City of Laguna Hills Municipal Code (Zoning and Subdivisions), is hereby revised by amending and restating Chapter 9-47 in its entirety with a new Chapter 9-47 as set forth in Exhibit "A" which is attached to this Ordinance.

SECTION 6. This Ordinance shall take effect on March 25, 2016, the 31st day following the adoption of this Ordinance by the City Council.

SECTION 7. Upon the effective date of this Ordinance, the provisions hereof shall supersede any inconsistent or conflicting provisions of the Laguna Hills Municipal Code.

SECTION 8. If any section, subsection, subdivision, sentence, clause, phrase, or portion of this Ordinance is, for any reason, held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance and each section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more section, subsection, subdivision, sentence, clause, phrase, or portion thereof be declared invalid or unconstitutional.

SECTION 9. The City Clerk shall certify to the adoption of this Ordinance and cause the same to be posted at the duly designated posting places within the City and published once within fifteen days after passage and adoption as may be required by law; or, in the alternative, the City Clerk may cause to be published a summary of this Ordinance and a certified copy of the text of this Ordinance shall be posted in the Office of the City Clerk five days prior to the date of adoption of this Ordinance; and, within fifteen days after adoption, the City Clerk shall cause to be published, the aforementioned summary and shall post a certified copy of this Ordinance, together with the vote for and against the same, in the Office of the City Clerk.

PASSED, APPROVED, AND ADOPTED this 23rd day of February, 2016.

BARBARA D. KOGERMAN, MAYOR

ATTEST:

MELISSA AU-YEUNG, CITY CLERK

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss
CITY OF LAGUNA HILLS)

I, Melissa Au-Yeung, City Clerk of the City of Laguna Hills, California, DO HEREBY CERTIFY that the foregoing Ordinance No. 2016-1 was duly introduced and placed upon its first reading at a Regular Meeting of the City Council on the 9th day of February, 2016, and that thereafter, said Ordinance was duly adopted and passed at a Regular Meeting of the City Council held on the 23rd day of February, 2016, by the following vote, to wit:

AYES: Council Members Carruth, Gilbert, Mayor Pro Tempore Sedgwick and Mayor Kogerman

NOES: None

ABSENT: Council Member Blount

ABSTAIN: None

(SEAL)

MELISSA AU-YEUNG, CITY CLERK

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss
CITY OF LAGUNA HILLS)

AFFIDAVIT OF POSTING
AND PUBLICATION

MELISSA AU-YEUNG, being first duly sworn, deposes and says:

That she is the duly appointed and qualified City Clerk of the City of Laguna Hills;

That in compliance with State Laws of the State of California, ORDINANCE NO. 2016-1, being:

> AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY

on the 14th day of February, 2016, was published in summary in The Orange County Register and on the 4th day of March, 2016, was published in summary in the Saddleback Valley News; and was, in compliance with City Resolution No. 2004-05-25-2, on the 4th day of March, 2016, caused to be posted in three places in the City of Laguna Hills, to wit:

Laguna Hills City Hall
Laguna Hills Community Center
Courtyard at La Paz Center

MELISSA AU-YEUNG, CITY CLERK
Laguna Hills, California

EXHIBIT A

Chapter 9-47

Landscape Water Efficiency

Sections:

9-47.010 Purpose.

The State Legislature has found that:

a) The waters of the state are of limited supply and are subject to ever increasing demands;

b) The continuation of California's economic prosperity is dependent on the availability of adequate supplies of water for future uses;

c) 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;

d) 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;

e) Landscape design, installation, maintenance, and management can and should be water efficient; and

f) 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.

9-47.020 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 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 chapter or conform to the prescriptive measures contained in Appendix A of the Guidelines;

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 through stored rainwater capture on site is subject only to Appendix A of the Guidelines.

B. Section 9-47.040(B) of the Landscape Water Use Standards of this Water Efficient Landscape Ordinance 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 9-47.020(A) is applicable.

C. This chapter shall 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.

9-47.030 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 its Guidelines.

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

2. 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.

9-47.040 Landscape Water Use Standards.

A. For applicable landscape installation or rehabilitation projects subject to Section 9-47.020(A) of this chapter, the Estimated Applied Water Use allowed for the landscaped area shall not exceed the MAWA calculated using an ET adjustment factor of 0.55 for residential areas and 0.45 for non-residential areas, 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 local agency.

9-47.050 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.

9-47.060 Definitions.

As used in this chapter:

"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.

"Applied water" means the portion of water supplied by the irrigation system to the landscape.

"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.

"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.

"Ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

"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.

"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.

"Guidelines" refers to the Guidelines for Implementation of Chapter 9-47, as adopted by the City, which describes procedures, calculations, and requirements for landscape projects subject to this Water Efficient Landscape Ordinance.

"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.

"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 Water Efficient Landscape Ordinance are 0.75 for overhead spray devices and 0.81 for drip systems.

"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).

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

"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.

"Landscape project" means total area of landscape in a project, as provided in the definition of "landscaped area," meeting the requirements under Section 9-47.020 of this chapter.

"Local agency" means a local water purveyor or 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.

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

"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 = (ETo) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]

"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.

"New construction" means, for the purposes of this Water Efficient Landscape Ordinance, a new building with a landscape or other new landscape such as a park, playground, or greenbelt without an associated building.

"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.

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

"Permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscape.

"Plant factor" or "plant water use factor" is a factor, when multiplied by ETo, that estimates the amount of water needed by plants. For purposes of this Water Efficient Landscape Ordinance, 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 Water Efficient Landscape Ordinance 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).

"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.

"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.

"Rehabilitated landscape" means any re-landscaping project that meets the applicability criteria of Section 9-47.020 where the modified landscape area is greater than 2,500 square feet.

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

"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.

"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 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.

City of Laguna Hills
City Council Meeting Agenda
Staff Report

DATE: FEBRUARY 23, 2016

TO: MAYOR AND COUNCIL MEMBERS

FROM: MELISSA AU-YEUNG
ASSISTANT TO THE CITY MANAGER

ISSUE: SECOND READING AND ADOPTION OF AN ORDINANCE AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY

RECOMMENDATION: THAT THE CITY COUNCIL ADOPT AN ORDINANCE ENTITLED: "AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY."

SUMMARY:

In response to Governor Brown's declared state of emergency due to severe conditions and Executive Order B-29-15 to update the State's Model Water Efficient Landscape Ordinance, cities throughout California are required to update their landscape ordinances. Consequently, at its February 9, 2016 meeting, the City Council introduced the proposed Ordinance amending and restating Chapter 9-47 of the Laguna Hills Municipal Code, entitled "Landscape Water Efficiency." The proposed Ordinance creates increased water efficiency standards for new and retrofitted 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.

A copy of the proposed Ordinance and the staff report for the introduction of the Ordinance, including attachments, are included as attachments to this report. The City Council introduced the Ordinance by a vote of 4-1 (Council Member Blount voting no). It is in order to adopt the Ordinance.

ATTACHMENTS:

- Proposed Ordinance
- February 9, 2016, Introduction of Ordinance Staff Report and Attachments

ORDINANCE NO. 2016-X

AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY

WHEREAS, in 1992, the State of California enacted the Water Conservation in Landscaping Act, (AB 325) requiring cities and counties throughout the state to adopt water efficient landscape ordinances. To assist local agencies, the Department of Water Resources (DWR) developed a model water efficient landscape ordinance (MWELO) that established water efficient landscape design standards for urban landscapes; and

WHEREAS, in 2006, Governor Schwarzenegger signed Assembly Bill 1881 (Laird, Water Conservation) amending the Water Conservation in the Landscape Act directing DWR to update the original MWELO and required cities and counties to update local landscape ordinances by January 1, 2010; and

WHEREAS, the City of Laguna Hills adopted Ordinance No. 2009-7 codified as Chapter 9-47 of the Laguna Hills Municipal Code to comply with AB 1881, and adopted guidelines implementing Ordinance No. 2009-7; and

WHEREAS, due to the on-going drought conditions within California, Governor Brown issued Executive Order (EO B-29-15) on April 1, 2015, directing DWR to update the MWELO by July 15, 2015 to increase water efficiency standards for new and existing landscapes through more efficient irrigation systems, greywater usage, onsite storm water capture and limiting the portion of landscaping that can be covered in turf; and

WHEREAS, on July 15, 2015, the California Water Commission (CWC) adopted revisions to the California Code of Regulations Title 23, Division 2, Chapter 2.7 "Model Water Efficient Landscape Ordinance", which requires cities and counties to adopt local or regional water efficient landscape ordinances that are at least as effective as the updated MWELO; and

WHEREAS, the Association of California Cities – Orange County (ACC-OC), the Municipal Water District of Orange County (MWDOC) and Building Industry Association, Orange County (BIAOC) formed a stakeholder group that developed a regional ordinance that is at least effective as the updated MWELO that includes a greater degree of local data than the state MWELO, provides a checklist and online worksheet to make the process and calculations to enhance the implementation effectiveness of the revised MWELO,

and adds guidelines and definitions that provide a greater level of certainty for applicants and staff; and

WHEREAS, the proposed Ordinance No. 2016-X is consistent with the model regional ordinance developed under the guidance of the ACC-OC, MWDOC, and BIAOC; and

WHEREAS, the State Legislature has found that:

(a) The waters of the state are of limited supply and are subject to ever increasing demands;

(b) The continuation of California's economic prosperity is dependent on the availability of adequate supplies of water for future uses;

(c) 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;

(d) 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;

(e) Landscape design, installation, maintenance, and management can and should be water efficient; and

(f) 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.

WHEREAS, Orange County has an established, large reclaimed water infrastructure system; and

WHEREAS, allocation-based and tiered water rate structures allow public agencies to document water use in landscapes; and

WHEREAS, incentive-based water use efficiency programs have been actively implemented within Orange County since before 1991; and

WHEREAS, current local design practices in new landscapes strive to achieve the intent of the state MWELO water use goals; and

WHEREAS, all water services within the City are metered and billed based on volume of use; and

WHEREAS, 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; and

WHEREAS, all new irrigation controllers sold after 2012 within Orange County were smart irrigation controllers; and

WHEREAS, landscape plan submittal and review has been a long standing practice in Laguna Hills; and

WHEREAS, the average rainfall in Orange County is approximately 12 inches per year; and

WHEREAS, the El Toro Water District and the Moulton Niguel Water District are the water utility districts serving the City of Laguna Hills and both districts implement a 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 City of Laguna Hills in its entirety; and

WHEREAS, the City properly noticed the public hearing concerning the adoption of this Ordinance pursuant to Government Code section 6061 and as required under Government Code section 65090; and

WHEREAS, the City Council of the City of Laguna Hills has considered information presented on the proposed Ordinance by City Staff, the public, and other interested parties at a Public Hearing held on February 9, 2016.

THE CITY COUNCIL OF THE CITY OF LAGUNA HILLS, CALIFORNIA, DOES HEREBY ORDAIN AS FOLLOWS:

SECTION 1. The above recitals are true and correct, and are incorporated herein by reference.

SECTION 2. Consistent with the above recitals, the purpose of the City's Water Efficient Landscape Ordinance is to establish an alternative model acceptable under Governor Brown's April 1, 2015 Drought Executive Order (EO-B-19-25) as being at least as effective as the state MWELO in the context of conditions in the City 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.

SECTION 3. The proposed Ordinance No. 2016-X is exempt from environmental review under the California Environmental Quality Act ("CEQA") (California Public Resources Code Section 21000 et seq.), because pursuant to Section 15307 of the state's CEQA Guidelines (14 Cal. Code Regs., § 15307), this Ordinance is covered by the CEQA Categorical Exemption for actions taken to assure the maintenance, restoration, enhancement, or protection of a natural resource where the regulatory process involves procedures for the protection of the environment. The adoption of this Ordinance will result in the enhancement and protection of water resources in the City, and will not result in cumulative adverse environmental impacts. It is therefore exempt from the provisions of CEQA.

SECTION 4. In accordance with Section 9-92.080 of the Laguna Hills Municipal Code, the required findings by the City for approval of the proposed Zone Text Amendment have been met and made as follows:

1. That the amendment or plan is consistent with the intent of the goals and policies of the General Plan as a whole, and is not inconsistent with any element thereof:

   The City's Conservation and Open Space Element of the General Plan adopted July 2009 includes Goals and Policies that support the management of natural resources, including water. Goal 1 of the Conservation and Open Space Element provides the following:

   Goal COS-1: Manage limited resources so that future generations can enjoy the environmental and scenic wealth this community has to offer.

Goal COS-1 is supported by the following policies under Water Supply and Quality:

Policy COS-1.1: Reduce water consumption by encouraging the use of low water use landscaping, water efficient plumbing, and water reclamation techniques in public and private projects.

Policy COS-1.2: Coordinate with regional water service providers to plan for emergency water services and drought.

Policy COS-1.3: Encourage the use of natural drainage improvements to retain and detain stormwater runoff, minimizing volume and pollutant concentrations.

Policy COS-1.4: Promote the use of LID standards in the design of new development and redevelopment.

Policy COS-1.5: Support the expansion of reclaimed water for irrigation of public and private landscaping.

The proposed zoning text amendment incorporates elements of each policy by limiting water use in certain new or rehabilitated landscapes and encouraging alternative methods of landscape and irrigation. The proposed Ordinance encourages the use of drought tolerant plant material, provides for the use of "greywater" and recycled water as part of project's irrigation design, provides for the incorporation of LID, and other stormwater management techniques in landscape design to minimize the use of potable water, thus conserving and managing the City's limited water resources. While the goals and policies of the Conservation and Open Space Element directly address water conservation, other policies contained in various elements of the general plan also support concepts of sustainable development, conservation, and resource management including:

Policy LU-3.7: Support the upgrade of existing buildings and landscapes for energy efficiency, water conservation, and runoff reduction.

Policy LU-4.5: Continue to plant and maintain attractive drought tolerant and native landscaping that enhances the character of Laguna Hills.

Policy COS-3.1: Continue to preserve important native trees and plant new low water use landscaping and trees.

Policy CSF-5.1: Work closely with local and regional water suppliers and distributors to ensure that high-quality water is available for the community.

Policy CSF-5.2: Actively promote water conservation by residents, businesses and organizations.

Policy S-6.2: Require that new development and redevelopment minimize stormwater and urban runoff into drainage facilities by incorporating on-site design features such as detention basins, water features, or other suitable strategies. Where feasible, support the use of common detention facilities serving more than one development.

Therefore, the proposed zoning text amendment is consistent with the General Plan.

2. That the amendment or plan is necessary to prescribe reasonable controls and standards for affected land uses to ensure compatibility and integrity of those uses with other established uses.

   The proposed zoning text amendment adopts regulations approved on July 15, 2015 by the California Water Commission revising the state's MWELO in response to Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15). The amendment provides for the reduction of water use in landscapes consistent with the new regulations found in 23 CCR 490.1 et al. The regulations ensure the City is implementing the requirements set forth by the state.

3. That the amendment or plan is necessary to provide reasonable property development rights while protecting environmentally sensitive land uses and species.

   The proposed zoning text amendment adopts regulations approved on July 15, 2015 by the California Water Commission revising the state's MWELO in response to Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15). The amendment provides for the reduction of water use in landscapes consistent with the new regulations found in 23 CCR 490.1 *et al.* The regulations ensure the City is implementing the requirements set forth by the state. The proposed ordinance and guidelines do not diminish the development rights of any property, but rather implement landscape and irrigation requirements that ensure the efficient use of water resources.

4. That the plan or amendment is necessary to correct discrepancies in standards or policies within the plan area or land use category.

The proposed zoning text amendment revises the City's water efficient landscape requirements that were adopted in 2010, adopting the state's regulations as set forth in AB 1881 enacted in 2006 (Laird, Water Conservation). The proposed amendment is necessary to update the newer water efficient landscape standards adopted by the state on July 15, 2015.

5. That the plan or amendment is necessary to protect the general health, safety, or general welfare of the community as a whole.

The proposed zoning text amendment requires the use of certain water conservation methods and techniques in landscape and irrigation design to conserve the City's water supply.

SECTION 5. Title 9 of the City of Laguna Hills Municipal Code (Zoning and Subdivisions), is hereby revised by amending and restating Chapter 9-47 in its entirety with a new Chapter 9-47 as set forth in Exhibit "A" which is attached to this Ordinance.

SECTION 6. This Ordinance shall take effect on March 25, 2016, the 31st day following the adoption of this Ordinance by the City Council.

SECTION 7. Upon the effective date of this Ordinance, the provisions hereof shall supersede any inconsistent or conflicting provisions of the Laguna Hills Municipal Code.

SECTION 8. If any section, subsection, subdivision, sentence, clause, phrase, or portion of this Ordinance is, for any reason, held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance and each section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more section, subsection, subdivision, sentence, clause, phrase, or portion thereof be declared invalid or unconstitutional.

SECTION 9. The City Clerk shall certify to the adoption of this Ordinance and cause the same to be posted at the duly designated posting places within the City and published once within fifteen days after passage and adoption as may be required by law; or, in the alternative, the City Clerk may cause to be published a summary of this Ordinance and a certified copy of the text of this Ordinance shall be posted in the Office of the City Clerk five days prior to the date of adoption of this Ordinance; and, within fifteen days after adoption, the City Clerk shall cause to be published, the aforementioned summary and shall post a certified copy of this Ordinance, together with the vote for and against the same, in the Office of the City Clerk.

PASSED, APPROVED, AND ADOPTED this 23rd day of February, 2016.

_____

BARBARA D. KOGERMAN, MAYOR

ATTEST:

_____

MELISSA AU-YEUNG, CITY CLERK

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss
CITY OF LAGUNA HILLS)

I, Melissa Au-Yeung, City Clerk of the City of Laguna Hills, California, DO HEREBY CERTIFY that the foregoing Ordinance No. 2016-X was duly introduced and placed upon its first reading at a Regular Meeting of the City Council on the 9th day of February, 2016, and that thereafter, said Ordinance was duly adopted and passed at a Regular Meeting of the City Council held on the 23rd day of February, 2016, by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

(SEAL)

_____

MELISSA AU-YEUNG, CITY CLERK

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss AFFIDAVIT OF POSTING
CITY OF LAGUNA HILLS) AND PUBLICATION

MELISSA AU-YEUNG, being first duly sworn, deposes and says:

That she is the duly appointed and qualified City Clerk of the City of Laguna Hills;

That in compliance with State Laws of the State of California, ORDINANCE NO. 2016-X, being:

> AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY

on the 14th day of February, 2016, was published in summary in The Orange County Register and on the 4th day of March, 2016, was published in summary in the Saddleback Valley News; and was, in compliance with City Resolution No. 2004-05-25-2, on the 3rd day of March, 2016, caused to be posted in three places in the City of Laguna Hills, to wit:

Laguna Hills City Hall
Laguna Hills Community Center
Courtyard at La Paz Center

_____
MELISSA AU-YEUNG, CITY CLERK
Laguna Hills, California

EXHIBIT A

Chapter 9-47

Landscape Water Efficiency

Sections:

9-47.010 Purpose.

The State Legislature has found that:

a) The waters of the state are of limited supply and are subject to ever increasing demands;

b) The continuation of California's economic prosperity is dependent on the availability of adequate supplies of water for future uses;

c) 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;

d) 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;

e) Landscape design, installation, maintenance, and management can and should be water efficient; and

f) 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.

9-47.020 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 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 chapter or conform to the prescriptive measures contained in Appendix A of the Guidelines;

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 through stored rainwater capture on site is subject only to Appendix A of the Guidelines.

B. Section 9-47.040(B) of the Landscape Water Use Standards of this Water Efficient Landscape Ordinance 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 9-47.020(A) is applicable.

C. This chapter shall 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.

9-47.030 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 its Guidelines.

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

2. 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.

9-47.040 Landscape Water Use Standards.

A. For applicable landscape installation or rehabilitation projects subject to Section 9-47.020(A) of this chapter, the Estimated Applied Water Use allowed for the landscaped area shall not exceed the MAWA calculated using an ET adjustment factor of 0.55 for residential areas and 0.45 for non-residential areas, 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 local agency.

9-47.050 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.

9-47.060 Definitions.

As used in this chapter:

"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.

"Applied water" means the portion of water supplied by the irrigation system to the landscape.

"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.

"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.

"Ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

"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.

"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.

"Guidelines" refers to the Guidelines for Implementation of Chapter 9-47, as adopted by the City, which describes procedures, calculations, and requirements for landscape projects subject to this Water Efficient Landscape Ordinance.

"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.

"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 Water Efficient Landscape Ordinance are 0.75 for overhead spray devices and 0.81 for drip systems.

"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).

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

"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.

"Landscape project" means total area of landscape in a project, as provided in the definition of "landscaped area," meeting the requirements under Section 9-47.020 of this chapter.

"Local agency" means a local water purveyor or 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.

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

"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 = (ETo) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]

"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.

"New construction" means, for the purposes of this Water Efficient Landscape Ordinance, a new building with a landscape or other new landscape such as a park, playground, or greenbelt without an associated building.

"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.

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

"Permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscape.

"Plant factor" or "plant water use factor" is a factor, when multiplied by ETo, that estimates the amount of water needed by plants. For purposes of this Water Efficient Landscape Ordinance, 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 Water Efficient Landscape Ordinance 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).

"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.

"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.

"Rehabilitated landscape" means any re-landscaping project that meets the applicability criteria of Section 9-47.020 where the modified landscape area is greater than 2,500 square feet.

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

"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.

"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 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.

AFFIDAVIT OF PUBLICATION

STATE OF CALIFORNIA,)
) ss.
County of Orange)

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the **Saddleback Valley News,** a newspaper that has been adjudged to be a newspaper of general circulation by the Superior Court of the County of Orange, State of California, on December 7, 1976, Case No. A-86742 in and for the South Orange County Judicial District, County of Orange, State of California; that the notice, of which the annexed is a true printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

March 4, 2016

"I certify (or declare) under the penalty of perjury under the laws of the State of California that the foregoing is true and correct":

Executed at Santa Ana, Orange County, California, on

Date: March 4, 2016

Signature

Saddleback Valley News
625 N. Grand Ave.
Santa Ana, CA 92701
(714) 796-2209

PROOF OF PUBLICATION

CITY OF LAGUNA HILLS
PUBLIC NOTICE
ORDINANCE SUMMARY

NOTICE IS HEREBY GIVEN that on February 23, 2016, the City Council of the City of Laguna Hills, California, adopted an Ordinance entitled:

ORDINANCE NO.2016-1

AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY.

The Ordinance will amend and restate Chapter 9-47 of the Laguna Hills Municipal Code regarding Landscape Water Efficiency.

A certified copy of the complete text of the Ordinance is posted and may be read in the City Clerk's Department, 24035 El Toro Road, Laguna Hills, and/or a copy may be obtained from the Office at a nominal charge.

Dated this 24th day of February 2016.

/s/Meliss Au Yeung

MELISSA AU-YEUNG, CITY CLERK
City of Laguna Hills

Publish: Saddleback Valley News March 4, 2016 ,10141429

CITY OF LAGUNA HILLS

NOTICE OF TRANSMITTAL - LEGAL PUBLICATIONS

TO: SADDLEBACK VALLEY NEWS
Michael Collins, Legal Advertising

FOR PUBLICATION ON: **MARCH 4, 2016**

DOCUMENT TO BE PUBLISHED: **ORDINANCE ADOPTION SUMMARY – ORDINANCE NO. 2016-1,**

PROOF OF PUBLICATION:

Please send to:

Melissa Au-Yeung, City Clerk
Laguna Hills City Hall
24035 El Toro Road
Laguna Hills, California 92653
(949) 707-2635

AUTHORIZED BY: _____ **DATE:** 2/24/16

Ordinance Adoption	**February 23, 2016**
Date Notice Published	**March 4, 2016**
Date Notice Posted in Designated Posting Places (3)	**March 4, 2016**

CITY OF LAGUNA HILLS
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Dated this 24th day of February 2016.

MELISSA AU-YEUNG, CITY CLERK
City of Laguna Hills

STATE OF CALIFORNIA)
COUNTY OF ORANGE) SS
CITY OF LAGUNA HILLS)

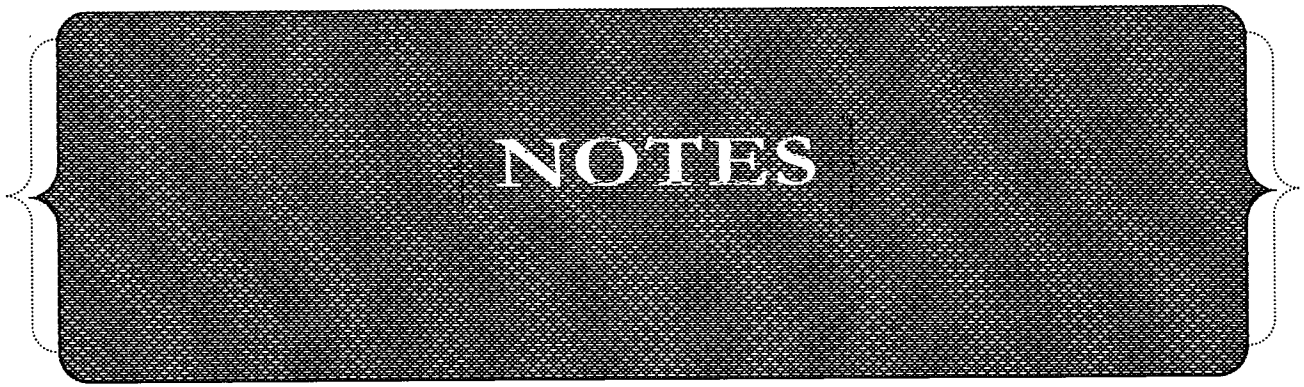
AFFIDAVIT OF POSTING
AND PUBLICATION

MELISSA AU-YEUNG, being first duly sworn, deposes and says that she is the duly appointed and qualified City Clerk of the City of Laguna Hills and that by February 24, 2016, at 5:00 p.m., she caused a certified copy of Ordinance No. 2016-1 to be posted in the City Clerk's Department; that on March 4, 2016, a copy of the above Notice was published in the Saddleback Valley News newspaper; and, that by March 4, 2016, at 5:00 p.m., she caused the above Notice to be posted in three (3) public places in the City of Laguna Hills, to wit: Laguna Hills City Hall, Laguna Hills Community Center, and the Courtyard at La Paz Center.

MELISSA AU-YEUNG, CITY CLERK

ORDINANCE CHECK LIST FOR ORDINANCE 2016-1

DATE RECV'D	Date Ord Introduced	Emailed to Paper	Publication Date	Posting Date	Copied for posting	Check Ad in paper	Date Ord Adopted	Emailed to Paper	Publication Date	Posting Date	Copied for Posting	Check Ad in Paper	Update Municipal Code Books	Update Code Online
1/18	2/9	2/12	2/14	2/12	2/12	2/14	2/23	2/24	3/4	3/4	2/24	3/4	2-25	2-25



CITY OF LAGUNA HILLS
ORDINANCE SUMMARY CERTIFICATION

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

I, MELISSA AU-YEUNG, City Clerk of the City of Laguna Hills, California, D0 HEREBY CERTIFY that the attached is a true and correct copy of:

ORDINANCE NO. 2016-1

AN ORDINANCE OF THE CITY OF LAGUNA HILLS, CALIFORNIA, AMENDING AND RESTATING CHAPTER 9-47 OF TITLE 9 OF THE LAGUNA HILLS MUNICIPAL CODE REGARDING LANDSCAPE WATER EFFICIENCY

This Ordinance was adopted by the City Council of the City of Laguna Hills, California, at a regular meeting thereof on the 23rd day of February 2016, by the following vote:

AYES: Council Members Carruth, Gilbert, Mayor Pro Tempore Sedgwick and Mayor Kogerman

NOES: None

ABSENT: Council Member Blount

MELISSA AU-YEUNG, CITY CLERK

Dated this 24th day of February 2016