CITY OF INDUSTRY

Landscape and Irrigation Plan Standards and Requirements

General

- Landscape and irrigation plans are reviewed and approved by the Planning Department.
- Unless it is strictly a landscape rehabilitation project, landscape and irrigation plans are submitted to the Planning Department **after** approval of the Development Plan application and prior to submittal for building permits.
- Landscape plans must conform to the approved development plan.
- Landscape plans must conform to Chapter 13.18, Water Efficient Landscapes, and the Water Efficient Landscape Guidelines (see attached).
- Water usage should be minimized through the planting of native and low-water species and the utilization of water-efficient and drip irrigation systems.

Process

Step 1 – Code Compliance. Review the City's landscape requirements and determine applicability of Chapter 13.18, Water Efficient Landscapes and the Water Efficient Landscape Guidelines (see attached).

Step 2 – Plan.

- Submit three (3) sets of scaled (recommend 1"=10', 1"=20', 1"=40', or 1"=50' scales) landscape and irrigation plans to the Planning Department for plan check purposes.
- Landscape plan check and permit fees will be determined after the submittal of landscape plans and the applicant will be billed for this cost.
- Upon approval, a stamped set of landscape plans will be sent to the applicant. No changes will be accepted on the approved landscape plans unless a new set of revised plans is submitted and approved. Please note that any re-submittal of landscaping and irrigation plans requires three (3) sets of plans and payment of additional plan check fees.

Step 3 – Installation. Upon receipt of the approved plans, install landscape and irrigation per the approved plan.

Step 4 – Inspection and Final. After building, site, irrigation, and landscape improvements are completed, contact the Planning Department to schedule a final inspection. At this time, the Planning Department will ask that all irrigation systems be activated to verify that everything is in working order and that there is no significant overspray.

Submittal Requirements

- A current California licensed landscape architect must prepare and sign all landscape and irrigation plans for projects that equal or exceed 2,500 square feet of landscaping or are subject to Chapter 13.18, Water Efficient Landscapes.
- If applicable, include all submittal requirements and calculations necessary to comply with Chapter 13.18, Water Efficient Landscapes and the Water Efficient Landscape Guidelines (see attached).
- Landscape Design Plan including a legend listing type of landscape material, size of plant material, quantity of each material, and a symbol that represents each material used on the plan.
- Landscape and irrigation notes and details as necessary to clearly describe plan.
- Irrigation Design Plan on a separate sheet drawn to scale with a legend listing: irrigation equipment, heads, lines, valves, etc... that are linked to the plan through symbols; valve size, radius, and gallons per minute (G.P.M.) for each head type, and; irrigation line sizes. On the plan, each valve shall be numbered to correlate with the automatic controller station that controls that valve.

Guidelines

Landscape Plan:

- If applicable, landscape plans shall comply with the requirements of Chapter 13.18, Water Efficient Landscapes and the Water Efficient Landscape Guidelines (see attached).
- All landscape areas shall be provided with trees, shrubs, ground cover or lawn. The use of gravel, decorative boulders, decomposed granite, concrete and/or other non-plant material as an accent in landscape areas is encouraged to help minimize water use.
- Trees
  - Street trees shall be provided along all street frontages and shall be located behind the required sidewalk.
  - Street trees shall be 24" box in size, planted 30 feet on center.
  - The type of street tree required varies with each street. Contact the City for type of street tree required.
  - All trees shall be provided with support stakes.
- Plant materials
  - Select water-conserving plant species and water-conserving turf
  - Select plants based on disease and pest resistance
  - On-site landscape materials minimum sizes are:
    - trees - 15 gallon
    - shrubs - 5 gallon
  - Plants must be selected and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site. To encourage the efficient use of water, the following is highly recommended for inclusion in the landscape design plan:
    - Use the Sunset Western Climate Zone System which takes into account temperature, humidity, elevation, terrain, latitude, and varying degrees of continental and marine influence on local climate;
    - 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); and
    - Consider the solar orientation for plant placement to maximize summer shade and winter solar gain.
- Lawn/turf/groundcover
  - Lawn may consist of hydroseeding or installation of turf.
  - A header or concrete mow strip shall separate any ground cover area from lawn areas.
  - 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).
  - Ground cover may be planted no greater than 12" o.c.
  - A minimum two inch (2") layer of mulch must 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.
- Prohibited plants
  - The use of invasive plant species and/or noxious plant species is prohibited. For reference purposes, a non-exhaustive list of invasive plants can be found at http://www.cal-ipc.org/ip/inventory/index.php.
  - Nerium oleander (oleander)
  - ice plant
  - ivy (hedera) - Hahn's ivy (small leaf) will be accepted

Irrigation Plans:

- If applicable, irrigation plans shall comply with the requirements of Chapter 13.18, Water Efficient Landscapes and the Water Efficient Landscape Guidelines (see attached).
- All landscape areas shall be provided with an automatic irrigation system.
- All plans shall be provided with either quick coupling valves or hose bibs.
- All irrigation heads shall be oriented to spray away from all buildings or walls.
- Dedicated landscape water meters are highly recommended on landscaped areas smaller than 5,000 square feet to facilitate water management.
- Where available and consistent with public health guidelines, irrigation systems must use recycled water.
- The irrigation system must be designed to ensure that the dynamic pressure at each emission device is within the manufacturer's recommended pressure range for optimal performance.
- Sensors (rain, freeze, wind, etc.), either integral or auxiliary, that suspend or alter irrigation operation during unfavorable weather conditions are required on all irrigation systems, as appropriate for local climatic conditions. Irrigation should be avoided during windy or freezing weather or during rain.
- Automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data are required for irrigation scheduling in all irrigation systems.
- High flow sensors that detect and report high flow conditions created by system damage or malfunction are recommended.
- Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) are required as close as possible to 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.
- The irrigation system must 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.
- In mulched planting areas, the use of low volume irrigation is required to maximize water infiltration into the root zone.
- Sprinkler heads and other emission devices must have matched precipitation rates, unless otherwise directed by the manufacturer's recommendations.
- Head to head coverage is recommended. However, sprinkler spacing must be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations.
- Swing joints or other riser-protection components are required on all risers subject to damage that are adjacent to high traffic areas.
- Check valves or anti-drain valves are required for all irrigation systems.
- Overhead irrigation is not 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:
  - The landscaped area is adjacent to permeable surfacing and no runoff occurs; or
  - The adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping; or
  - The irrigation designer for the landscape project specifies an alternative design or technology.
- Slopes greater than 25% may not be irrigated with an irrigation system with a precipitation 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 and clearly demonstrates no runoff or erosion will occur.

CITY OF INDUSTRY
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Water Efficient Landscape Guidelines

Implementing Municipal Code Chapter 13.18 Water Efficient Landscape Ordinance

Table of Contents

1. PURPOSE AND APPLICABILITY

1.1 Purpose

A. The primary purpose of these Guidelines is to provide procedural and design guidance for applicants proposing new landscape or landscape rehabilitation projects that are subject to Chapter 13.18 of the City of Industry Municipal Code. This document is also intended for use and reference by City staff in reviewing and approving designs and verifying compliance with Chapter 13.18.

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. Governor's Executive Order No. B-29-15;
2. National Pollutant Discharge Elimination Permit(s) for the Municipal Separate Storm Sewer System;
3. Los Angeles County Fire Code Regulations for fuel modification in landscapes;
4. Water Conservation, Water Supply Shortage and Drought Response Regulations of any other Local Water Purveyor that provides water to the City;
5. State and local regulations governing the use of Recycled Water;
6. Industry Municipal Code (including Building and Zoning Code);
7. Specific Plans, Master Plans, General Plan, or similar land use and planning documents; and
8. Conditions of approval for a specific project.

1.2 Applicability

A. This ordinance shall apply to all of the following landscape projects:

1. New construction 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. Existing landscapes limited to Section 3.1; and
4. Cemeteries. Recognizing the special landscape management needs of cemeteries, new and rehabilitated cemeteries are limited to Sections

2.1.B.2, 2.2.A.4, and 2.2.A.5; and existing cemeteries are limited to Section 3.1.

B. Any project 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 E of the Water Efficient Landscape Guidelines.

C. For projects using treated or untreated graywater or rainwater captured on site, any lot or parcel within the project that has less than 2500 sq. ft. of landscape and meets the lot or parcel's landscape water requirement (Estimated Total Water Use) entirely with treated or untreated graywater or through stored rainwater captured on site is subject only to the prescriptive measures contained in Section B.5 of Appendix E of the Water Efficient Landscape Guidelines.

D. Exemptions. This ordinance does not apply to:

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

2. SUBMITTAL REQUIREMENTS

2.1 Landscape Documentation Package

A. A Certification of Landscape Design in accordance with Exhibit A of these Guidelines that includes a landscape professional's professional stamp, licensed in California, signature, contact information (including email and telephone number), license number, and date, certifying the statement, "I have complied with Chapter 13.18 of the City of Industry Municipal Code and the Water Efficient Landscape Guidelines and applied them for the efficient use of water in this landscape design plan" and must bear the signature of the landscape professional as required by law.

B. A Landscape Documentation Package is required to be submitted by the Applicant for review and approval prior to the issuance of ministerial permits and prior to the start of construction. Unless otherwise directed by the City, the Landscape Documentation Package must include the following elements on fully

dimensioned and labeled plan sheets and supplemental pages as directed by the City:

1. Project information including all of the following;
    a. Date
    b. Applicant
    c. Project address (if available, parcel and/or lot number(s))
    d. Total landscape area (square feet)
    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. Checklist of all documents in Landscape Documentation Package
    h. Project contacts to include contact information for the Applicant and property owner.
    i. Applicant signature and date with statement, "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package".
2. Water Efficient Landscape Worksheet (Appendix C) including the following:
    a. A completed Water Efficient Landscape Worksheet found in Appendix C containing 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 (WAWA) 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 Estimated Total Water Use (ETWU) is calculated based on the plants used and irrigation method selected for the landscape design. ETWU must be below the MAWA.
    b. In calculating the MAWA and ETWU, an Applicant shall use the ETo values from the Reference Evapotranspiration Table in Appendix B.
    c. Water budget calculations shall adhere to the following requirements:
        i. The plant factor used shall be from WUCOLS 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 using plants, 0.1 to 0.3 for low water use plants, from 0.4 to 0.6 for moderate water use plants, and from 0.7 to 1.0 for high water use plants.

ii. (All water features shall be included in the high water use hydrozone and temporarily irrigated areas shall be included in the low water use hydrozone.

iii. All Special Landscape Areas shall be identified and their water use calculated as shown in Appendix C.

iv. ETAF for new and existing (non-rehabilitated) Special Landscape Areas shall not exceed 1.0.

3. Soil management report completed by the Applicant, or his/her designee, as follows:

a. Submit soil samples to a laboratory for analysis and recommendations.

b. Soil sampling shall be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants.

c. The soil analysis shall include:

i. Soil texture;

ii. Infiltration rate determined by laboratory test or soil texture infiltration rate table;

iii. pH;

iv. Total soluble salts;

v. Sodium;

vi. Percent organic matter; and

vii. Recommendations.

d. In projects with multiple landscape installations (i.e. production home developments) a soil sampling rate of 1 in 7 lots or approximately 15% will satisfy this requirement. Large landscape projects shall sample at a rate equivalent to 1 in 7 lots.

e. The Applicant, or his/her designee, shall comply with one of the following:

i. If significant mass grading is not planned, the soil analysis report shall be submitted to the city as part of the Landscape Documentation Package; or

ii. If significant mass grading is planned, the soil analysis report shall be submitted to the city as part of the Certificate of Completion.

f. The soil analysis report shall be made available, in a timely manner, to the professionals preparing the landscape design plans and irrigation design plans to make any necessary adjustments to the design plans.

g. The Applicant, or his/her designee, shall submit documentation verifying implementation of soil analysis report recommendations to the city with Certificate of Completion.

4. Landscape Design Plan that contains the following:

a. The Landscape Design Plan, at a minimum, shall:

i. Delineate and label each hydrozone by number, letter, or other method;

ii. Identify each hydrozone as low, moderate, high water, or mixed water use. Temporarily irrigated areas of the landscape shall be included in the low water use hydrozone for the water budget calculation;

iii. Identify recreational areas;

iv. Identify areas permanently and solely dedicated to edible plants;

v. Identify areas irrigated with recycled water;

vi. Identify type of mulch and application depth;

vii. Identify soil amendments, type, and quantity;

viii. Identify type and surface area of water features;

ix. Identify hardscapes (pervious and non-pervious);

x. Identify location, installation details, and 24-hour retention or infiltration capacity of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater. Applicants shall refer to the city or regional Water Quality Control Board for information on any applicable stormwater technical requirements. Stormwater best management practices are encouraged in the landscape design plan and examples are provided in Section 2.6.

xi. Identify any applicable rain harvesting or catchment technologies as discussed in Section 2.6 and their 24-hour retention or infiltration capacity;

xii. Identify any applicable graywater discharge piping, system components and area(s) of distribution;

xiii. Contain the following statement: "I have complied with Chapter 13.18 of the City of Industry Municipal Code and the Water Efficient Landscape Guidelines and applied them for the efficient use of water in this landscape design plan"; and

xiv. Bear the professional stamp, contact information, and signature of the California-licensed landscape architect who prepared the landscape plan. (See Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agriculture Code.)

b. Plant Material. Any plant may be selected for the landscape, providing the ETWU in the landscape area does not exceed the MAWA. Methods to achieve water efficiency shall include one or more of the following:

   i. Protection and preservation of native species and natural vegetation;

   ii. Selection of water-conserving plant, tree and turf species, especially local native plants;

   iii. Selection of plants based on local climate suitability, disease and pest resistance;

   iv. Selection of trees based on applicable local tree ordinances or tree shading guidelines, and size at maturity as appropriate for the planting area; and

   v. Selection of plants from local and regional landscape program plant lists.

   vi. Selection of plants from local Fuel Modification Plan Guidelines.

c. 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 2.1.B.5.b.iv.

d. 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:

   i. Use the Sunset Western Climate Zone System which takes into account temperature, humidity, elevation, terrain, latitude, and varying degrees of continental and marine influence on local climate;

ii. 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, power lines]; allow for adequate soil volume for healthy root growth; and

iii. Consider the solar orientation for plant placement to maximize summer shade and winter solar gain.

e. Turf is not allowed 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).

f. High water use plants, characterized by a plant factor of 0.7 to 1.0, are prohibited in street medians.

g. A landscape design plan for projects in fire-prone areas shall address fire safety and prevention. A defensible space or zone around a building or structure is required per Public Resources Code Section 4291(a) and (b). Avoid fire-prone plant materials and highly flammable mulches. Refer to the local Fuel Modification Plan guidelines.

h. The use of invasive plant species, such as those listed by the California Invasive Plant Council, is strongly discouraged.

i. 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 low-water use plants as a group.

j. Water Features

i. Recirculating water systems shall be used for water features.

ii. Where available, recycled water shall be used as a source for decorative water features.

iii. Surface area of a water feature shall be included in the high water use hydrozone area of the water budget calculation.

iv. Pool and spa covers are highly recommended.

k. Soil Preparation, Mulch and Amendments

i. Prior to the planting of any materials, compacted soils shall be transformed to a friable condition. On engineered slopes, only amended planting holes need meet this requirement.

ii. Soil amendments shall be incorporated according to recommendations of the soil report and what is appropriate for the plants selected (see Section 2.1.B.3).

iii. 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.

iv. 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.

v. Stabilizing mulching products shall be used on slopes that meet current engineering standards.

vi. The mulching portion of the seed/mulch slurry in hydro-seeded applications shall meet the mulching requirement.

vii. 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.

5. Irrigation design plan, which only applies to landscaped 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 manufacturers' 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.

   a. System

      i. Landscape water meters, defined as either a dedicated water service meter or private submeter, 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 submeter.

ii. Automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data utilizing non-volatile memory shall be required for irrigation scheduling in all irrigation systems.

iii. 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.

   a) 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.

   b) 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.

iv. 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.

v. Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be required, as close as possible to 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.

vi. Backflow prevention devices shall be required to protect the water supply from contamination by the irrigation system. An Applicant shall refer to the applicable local agency code (i.e., public health) for additional backflow prevention requirements.

vii. Flow sensors that detect high flow conditions created by system damage or malfunction are required for all on non-residential landscapes and residential landscapes of 5000 sq. ft. or larger.

viii. Master shut-off valves are required on all projects except 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.

ix. 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.

x. Relevant information from the soil management plan, such as soil type and infiltration rate, shall be utilized when designing irrigation systems.

xi. The design of the irrigation system shall conform to the hydrozones of the landscape design plan.

xii. The irrigation system must be designed and installed to meet, at a minimum, the irrigation efficiency criteria as described in Section 2.1.B.2 regarding the MAWA.

xiii. 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 ASABE/ICC 802-2014.

xiv. It is highly recommended that the Applicant or city 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.

xv. In mulched planting areas, the use of low volume irrigation is required to maximize water infiltration into the root zone.

xvi. Sprinkler heads and other emission devices shall have matched precipitation rates, unless otherwise directed by the manufacturer's recommendations.

xvii. Head to head coverage is recommended. However, sprinkler spacing shall be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations.

xviii. Swing joints or other riser-protection components are required on all risers subject to damage that are adjacent to hardscapes or in high traffic areas of turfgrass.

xix. Check valves or anti-drain valves are required on all sprinkler heads where low point drainage could occur.

xx. 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.

xxi. 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:

a) The landscape area is adjacent to permeable surfacing and no runoff occurs; or

b) The adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping; or

c) The irrigation designer specifies an alternative design or technology, as part of the Landscape Documentation Package and clearly demonstrates strict adherence to irrigation system design criteria in Section 2.1.B.5.a.ix. Prevention of overspray and runoff must be confirmed during the irrigation audit.

xxii. Slopes greater than 25% shall not be irrigated with an irrigation system with an application rate exceeding 0.75 inches per hour. This restriction may be modified if the landscape designer 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.

b. Hydrozone

i. Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use.

ii. Sprinkler heads and other emission devices shall be selected based on what is appropriate for the plant type within that hydrozone.

iii. 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.

iv. Individual hydrozones that mix plants of moderate and low water use, or moderate and high water use, may be allowed if:

a) Plant factor calculation is based on the proportions of the respective plant water uses and their plant factor; or

b) The plant factor of the higher water using plant is used for calculations.

v. Individual hydrozones that mix high and low water use plants shall not be permitted.

vi. 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. Use this valve number in the Hydrozone Information Table (see Appendix C Section A). This table can also assist with the irrigation audit and programming the controller.

c. The irrigation design plan, at a minimum, shall contain:

i. Location and size of separate water meters for landscape;

ii. 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;

iii. Static water pressure at the point of connection to the public water supply;

iv. Flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (pressure per square inch) for each station;

v. Recycled water irrigation systems as specified in Section 2.4;

vi. The following statement: "I have complied with Chapter 13.18 of the City of Industry Municipal Code and the Water Efficient Landscape Guidelines and applied them accordingly for the efficient use of water in the irrigation design plan"; and

vii. The signature of a California-licensed landscape architect, certified irrigation designer, licensed landscape contractor, or any other person authorized to design an irrigation system. (See Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agricultural Code.)

6. Grading design plan. A comprehensive grading plan prepared by a civil engineer for other city permits satisfies this requirement.

a. The Applicant shall submit a landscape grading plan that indicates finished configurations and elevations of the landscape area including:

i. Height of graded slopes;

ii. Drainage patterns;

iii. Pad elevations;

iv. Finish grade; and

v. Stormwater retention improvements, if applicable.

b. To prevent excessive erosion and runoff, it is highly recommended that Applicants:

i. Grade so that all irrigation and normal rainfall remains within property lines and does not drain on to non-permeable hardscapes;

ii. Avoid disruption of natural drainage patterns and undisturbed soil; and

iii. Avoid soil compaction in landscape areas.

c. The grading design plan shall contain the following statement: "I have complied with Chapter 13.18 of the City of Industry Municipal Code and the Water Efficient Landscape Guidelines and applied them accordingly for the efficient use of water in the grading design plan" and shall bear the signature of a California-licensed professional as authorized by law.

2.2 Certificate of Completion

A. Upon installation and prior to final inspection and approval (issuance of a Letter #2), the Applicant shall submit a Certificate of Completion (Appendix D) to the Planning Department that includes:

1. Project information sheet containing:

a. Date;

b. Project name;

c. Applicant name, telephone, and mailing address;

d. Project address and location; and

e. Property owner name, telephone, and mailing address.

2. Certification by either the signer of the landscape design plan, the signer of the irrigation design plan, or the licensed landscape contractor that the landscape project has been installed per the approved Landscape Documentation Package;

a. Where there have been significant changes made in the field during construction, these "as-built" or record drawings shall be included with the certification;

b. A diagram of the irrigation plan showing hydrozones shall be kept with the irrigation controller for subsequent management purposes.

3. Irrigation scheduling parameters used to set the controller meeting the following criteria:

   a. Irrigation scheduling shall be regulated by automatic irrigation controllers.

   b. Overhead irrigation shall be scheduled between 8:00 p.m. and 10:00 a.m. unless weather conditions prevent it. If allowable hours of irrigation differ from the local water purveyor, the stricter of the two shall apply. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.

   c. For implementation of the irrigation schedule, particular attention must be paid to irrigation run times, emission device, flow rate, and current reference evapotranspiration, so that applied water meets the ETWU. Total annual applied water shall be less than or equal to MAWA. Actual irrigation schedules shall be regulated by automatic irrigation controllers using current reference evapotranspiration data (e.g., CIMIS) or soil moisture sensor data.

   d. Parameters used to set the automatic controller shall be developed and submitted for each of the following:

      i. the plant establishment period;

      ii. The established landscape; and

      iii. Temporarily irrigated areas.

   e. Each irrigation schedule shall consider for each station all of the following that apply:

      i. Irrigation interval (days between irrigation);

      ii. Irrigation run times (hours or minutes per irrigation event to avoid runoff);

      iii. Number of cycle starts required for each irrigation event to avoid runoff;

      iv. Amount of applied water scheduled to be applied on a monthly basis;

      v. Application rate setting;

      vi. Root depth setting;

      vii. Plant type setting;

      viii. Soil type;

      ix. Slope factor setting;

x. Shade factor setting; and

xi. Irrigation uniformity or efficiency setting.

4. Landscape and irrigation maintenance schedule that includes, but is not be limited to, routine inspection; auditing, adjustment and repair of the irrigation system and its components; aerating and dethatching turf areas; topdressing with compost, replenishing mulch; fertilizing; pruning; weeding in all landscape areas, and removing obstructions to emission devices. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.

   a. Repair of all irrigation equipment shall be done with the originally installed components or their equivalents or with components with greater efficiency.

   b. An Applicant is encouraged to implement established landscape industry sustainable Best Practices for overall all landscape maintenance activities.

5. Irrigation audit report conducted by a third party certified landscape irrigation auditor. Landscape audits shall not be conducted by the person who designed the landscape or installed the landscape.

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

   b. The irrigation audit report that may include, but is not limited to: inspection, system tune-up, system test with distribution uniformity, reporting overspray or run off that causes overland flow, and preparation of an irrigation schedule, including configuring irrigation controllers with application rate, soil types, plant factors, slope, exposure and any other factors necessary for accurate programming;

6. Soil analysis report, if not submitted with Landscape Documentation Package, and documentation verifying implementation of soil report recommendations (see Section 2.1.B.3).

7. Documentation showing that copies of the Certificate of Completion have been submitted to the local water purveyor and property owner or his or her designee.

2.3 Irrigation Efficiency

A. For the purpose of determining ETWU, average irrigation efficiency is assumed to be 0.75 for overhead spray devices and 0.81 for drip system devices.

2.4 Recycled Water

A. The installation of recycled water irrigation systems shall allow for the current and future use of recycled water.

B. All recycled water irrigation systems shall be designed and operated in accordance with all applicable local and State laws.

C. Landscapes using recycled water are considered Special Landscape Areas. The ET Adjustment Factor for new and existing (non-rehabilitated) Special Landscape Areas shall not exceed 1.0.

2.5 Graywater Systems

A. 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. Refer to Section 1.2.C for the applicability of this ordinance to landscape areas less than 2,500 square feet with the ETWU met entirely by graywater.

2.6 Stormwater Management and Rainwater Retention

A. Stormwater management practices minimize runoff and increase infiltration which recharges groundwater and improves water quality. Implementing stormwater best management practices into the landscape and grading design plans to minimize runoff and to increase on-site rainwater retention and infiltration are encouraged.

B. Applicants shall refer to the city or Regional Water Quality Control Board for information on any applicable stormwater technical requirements.

C. All planted landscape areas are required to have friable soil to maximize water retention and infiltration. Refer to Section 2.1.B.4.k.

D. 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 either: the one inch, 24-hour rain event or (2) the 85th percentile, 24-hour rain event, and/or additional capacity as required by any applicable local, regional, state or federal regulation.

E. It is recommended that storm water projects incorporate any of the following elements to improve on-site storm water and dry weather runoff capture and use:

1. Grade impervious surfaces, such as driveways, during construction to drain to 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 landscaped 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 storm water 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.

2.7 Effective Precipitation

A. The city may consider Effective Precipitation (25% of annual precipitation) in tracking water use and may use the following equation to calculate MAWA:

1. MAWA= (ETo - Eppt) (0.62) [(0.70.55 x LA) + (0.30.45 x SLA)] for residential areas.
2. MAWA= (ETo-EPPT) (0.62) [(0.45 x LA) + (0.55 x SLA)] for non-residential areas.

3. EXISTING LANDSCAPES

3.1 Provisions for Existing Landscapes

A. Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis. This section shall apply to all existing landscapes that were installed before December 1, 2015 and are over one acre in size.

1. For existing landscapes that have a water meter, the city shall administer programs that may include, but not be limited to, irrigation water use analyses, irrigation surveys, and irrigation audits to evaluate water use and provide recommendations as necessary to reduce landscape water use to a level that does not exceed the MAWA for existing landscapes. The MAWA for existing landscapes shall be calculated as: MAWA = (0.8) (ETo)(LA)(0.62).

2. For existing landscapes that do not have a meter, the city shall administer programs that may include, but not be limited to, irrigation surveys and irrigation audits to evaluate water use and provide recommendations as necessary in order to prevent water waste.

3. All landscape irrigation audits shall be conducted by a certified landscape irrigation auditor.

B. Water Waste Prevention. The property owner, business owner, and City and shall prevent water waste resulting from inefficient landscape irrigation by prohibiting runoff from leaving the target landscape due to low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures.

1. Restrictions regarding overspray and runoff may be modified if:

   a. The landscape area is adjacent to permeable surfacing and no runoff occurs; or

   b. The adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping.

Appendix A

Certificate of Landscape Design

CERTIFICATE OF LANDSCAPE DESIGN

I hereby certify that:

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

(2) I prepared 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) In regards to the landscape design and water use calculations I prepared for the identified property, I have complied with Chapter 13.18 of the City of Industry Municipal Code and the Water Efficient Landscape Guidelines and applied them for the efficient use of water in this landscape design plan, irrigation plan, and grading design plan (if applicable).

(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 Industry Water Efficient Landscape Guidelines.

_____ _____

Print Name Date

_____ _____

Signature License Number

_____

Address

_____ _____

Telephone E-mail Address

Landscape Design Professional's Stamp

Appendix B

Reference Evapotranspiration (ETo) Table

County and City	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual ETo
Pomona	1.7	2.0	3.4	4.5	5.0	5.8	6.5	6.4	4.7	3.5	2.3	1.7	47.5

Source: Model Water Efficient Landscape Ordinance: 2015 Revision

Appendix C

Sample Water Efficient Landscape Worksheet

WATER EFFICIENT LANDSCAPE WORKSHEET

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

Reference Evapotranspiration (ETo) _____

Hydrozone # /Planting Description[a]	Plant Factor (PF)	Irrigation Method[b]	Irrigation Efficiency (IE)[c]	ETAF (PF/IE)	Landscape Area (sq, ft,)	ETAF x Area	Estimated Total Water Use (ETWU)[e]
Regular Landscape Areas							
				Totals	(A)	(B)	
Special Landscape Areas							
				1			
				1			
				1			
				Totals	(C)	(D)	
						ETWU Total	
						Maximum Allowed Water Allowance (MAWA)[e]	

[a] ***Hydrozone #/Planting Description***
E.g
1.) front lawn
2.) low water use plantings
3.) medium water use planting

[b] ***Irrigation Method***
overhead spray or drip

[c] ***Irrigation Efficiency***
0.75 for spray head
0.81 for drip

[d] ***ETWU*** **(Annual Gallons Required) =**
Eto x 0.62 x ETAF x Area
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year.

[e] ***MAWA (Annual Gallons Allowed)*** = *(Eto) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]*
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year, LA is the total landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is .55 for residential areas and 0.45 for non-residential areas.

ETAF Calculations

Regular Landscape Areas

Total ETAF x Area	(B)
Total Area	(A)
Average ETAF	**B ÷ A**

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas, and 0.45 or below for non-residential areas.

All Landscape Areas

Total ETAF x Area	(B+D)
Total Area	(A+C)
Sitewide ETAF	**(B+D) ÷ (A+C)**

Appendix D

Sample Certificate of Completion

CERTIFICATE OF COMPLETION

This certificate is filled out by the project applicant upon completion of the landscape project.

PART 1. PROJECT INFORMATION SHEET

Date		
Project Name		
Name of Project Applicant	Telephone No.	
	Fax No.	
Title	Email Address	
Company	Street Address	
City	State	Zip Code

Project Address and Location:

Street Address		Parcel, tract or lot number, if available.
City		Latitude/Longitude (optional)
State	Zip Code	

Property Owner or his/her designee:

Name	Telephone No.	
	Fax No.	
Title	Email Address	
Company	Street Address	
City	State	Zip Code

Property Owner

"I/we certify that I/we have received copies of all the documents within the Landscape Documentation Package and the Certificate of Completion and that it is our responsibility to see that the project is maintained in accordance with the Landscape and Irrigation Maintenance Schedule."

_____

Property Owner Signature Date

Please answer the questions below:

1. Date the Landscape Documentation Package was submitted to the local agency_____
2. Date the Landscape Documentation Package was approved by the local agency_____
3. Date that a copy of the Water Efficient Landscape Worksheet (including the Water Budget Calculation) was submitted to the local water purveyor_____

PART 2. CERTIFICATION OF INSTALLATION ACCORDING TO THE LANDSCAPE DOCUMENTATION PACKAGE

"I/we certify that based upon periodic site observations, the work has been completed in accordance with the ordinance and that the landscape planting and irrigation installation conform with the criteria and specifications of the approved Landscape Documentation Package."

Signature*	Date	
Name (print)	Telephone No.	
	Fax No.	
Title	Email Address	
License No. or Certification No.		
Company	Street Address	
City	State	Zip Code

*Signer of the landscape design plan, signer of the irrigation plan, or a licensed landscape contractor.

PART 3. IRRIGATION SCHEDULING

Attach parameters for setting the irrigation schedule on controller

PART 4. SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE

Attach schedule of Landscape and Irrigation Maintenance

PART 5. LANDSCAPE IRRIGATION AUDIT REPORT

Attach Landscape Irrigation Audit Report

PART 6. SOIL MANAGEMENT REPORT

Attach soil analysis report, if not previously submitted with the Landscape Documentation Package

Attach documentation verifying implementation of recommendations from soil analysis report

Appendix E

Prescriptive Compliance Option

A. This Appendix contains prescriptive requirements which may be used as a compliance option to the Model Water Efficient Landscape Ordinance.

B. Compliance with the following items is mandatory and must be documented on 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. 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 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 plant 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 plant 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 there shall be no turf 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 and utilize a rain sensor.

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/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 ASABE/ICC 802-2014.

f. 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.

6. For non-residential projects with landscape areas of 1,000 sq. ft. or more, a private submeter(s) to measure landscape water use shall be installed.

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 F

Definitions

The terms used in these Water Efficient Landscape Guidelines have the meanings set forth below:

"Applicant" means the person submitting a landscape documentation package. Applicants can be the property owner or the owner's designee.

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

"Automatic irrigation controller" means a timing device used to remotely control valves that operate an irrigation system. Automatic irrigation controllers are able to self-adjust and schedule irrigation events using either evapotranspiration (weather-based) or soil moisture data.

"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.

"Certificate of Completion" means the document required under Section 2.2.

"Certified irrigation designer" means a person certified to design irrigation systems by an accredited academic institution, a professional trade organization or other program such as the US Environmental Protection Agency's WaterSense irrigation designer certification program and Irrigation Association's Certified Irrigation Designer program.

"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.

"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.

"Common interest developments" means community apartment projects, condominium projects, planned developments, and stock cooperatives per Civil Code Section 1351.

"Compost" means the safe and stable product of controlled biologic decomposition of organic materials that is beneficial to plant growth.

"Conversion factor (0.62)" means the number that converts acre-inches per acre per year to gallons per square foot per year.

"Distribution uniformity" means the measure of the uniformity of irrigation water over a defined area.

"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.

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

"Effective precipitation" or "usable rainfall" (Eppt) means the portion of total precipitation which becomes available for plant growth.

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

"Established landscape" means the point at which plants in the landscape have developed significant root growth into the soil. Typically, most plants are established after one or two years of growth.

"Establishment period of the plants" means the first year after installing the plant in the landscape or the first two years if irrigation will be terminated after establishment. Typically, most plants are established after one or two years of growth. Native habitat mitigation areas and trees may need three to five years for establishment.

"Estimated Total Water Use" (ETWU) means the total water used for the landscape as described in Section 2.1.B.2.

"ET adjustment factor" (ETAF) means a factor 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 Areas 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.

"Flow sensor" means an inline device installed at the supply point of the irrigation system that produces a repeatable signal proportional to flow rate. Flow sensors must be connected to an automatic irrigation controller, or flow monitor capable of receiving flow signals and operating master valves. This combination flow sensor/controller may also function as a landscape water meter or submeter.

"Friable" means a soil condition that is easily crumbled or loosely compacted down to a minimum depth per planting material requirements, whereby the root structure of newly planted material will be allowed to spread unimpeded.

"Fuel Modification Plan Guideline" means guidelines from a local fire authority to assist residents and businesses that are developing land or building structures in a fire hazard severity zone.

"Graywater" means untreated 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 unhealthful 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. Health and Safety Code Section 17922.12.

"Hardscapes" means any durable material (pervious and non-pervious).

"Hydrozone" means a portion of the landscaped area having plants with similar water needs and rooting depth. 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 plant species" means species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources. Invasive species may be regulated by county agricultural agencies as noxious species. Lists of invasive plants are maintained at the California Invasive Plant Inventory and USDA invasive and noxious weeds database.

"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. The audit must be conducted in a manner consistent with the Irrigation Association's Landscape Irrigation Auditor Certification program or other U.S. Environmental Protection Agency "WaterSense" labeled auditing program.

"Irrigation efficiency" (IE) 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 ordinance are 0.75 for overhead spray devices and 0.81 for drip systems.

"Irrigation survey" means an evaluation of an irrigation system that is less detailed than an irrigation audit. An irrigation survey includes, but is not limited to: inspection, system test, and written recommendations to improve performance of the irrigation system.

"Irrigation water use analysis" means an analysis of water use data based on meter readings and billing data.

"Landscape architect" means a person who holds a license to practice landscape architecture in the state of California Business and Professions Code, Section 5615.

"Landscape area" means all the planting areas, turf areas, and water features in a landscape design plan subject to the MAWA calculation. 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).

"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 under Section 2.1.B.1.

"Landscape project" means total area of landscape in a project as defined in "landscape area" for the purposes of this ordinance, meeting requirements under Section 1.2.

"Landscape water meter" means an inline device installed at the irrigation supply point that measures the flow of water into the irrigation system and is connected to a totalizer to record water use.

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

"Local agency" means a city or county, including a charter city or charter county, that is responsible for adopting and implementing the ordinance. The local agency is also responsible for the enforcement of this ordinance, including but not limited to, approval of a permit and plan check or design review of a project.

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

"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.

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

"Master shut-off valve" is an automatic valve installed at the irrigation supply point which controls water flow into the irrigation system. When this valve is closed water will not be supplied to the irrigation system. A master valve will greatly reduce any water loss due to a leaky station valve.

"Maximum Applied Water Allowance" (MAWA) means the upper limit of annual applied water for the established landscaped area as specified in Section 2.1.B.2. It is based upon the area's reference evapotranspiration, the ET Adjustment Factor, and the size of the landscape area. The ETWU shall not exceed the MAWA. Special Landscape Areas, including recreation areas, areas permanently and solely dedicated to edible plants such as orchards and vegetable gardens, and areas irrigated with recycled water are subject to the MAWA with an ETAF not to exceed 1.0. MAWA = (ETo) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]

"Median" is an area between opposing lanes of traffic that may be unplanted or planted with trees, shrubs, perennials, and ornamental grasses.

"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.

"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.

"Mulch" means any organic material such as leaves, bark, straw, 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.

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

"Non-residential landscape" means landscapes in commercial, institutional, industrial and public settings that may have areas designated for recreation or public assembly. It also includes portions of common areas of common interest developments with designated recreational areas.

"Operating pressure" means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.

"Overhead sprinkler irrigation systems" or "overhead spray irrigation systems" means systems that deliver water through the air (e.g., spray heads and rotors).

"Overspray" means the irrigation water which is delivered beyond the target area.

"Parkway" means the area between a sidewalk and the curb or traffic lane. It may be planted or unplanted, and with or without pedestrian egress.

"Permit" means an authorizing document issued by the city for new construction or rehabilitated landscapes.

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

"Planning Approval Letter (Letter #1)" is issued by the City and is required in order for the Los Angeles County Building and Safety Department to issue building and grading permits.

"Planning Final Letter (Letter #2)" is issued by the City and is required in order for the Los Angeles County Building and Safety Department to issue a Certificate of Occupancy (final building permit approval).

"Plant factor" or "plant water use factor" is a factor, when multiplied by ETo, estimates the amount of water needed by plants. For purposes of this 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 0.1 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 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).

"Project applicant" means the individual or entity submitting a Landscape Documentation Package required under Section 2.1.B, to request a permit, plan check, or design review from the city. A project applicant may be the property owner or his or her designee.

"Rain sensor" or "rain sensing shutoff device" means a component which automatically suspends an irrigation event when it rains.

"Record drawing" or "as-builts" means a set of reproducible drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the contractor.

"Recreational area" means areas, excluding private single family residential areas, designated for active play, recreation or public assembly such in parks, sports fields, picnic grounds, amphitheaters or golf course tees, fairways, roughs, surrounds and greens.

"Recycled water," "reclaimed water," or "treated sewage effluent 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 B, 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 so that regional differences in climate can be accommodated.

"Regional Water Efficient Landscape Ordinance" means a local Ordinance adopted by two or more local agencies, water suppliers and other stakeholders for implementing a consistent set of landscape provisions throughout a geographical region. Regional ordinances are strongly encouraged to provide a consistent framework for the landscape industry and applicants to adhere to.

"Rehabilitated landscape" means any re-landscaping project that requires a permit, plan check, or design review, meets the requirements of Section 1.2, and the modified landscape area is equal to or greater than 2,500 square feet.

"Residential landscape" means landscapes surrounding single or multifamily homes.

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

"Soil moisture sensing device" or "soil moisture sensor" means a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.

"Soil texture" means the classification of soil based on its percentage of sand, silt, and clay.

"Special Landscape Area" (SLA) means an area of the landscape dedicated solely to edible plants, recreational areas, areas irrigated with recycled water, or water features using recycled water.

"Sprinkler head" or "spray 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 flexible, leak-free connection between the emission device and lateral pipeline to allow movement in any direction and to prevent equipment damage.

"Submeter" means a metering device to measure water applied to the landscape that is installed after the primary utility water meter.

"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 the irrigation system.

"Water conserving plant species" means a plant species identified as having a very low or low plant factor.

"Water Efficient Landscape Guidelines" or "Guidelines" refers to the Water Efficient Landscape Guidelines, as approved by and available at the City, which describes procedures, calculations, and requirements for landscape projects subject to the Guidelines.

"Water Efficient Landscape Ordinance" means Chapter 13.18 of the Industry Municipal Code.

"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 or stormwater best management practices that are not irrigated and used solely for water treatment or stormwater 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 Species published by the University of California Cooperative Extension and the Department of Water Resources 2014.

CITY OF INDUSTRY

Street Tree List

STREET	LATIN NAME	COMMON NAME
Aileron Avenue		
Ajax Avenue	Prunus Pissardi	Purple Leaf Plum
Ajax Avenue (n/e, corner)	Cupaniopsis Anacardioides	Carrotwood
Albatross Road		
Amar Road	Quercus Ilex	Holl Oak
Anaheim-Puente Road		
Arenth Avenue	Schinus Terebinthifolius	Brazilian Pepper
Azusa Avenue	Magnolia Grandiflora	Southern Magnolia
Baker Parkway	Cinnamomum Camphora	Camphor Tree
Baldwin Park Boulevard	Pinus Halepensis & Pinus Canariensis	Aleppo Pine & Canary Island Pine
Benton Court	Cinnamomum Camphora	Camphor Tree
Bixby Drive	Eucalyptus Citriodora	Lemon Scented Gum
Bonelli Street	Magnolia Grandiflora	Southern Magnolia
Brea Canyon Road	Schinus Molle	California Pepper
Business Parkway	La erstroemia Indica 'Bright Pink'	Crape Myrtle
California Avenue	Alnus Cordata	Italian Alder
Canada Court	Alnus Cordata	Italian Alder
Canal Place	Pinus Canariensis	Canary Island Pine
Capitol Avenue	Ceratonia Sili ua	Carob Tree
Castleton Street	Washington Robusta (18-25'BT)	
Centre Drive	Pyrus Kawakami	Evergreen Pear
Charlie Road	Pyrus Kawakami	Evergreen Pear
Cheryl Lane	Cinnamomum Camphora	Camphor Tree
Chestnut Street	Schinus Terebinthifolius	Brazilian Pepper
Clark Avenue	Pinus Canariensis	Canary Island Pine
Clora Place		
Colima Road (near mall)	Pyrus Kawakami	Evergreen Pear
Cortney Court	Pinus Canariensis	Canary Island Pine
Crossroads Parkway North	Tipuana Tipu	Tipu Tree
Crossroads Parkway South	Tipuana Tipu	Tipu Tree
Currier Road	Cinnamomum Cam hors	Camphor Tree
Daum Drive	Pinus Canariensis	Canary Island Pine
Del Valle Avenue		
Don Julian Road	Cupaniopsis Anacardioides	Carrotwood
East Parriott Place	Pinus Canariensis	Canary Island Pine
Echelon Avenue	Schinus Molle	California Pepper
Ector Street		
Eighth Avenue		
El Encanto Road	Pinus Canariensis	Canary Island Pine
Epperson Drive	Tristania Conferta	Brisbane Box
Evergreen Place	Cinnamomum Cam hora	Camphor Tree
Fairway Drive	Pinus Canariensis	Canary Island Pine

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Street Tree List

STREET	LATIN NAME	COMMON NAME
Faure Avenue	Cinnamomum Camphora	Camphor Tree
Ferrero Parkway	Cinnamomum Camphora	Camphor Tree
Fifth Avenue	Liquidambar Styraciflua 'Palo Alto'	American Sweet Gum
Fullerton Road	Alnus Cordata	Italian Alder
Gale Avenue	Cinnamomum Camphora	Camphor Tree
Garcia Lane	Platanus Acerifolia	London Plane Sycamore
Giano Avenue	Pinus Canariensis	Canary Island Pine
Gilman Road		
Grand Crossing	Platanus Acerifolia	London Plane Sycamore
Green Drive	Eucalyptus Citriodora	Lemon Scented Gum
Hacienda Boulevard	Pinus Canariensis	Canary Island Pine
Hambledon Avenue	Pinus Canariensis	Cana Island Pine
Hanover Road	Washington Robusta (25' BT)	
Harrison Avenue	Cinnamomum Camphora	Camphor Tree
Hatcher Avenue	Schinus Terebinthifolius	Brazilian Pepper
Hill Street		
Hudson Avenue	Pyrus Kawakami	Evergreen Pear
Hurley Street	Cinnamomum Camphora	Camphor Tree
Jellick Avenue	Pinus Canariensis	Canary Island Pine
John Reed Court	Koelreuteria Bipinnata	Chinese Flame Tree
Johnson Drive		
Kaplan Drive	Liuidambar Styraciflua	American Sweet Gum
Kearn Creek Court	Schinus Terebinthifolius	Brazilian Pepper
Kella Avenue	Pinus Canariensis	Canary Island Pine
Lawson Street	Ficus Retusa	Indian Laurel Fig
Lemon Avenue	Pinus Canariensis	Canary Island Pine
Lomitas Avenue	Pinus Canariensis	Canary Island Pine
Long Lane	Fraxinus Uhdei 'Majestic Beauty'	Ash
Louden Lane	Pinus Halepensis	Aleppo Pine
Loukelton Street	Pinus Canariensis	Canary Island Pine
Machlin Court	Cinnamomum Camphora	Camphor Tree
Mason Way	Platanus Acerifolia	London Plane Tree
Mayo Avenue	Brachychiton Populneus	Bottle Tree
Mission Mill Road	Ceratonia Sili ua	Carob Tree
Nelson Avenue	Pyrus Kawakami	Evergreen Pear
New uist Place	Pinus Canariensis	Canary Island Pine
Ninth Avenue	Cu anio sis Anacardioides	Carrotwood
Nogales Street	Pinus Canariensis	Canary Island Pine
Old Ranch Road	Magnolia Grandiflora	Southern Magnolia
Orange Avenue	Cu anio sis Anacardioides	Carrotwood
Otterbein Avenue	Eucalyptus Camaldulensis	Red Gum
Parriott Place	Pinus Canariensis	Canary Island Pine
Parriott Place West	Cinnamomum Camphora	Camphor Tree
Patricia Court	Cinnamomum Cam hors	Camphor Tree

CITY OF INDUSTRY

Street Tree List

STREET	LATIN NAME	COMMON NAME
Peck Road	Pinus Canariensis	Canary Island Pine
Pellissier Place	Eucalyptus Sideroxylon	Red Ironbark
Perez Place		
Phillips Drive	Cinnamomum Cam hors	Camphor Tree
Phoenix Drive	Cuaniosis Anacardioides	Carrotwood
Pitchess Place		
Proctor Avenue	Ficus Retusa	Indian Laurel Fig
Puente Avenue	Pinus Halepensis	Aleppo Pine
Radecki Court	Alnus Cordata	Italian Alder
Railroad Avenue		
Railroad Street	Schinus Terebinthifolius	Brazilian Pepper
Reyes Drive	Cinnamomum Camphora	Champor Tree
Robin Way	Har e h llum Caffrum	Kaffir Plum
Rooks Road	Pinus Canariensis	Canary Island Pine
Rose Hills Road		
Rowland Street	Alnus Cordata	Italian Alder
Russell Street (west side)	Pinus Canariensis	Canary Island Pine
Russell Street (east side)	Jacaranda Acutifolia	Jacaranda
Salt Lake Avenue	Ficus Microphylla (Ficus Rubiginosa)	Rusty Leaf Fig
Samuelson Street	Koelreuteria Bipinnata	Chinese Flame Tree
San Jose Avenue	Pinus Canariensis	Canary Island Pine
Seventh Avenue	Li uidambar Styraciflua	American Sweet Gum
Sentous Street		
Shepard Street	Tipuanu Tipu	Tipu Tree
Sixth Avenue	Cu anio sis Anacardioides	Carrotwood
Spanish Lane		
Stafford Street	Pyrus Kawakami	Evergreen Pear
Stephens Street north side of street)	Magnolia Grandiflora	Southern Magnolia
Stimson Avenue n/o Valley	Cinnamomum Camphora	Camphor Tree
Stimson Avenue s/o Valley	Harpephyllum Caffrum	Kaffir Plum
Stoner Creek Road		
Sunset Avenue	Li uidambar Styraciflua	American Sweet Gum
Temple Avenue	Pinus Canariensis	Canary Island Pine
Third Avenue	Pinus Canariensis	Canary Island Pine
Tucker Lane	Cinnamomum Camphora	Camphor Tree
Turnbull Canyon Road	Pinus Canariensis	Canary Island Pine
Unruh Avenue	Schinus Terebinthifolius	Brazilian Pepper
Valley Boulevard	Pinus Canariensis	Canary Island Pine
Valley Boulevard (between Hacienda & Stimson)	Jacaranda Acutifolia	Jacaranda
Valley Boulevard from w/o Grand Avenue to City Limits	Cinnamomum Camphora	Camphor Tree
Vineland Avenue	Cupaniopsis Anacardioides	Carrotwood
Virgil Waters Way		

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Street Tree List

STREET	LATIN NAME	COMMON NAME
Wallace Way	Schinus Terebinthifolius	Brazilian Pepper
North Walnut Drive (west of Fairway Drive)	Eucalyptus Camaldulensis	Red Gum
North Walnut Drive (east of Fairway Drive)	Jacaranda Acutifolia	Jacaranda
Waddin ham Way	Cinnamomum Camphora	Camphor Tree
Walnut Drive (South)	Pinus Canariensis	Canary Island Pine
Ward Way		
Willow Avenue	Sequois Sempervirens	Coast Redwood
Wilson Way		
Workman Mill Road	Quercus Ilex	Holly Oak
Workman Street		
Wright Way		