

## ORDINANCE NO. \_\_\_\_\_

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SUNNYVALE AMENDING CHAPTER 19.37 (LANDSCAPING, IRRIGATION AND USABLE OPEN SPACE) AND SECTION 19.48.090 (POOLS AND SPAS) OF CHAPTER 19.48 (FENCES, DISTANCES BETWEEN BUILDINGS AND EXTENSIONS INTO YARDS) OF TITLE 19 (ZONING) OF THE SUNNYVALE MUNICIPAL CODE TO UPDATE THE WATER-EFFICIENT LANDSCAPING REGULATIONS PURSUANT TO CALIFORNIA STATE LAW**

WHEREAS, the adoption and enforcement of this Ordinance is necessary to manage the City of Sunnyvale's ("City") potable water supply in the short and long-term and to avoid or minimize the effects of drought and shortage within the City. This Ordinance is essential to ensure a reliable and sustainable minimum supply of water for the public health, safety and welfare; and

WHEREAS, the California Water Conservation in Landscaping Act was implemented by a statewide Landscape Task Force, which was overseen by the California Urban Water Conservation Council, to create a Model Water-Efficient Landscape Ordinance (Model Ordinance) that local agencies may adopt. The Water Conservation in Landscaping Act was amended pursuant to AB 2717 (Chapter 682, Stats. 2004) and AB 1881 (Chapter 559, Stats. 2006) to update the Model Ordinance; and

WHEREAS, on May 11, 2010, the City Council of the City of Sunnyvale adopted Ordinance No. 2918-10, adding a new Chapter 19.37 (Landscaping, Irrigation and Usable Open Space) to the Sunnyvale Municipal Code to comply with AB 1881, which required cities and counties to adopt the updated Model Ordinance or an equivalent document which is "at least as effective as" the Model Ordinance in conserving water; and

WHEREAS, on April 1, 2015, Governor Brown issued Executive Order B-29, which directed State agencies to implement immediate measures to save water, increase enforcement against water waste, and streamline government response to ongoing drought conditions; and

WHEREAS, Executive Order B-29 directed the Department of Water Resources ("DWR") to update the State Model Ordinance through expedited regulation to increase water efficiency standards for new and existing landscapes through more efficient standards, graywater usage, onsite storm water capture, and limitations of the portions of landscape that can be covered in turf or high water use plants; and

WHEREAS, local agencies are required to adopt the revised State Model Ordinance or adopt a local or regional ordinance at least as effective in conserving water; and

WHEREAS, the City of Sunnyvale has developed this updated Landscaping, Irrigation and Usable Open Space Ordinance in conjunction with the Bay Area Water Supply and Conservation Agency and other local agencies to meet the requirements and guidelines of the Model Ordinance and to address the unique physical characteristics within the City of Sunnyvale's jurisdiction, in order to ensure that this Ordinance will be "at least as effective as" the Model Ordinance in conserving water; and

WHEREAS, although this Landscaping, Irrigation and Usable Open Space Ordinance is more streamlined and simplified than the Model Ordinance, the Council finds that it is "at least as effective as" the Model Ordinance for the following reasons: (1) this Ordinance applies to more accounts than the Model Ordinance does because it lowers the size threshold for applicable rehabilitated landscaped areas from 1,000 square feet to 500 square feet for residential and non-residential projects, to better reflect the typical landscaped areas located within the City of Sunnyvale; (2) this Ordinance includes a default no turf restriction in the irrigated area and requires that at least 80% of the plants be native plants, low water using plants, or no water using plants (unless the applicant elects to perform a water budget); and (3) this Ordinance requires covers on newly constructed pools and spas. The Model Ordinance does not contain any such default turf restrictions or specified plant requirements; and

WHEREAS, although this Ordinance is more streamlined and simplified than the Model Ordinance, the Council further finds that it is "at least as effective as" the Model Ordinance because this Ordinance includes water budget parameters and values and landscaping requirements that are consistent with the Model Ordinance. By using the same water budget parameters as the Model Ordinance (e.g., plant factors, irrigation efficiency), this Ordinance will be as effective as the Model Ordinance in developing landscaping water budgets. By using the same, and in some cases more stringent, landscaping parameters as the Model Ordinance for, among other things, slope restrictions and width restrictions for turf, irrigation times, and minimum mulch requirements, this Ordinance will be at least as effective as the Model Ordinance in achieving water savings; and

WHEREAS, Article X, Section 2 of the California Constitution and Section 100 of the California Water Code declare that the general welfare requires water resources be put to beneficial use, waste or unreasonable use or unreasonable method of use of water be prevented, and conservation of water be fully exercised with a view to the reasonable and beneficial use thereof; and

WHEREAS, The Council finds and determines that this Ordinance is consistent with the provisions requiring reductions in outdoor water use for landscaping in the California Green Building Standards Code, as such provisions will be implemented in the coming years. Such requirements include the development of a water budget for landscaping irrigation in accordance with methodology outlined in either the Model Ordinance or pursuant to a locally adopted ordinance; and

WHEREAS, the State Legislature has identified the provision of a more reliable water supply and the protection, restoration and enhancement of the Delta ecosystem as a high priority for the state. Pursuant to this, in November 2009, the State Legislature passed Senate Bill 7 (7<sup>th</sup>

Extraordinary Session) requiring certain urban water suppliers to reduce per capita urban water use by 20% by the year 2020. Accordingly, the Council finds that implementation of this Ordinance is consistent with the policies and goals established by the State Legislature in enacting SB 7 (7<sup>th</sup> Extraordinary Session).

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SUNNYVALE DOES ORDAIN AS FOLLOWS:

SECTION 1. CHAPTER 19.37 AMENDED. Chapter 19.37 (Landscaping, Irrigation and Usable Open Space) of Title 19 (Zoning) of the Sunnyvale Municipal Code is hereby amended to read as follows:

### **Chapter 19.37.**

#### **LANDSCAPING, IRRIGATION AND ~~USEABLE~~USABLE OPEN SPACE**

- 19.37.010. Purpose.**
- 19.37.020. Applicability.**
- 19.37.030. Definitions.**
- 19.37.040. Minimum landscaped area and ~~useable~~usable open space.**
- 19.37.050. Water efficiency design requirements.**
- 19.37.060. General planting, soil management and water feature design requirements.**
- 19.37.070. Reserved.**
- 19.37.080. ~~Buffer landscaping design requirements.~~Reserved.**
- 19.37.090. ~~Frontage strip landscaping design requirements.~~Reserved.**
- 19.37.100. ~~Useable~~Usable open space design requirements.**
- 19.37.110. Irrigation system design requirements.**
- 19.37.120. Landscaping and irrigation approval.**
- 19.37.130. Landscaping irrigation audit and maintenance.**

#### **19.37.010. Purpose.**

The purpose of this chapter is to ensure that adequate landscaped areas and ~~useable~~usable open space are provided where applicable for all zoning districts; to promote the conservation and efficient use of water and to prevent the waste of this valuable resource; and to promote water conservation as one component of sustainable building practices. This chapter shall be construed to assure consistency with the requirements of the Water Conservation in Landscaping Act of the California Government Code, or any successor statute, and any applicable implementing regulations, as they exist at the time of enactment or as later amended. In addition to compliance with the provisions in this chapter, projects shall comply with stormwater management requirements set forth in Chapter 12.60.

**19.37.020. Applicability.**

~~All provisions of this chapter shall apply to the following landscaping projects:~~

~~(a) Individual Single Family or Duplex Residential Projects. New landscaping installations equal to or greater than one thousand square feet in connection with construction of a new dwelling unit. Unless otherwise provided by this section, all lots in all zoning districts are subject to Section 19.37.040 (Minimum Landscaped Areas and Usable Open Space) and 19.37.120 (Landscaping and Irrigation Approval). The following types of projects are subject to certain provisions of this chapter as specified:~~

~~(1) Single-Family and Two-Family Dwelling New Construction. New landscaping installations of 500 square feet or more in connection with the construction of a new single-family or two-family dwelling unit shall meet all requirements of this chapter. Such projects with less than 500 square feet of landscaped area are subject only to Section 19.37.040 (Minimum Landscaped Area and Usable Open Space).~~

~~(2) New Landscaping Installations. New landscaping installations of 500 square feet or more for any use except for existing single-family and two-family dwellings shall meet all requirements of this chapter. Such projects with less than 500 square feet of landscaped area are subject only to Section 19.37.040 (Minimum Landscaped Area and Usable Open Space) and Section 19.37.120 (Landscaping and Irrigation Approval).~~

~~(3) Rehabilitated Landscapes. Projects to rehabilitate existing landscaped areas between 1,000 square feet and 2,500 square feet are subject to all requirements of this chapter, except that an irrigation audit is not required. Rehabilitated landscape projects on existing landscaped areas over 2,500 square feet shall meet all requirements of this chapter. Rehabilitated landscape projects less than 1,000 square feet are subject only to Section 19.37.040 (Minimum Landscaped Area and Usable Open Space) and Section 19.37.120 (Landscaping and Irrigation Approval).~~

~~(4) Graywater for Landscapes. Landscape projects of 2,500 square feet or less using a graywater system that conforms to Title 16 and the California Plumbing Code or rainwater captured on site to meet all of its planting water needs are subject only to Section 19.37.110 (Irrigation System Design Requirements).~~

~~(b) All Other Projects. New landscaping installations or landscaping rehabilitation projects equal to or greater than one thousand square feet. Specific Plans, Precise Plans and other Specialized Plan Areas. Properties within a specific plan, precise plan or other specialized plan area are subject to the minimum landscaped area, usable open space, or modified frontage strip and buffer design requirements prescribed in those individual plans. All other requirements in this chapter apply to such projects.~~

~~(c) Exemptions. Landscaping and irrigation requirements shall not apply to: The following projects are exempt from this chapter:~~

~~(1) Projects that fall below the square footage thresholds stated in subsections (a) and (b);~~

~~(2)~~(1) Individual single-family or ~~duplex residential~~two-family dwelling landscape projects that are not in connection with construction of a new dwelling unit, except that Section 19.37.040(e)(2) applies;

~~(3)~~(2) - ~~(5)~~(4) [Renumbered; text unchanged]

### **19.37.030. Definitions.**

The following terms and definitions pertain to the water efficiency sections of this chapter:

~~(a)~~—“Applied water” means the portion of water supplied by the irrigation system to the landscaped area.

~~(b)~~—“Automatic irrigation controller” means an automatic timing device used to remotely control valves that operate an irrigation system. ~~Automatic irrigation controllers schedule irrigation events~~ using either evapotranspiration (weather-based) or soil moisture data.

~~(c)~~—“Certified professional” means a licensed landscape architect, a licensed landscape contractor, a licensed professional engineer, certified irrigation designer, or any other person authorized by the state to design a landscape or irrigation system, or a certified landscape irrigation auditor.

~~(d)~~—“Conversion factor (0.62)” means the number that converts acre-inches per acre per year to gallons per square foot per year.

~~(e)~~—“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.

~~(f)~~—“Estimated total water use” (ETWU) means the total water used for the landscaped area as described in Section 19.37.050.

~~(g)~~—“ET adjustment factor” (ETAF) means a factor ~~of 0.70.55 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 landscaped area. ~~ETAF for a special landscaped area shall not exceed 1.0.~~

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

“Flow sensor” means an inline device installed at the supply point of the irrigation system that produces a repeatable signal proportional to flow rate, and connected to an automatic irrigation controller, or flow monitor capable of receiving flow signals and operating master valves and detecting high flow conditions created by system damage or malfunction.

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

“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

wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers.

~~(i)~~—“Hardscape” means any durable material (pervious and non-pervious) in a landscaped area, such as decks, patios or pedestrian walkways, and other non-irrigated elements which may include art work, benches, and bicycle parking.

~~(j)~~—“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.

~~(k)~~—“Irrigation audit” means an in depth evaluation of the performance of an irrigation system. An irrigation audit includes, ~~but is not limited to:~~ inspection, system tune up, system test with distribution uniformity or emission uniformity, correction of any overspray or runoff that causes overland flow, and preparation of an irrigation schedule.

~~(l)~~—“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. ~~Required irrigation efficiency is described in Section 19.37.110.~~

~~(m)~~—“Low water use plant” means a plant species whose water needs are compatible with local climate and soil conditions. ~~Species classified as “very low water use” and “low water use” by WUCOLS, having, and have a regionally adjusted plant factor of 0.0 through 0.3, shall be considered low water use plants per WUCOLS.~~

“Master shut-off valve” means an automatic valve installed at the irrigation supply point which controls water flow into the irrigation system.

~~(n)~~—“Maximum applied water allowance” (MAWA) means the upper limit of annual applied water for the established landscaped area, expressed in gallons per year as specified in Section 19.37.050.

~~(o)~~—“Mulch” means any organic material such as leaves, bark, straw, compost, or inorganic mineral materials such as rocks, gravel, and 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.

~~(p)~~—“Native plant” means a plant indigenous to ~~a specific area of consideration. For the purposes of these guidelines, the term shall refer to plants indigenous to~~ the coastal ranges of central and northern California, and more specifically, ~~to~~ such plants that are suited to the ecology of the present or historic natural ~~community(ies) environment within of~~ the project’s vicinity.

~~(q)~~—“~~No-~~water using plant” means a plant species with water needs that are compatible with local climate and soil conditions such that regular supplemental irrigation is not required to sustain the plant after it has become established.

~~(r)~~—“Plant factor” or “plant water use factor” is a factor, when multiplied by ETo (reference evapotranspiration), estimates the amount of water

needed by plants. ~~For purpose of calculation of the ETWU, use values from WUCOLS, or equivalent reference subject to approval by the director of community development.~~

(s) —“Precipitation rate” means the rate of application of water measured in inches per hour.

(t) —“Recreational area” means areas designated for dedicated to active play, recreation or public assembly in such as parks, sports fields, picnic grounds, amphitheaters and golf courses course tees, fairways, roughs, surrounds and greens on any private property, excluding private single-family and two-family dwelling properties, where turf provides a playing surface.

(u) —“Reference evapotranspiration” or “ETo” means a standard measurement of environmental parameters specific to the local climate which affect the water use of plants, expressed in inches per year, and used as the basis of calculating the maximum applied water allowance for local landscapes. ~~For purposes of calculation of the MAWA and ETWU, as described in Section 19.37.050, use current reference evapotranspiration data, such as from the California Irrigation Management Information System (CIMIS), or other equivalent data, or soil moisture sensor data.~~

(v) —“Runoff” means water which is not absorbed by the soil or landscaping to which it is applied and flows from the landscaped area.

(w) —“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.

(x) —“Special landscaped area” (SLA) means an area of the landscaping dedicated solely to edible plants, recreational areas, areas irrigated with recycled water, water features using recycled water, and areas dedicated to active play such as parks, sports fields, golf courses, and where turf provides a playing surface.

(y) —“Turf” means a ground cover surface of mowed grass.

(z) —“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).

(aa) —“WUCOLS” means the Water Use Classification of Landscape Species published by the University of California Cooperative Extension, and the Department of Water Resources 2014 and the Bureau of Reclamation, 2000.

#### **19.37.040. Minimum landscaped area and ~~useable~~usable open space.**

(a) Minimum Landscaped Area. Table 19.37.040 describes the minimum landscaped area and ~~useable~~usable open space required by zoning district. In addition to the minimum landscaped area, areas not used for buildings, parking lot areas, driveways or pedestrian walkways shall be landscaped unless the review authority determines that landscaping is not necessary to achieve the purposes of this chapter. ~~For requirements specific to single family uses, see subsection (f).~~ For projects not involving redevelopment of the entire site, the director of community development may allow less landscaped area than required



by Table 19.37.040 if existing physical constraints on the site (such as structures, parking or circulation) limit the amount of landscaping that can be provided.

(b) Landscaped Buffer Required. A landscaped buffer is required for any property with a nonresidential use in a residential zoning district that abuts a residential use. ~~It is also required for properties of and for~~ any use in a nonresidential zoning district which abuts a residential zoning district. See Section 19.37.080 for buffer landscaping design requirements. Landscaped buffers must be designed to meet the following:

(1) Width. The buffer shall maintain a width of at least 10 feet.

(2) Landscaping. The buffer shall include a planted screen of approved trees and shrubs which shall be placed along the length of the buffer at intervals not to exceed twenty feet, provided, however, that the approving body may grant exceptions as part of any discretionary permit when warranted by conditions on the property.

(3) Wall Design. The buffer shall include a decorative masonry wall six feet in height measured from the highest adjoining grade. When the adjacent nonresidential building is two stories or more in height, the decorative masonry wall shall be eight feet measured from the highest adjoining grade. Where a residential use is permitted in a nonresidential zoning district, the wall shall be required on the residential property, unless a wall already exists.

(c) Landscaped Frontage Strip Required. A fifteen-foot wide landscaped frontage strip is required for all properties except ~~those noted below in subsection (f) for single-family properties which have a frontage on a public street.~~ The frontage strip is measured from the inside edge of the public sidewalk, or if no sidewalk exists, from the curb. ~~See Section 19.37.090 for frontage strip landscaping design requirements. Frontage strip landscaping may be crossed by walkways and access drives.~~

(d) ~~Useable~~Usable Open Space Required. ~~Useable~~Usable open space is required for all duplex and multifamily residential properties as described in Table 19.37.040. ~~Useable~~Usable open space areas that meet the definition of landscaping may contribute towards the minimum landscaped area of the site. See Required usable open space shall meet the requirements of Section 19.37.100 for ~~useable~~(Usable open space design requirements).

~~(e) Specific Plan, Precise Plan and Other Specialized Plan Areas. Minimum landscaped area and useable open space for properties within a specialized plan's prescribed area are described in their individual plans.~~

~~(f)~~(e) Allowances and Limitations for Single-Family Uses and Single-Family Zoning Districts.

(1) Allowances for Single-Family Zoning Districts. Yards are not required to be landscaped in single-family zoning districts; however, ~~the provisions of this chapter apply if landscaping is provided and meets the criteria in Section 19.37.020 (Applicability). other provisions in Title 19 may apply.~~

(2) Limitation on Paved Areas in the R-0 and R-1 Zoning Districts. Not more than fifty percent of the required front yard of any lot within an R-0 or R-1 zoning district shall be paved with asphalt, concrete cement, or any



other impervious surface, except as may be required to meet off-street parking and access requirements of Chapter 19.46.

~~(3) — Landscaped Frontage Strip for Single Family Uses. A landscaped frontage strip is not required in any zoning district for single family residential uses which have a frontage on a public street.~~

**Table 19.37.040**  
**Minimum Landscaped Area and ~~Useable~~Usable Open Space by Zoning District**

Zoning District	<del>Useable</del> <u>Usable</u> Open Space	Other Landscaped Area	Parking Lot Landscaped Area	Total Landscaped Area
R-0	N/A	N/A	N/A	N/A
R-1	N/A	N/A	N/A	N/A
R-1.5	N/A	N/A	N/A	N/A
R-1.7/PD	N/A	N/A	N/A	N/A
R-2	500 sq. ft./unit <sup>1</sup>	850 sq. ft./ unit	20% of the parking lot area	Total minimum landscaped area is the combination of the minimum parking lot landscaped area and other landscaped area. In no case shall this total be less than 20% of the lot area.
R-3	400 sq. ft./unit	425 sq. ft./unit		
R-4	380 sq. ft./unit	375 sq. ft./unit		
R-5	380 sq. ft./unit	375 sq. ft./ unit		
C-1	N/A	12.5% of floor area		
C-2	N/A	12.5% of floor area		
C-3	N/A	12.5% of floor area		
C-4	N/A	12.5% of floor area		
O	N/A	10% of lot area		
P-F	N/A	10% of lot area		
M-S	N/A	10% of floor area		
M-3	N/A	10% of floor area		

<sup>1</sup> One thousand square feet of ~~useable~~usable open space is required for a property with an accessory living unit.

#### **19.37.050. Water efficiency design requirements.**

Water Efficiency in Design. Landscaped areas shall be designed to achieve water efficiency. ~~Landscaping design and plant selection may and shall be based on one of two options. Regardless of which option is selected, all other criteria described in this chapter shall apply. The options include:~~

~~(a) Option 1—Turf Limitation—No Turf and Minimum Area with 80 Percent Water Conserving Plants. Turf area shall not be more than twenty-five percent of There shall be no turf or high water use plants in the landscaped areas, and at least 80 percent of the plants installed shall be native, low water use or no water use plants. shall be installed in at least eighty percent of all non-turf landscaped areas.~~

(b) Option 2—Water Budget Calculations. If the turf limitation option is not selected, a water budget calculation shall be prepared and shall adhere to the following requirements:

(1) Plant Factors. The plant factors shall be obtained from WUCOLS or an equivalent reference ~~subject to approval by the director of community development approved by the California Department of Water Resources.~~ For areas that mix plants with different water uses, the plant factor calculation ~~is shall be~~ based on the proportion of the respective plant factors, or based on the plant factor of the higher water using plant. Mixing high and low water use plants in the same hydrozone is prohibited. The plant factor ranges from 0.0 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.

(2) ~~Water Features.~~ All water features not using recycled water shall be included in the high water use hydrozone and temporarily irrigated areas shall be included in the low water use hydrozone.

(3) Special Landscaped Areas. All special landscaped areas (SLA) shall be identified and their water use included in the water budget calculations. The reference evapotranspiration adjustment factor for SLAs shall not exceed 1.0.

(4) Reference Evapotranspiration Adjustment Factor. ~~The reference evapotranspiration adjustment factor (ETAF) for SLAs shall not exceed 1.0. The ETAF reference evapotranspiration adjustment factor for all other landscaped areas shall not exceed 0.7.~~ 0.55 for landscaped areas on residential properties and shall not exceed 0.45 for landscaped areas on nonresidential properties.

(5) Water Budget Calculation. ~~The M~~maximum applied water allowance (MAWA) for a landscape shall be calculated using the following equations:

For residential projects, MAWA = (ETo) (0.62) [(0.70.55 x LA) + (0.30.45 x SLA)]

For nonresidential projects, MAWA = (ETo) (0.62) [(0.45 x LA) + (0.55 x SLA)]

Where:

MAWA = Maximum applied water allowance (gallons per year)

ETo = Reference evapotranspiration (inches per year)

0.62 = Conversion factor (to gallons)

0.7 = Reference evapotranspiration adjustment factor (ETAF)

LA = Planted landscaped area including SLA and not including hardscapes (square feet)

~~0.30.45~~ = Additional water allowance for SLA in residential projects

0.55 = Additional water allowance for SLA in nonresidential projects

SLA = Special landscaped area (square feet)

(6) Estimated Total Water Use. Estimated total water use (ETWU) ~~will shall~~ be calculated using the equation below. The sum of the ETWU calculated for all hydrozones shall not exceed the MAWA.

$$ETWU = (ETo)(0.62) \left( \frac{PF \times HA}{IE} + SLA \right)$$

Where:

ETWU = Estimated total water use per year (gallons)

ETo = Reference evapotranspiration (inches)

PF = Plant factor from WUCOLS

HA = Hydrozone area [high, medium, and low water use areas]  
(square feet)

SLA = Special landscaped area (square feet)

0.62 = Conversion factor

IE = Irrigation efficiency ~~(minimum 0.70)~~ of 0.75 for overhead spray systems and 0.81 for drip irrigation systems

**19.37.060. General planting, soil management and water feature design requirements.**

(a) Plant Material. In addition to the requirements below, plant selection and installation shall be done in accordance with accepted horticultural industry practices.

(1) - (3) [Text unchanged]

(4) Turf. Any allowable~~Any~~ turf areas shall be planted with tall fescue or similar turf requiring less water. Turf shall not be planted on slopes greater than ten percent where the toe of the slope is adjacent to an impermeable hardscape.

(b) Grouping of Plants. Plants with similar water needs shall be grouped (also described as a hydrozone). Areas that mix plants with different water uses may be allowed if a water budget is performed per Section 19.37.050 (Water Efficiency Design Requirements).

(c) Soil Management.

(1) Mulch. A minimum ~~two~~three-inch layer of mulch shall be applied on all ~~non-turf~~exposed soil areas, except that up to five percent of the area may be left exposed if designed to provide a habitat for beneficial insects and other wildlife.

(2) Soil Amendments. Soil amendments, ~~such as compost,~~ shall be incorporated according to the soil conditions at the project site and based on what is appropriate for selected plants. Compacted soils shall be transformed to a friable condition. Compost shall be incorporated at a minimum rate of four cubic yards per 1,000 square feet of planting area to a depth of six inches, unless the soil contains more than six percent of organic matter.

(3) Grading. If the project includes grading, the grading shall be designed to minimize soil erosion, runoff and water waste. The grading shall avoid soil compaction in planted landscaped areas.

(d) [Text unchanged]

**19.37.070. Reserved.**

**19.37.080. ~~Buffer landscaping design requirements. Reserved.~~**

~~The following is a list of design requirements for buffer landscaping.~~

~~(a) Width. The buffer shall maintain a width of at least ten feet.~~

~~(b) Landscaping. The buffer shall include a planted screen of approved trees and shrubs which shall be placed along the length of the buffer at intervals not to exceed twenty feet, provided, however, that the director of~~

~~community development may grant exceptions through a miscellaneous plan permit when warranted by conditions on the property.~~

~~(c) — Wall Design. The buffer shall include a decorative masonry wall six feet in height measured from the highest adjoining grade. When the adjacent nonresidential building is two stories or more in height, the decorative masonry wall shall be eight feet measured from the highest adjoining grade. Where a residential use is permitted in a nonresidential zoning district, the wall shall be required on the residential property, unless a wall already exists.~~

~~(d) — Specific Plan, Precise Plan and other specialized plan areas. Properties within a specialized plan's prescribed area may be subject to additional buffer landscaping design requirements, as described in their individual plans.~~

**19.37.090. — Frontage strip landscaping design requirements. Reserved.**

~~(a) — Width. The frontage strip shall be fifteen feet wide along the entire street frontage measured from the inside edge of the public sidewalk, or if no sidewalk exists, from the curb.~~

~~(b) — Landscaping Allowances. Frontage strip landscaping may be crossed by walkways and access drives.~~

~~(c) — Specific Plan, Precise Plan and Other Specialized Plan Areas. Properties within a specialized plan's prescribed area may vary from these frontage strip design requirements, as described in their individual plans.~~

**19.37.100. UseableUsable open space design requirements.**

(a) Function. UseableUsable open space must be designed to be accessible to, and useableusable for outdoor living, recreation or utility use.

(b) Location. UseableUsable open space may not be located in any required front yard area.

(c) Minimum UseableUsable Open Space Dimensions and Area. Each useableusable open space area shall have at least a twelve foot dimension in any direction and a minimum area of two hundred square feet except for:

(1) - (2) [Text unchanged]

(d) Private UseableUsable Open Space Required. In the R-4 and R-5 zoning districts, a minimum of eighty square feet per unit shall be designed as private useableusable open space.

~~(e) — Specific Plan, Precise Plan and Other Specialized Plan Areas. Properties within a specialized plan's prescribed area may vary from these useable open space design requirements, as described in their individual plans.~~

**19.37.110. Irrigation system design requirements.**

(a) Irrigation System Required. All landscaped areas shall have a permanent irrigation system, except for single-family detached and duplex two-family dwellings.

(b) Irrigation Efficiency and Design. Irrigation systems shall be designed and maintained to meet the water needs of each hydrozone and the following requirements: meet or exceed an average landscaping irrigation efficiency of seventy percent.

(1) Efficiency. Irrigation systems must meet or exceed an average landscaping irrigation efficiency of 75 percent for overhead spray systems and 81 percent for drip irrigation systems;

(2) Drip Irrigation. Bubbler or other low-flow, non-spray irrigation system shall be provided for trees and shrubs, mulched areas, areas with slope greater than 10 percent (unless it can be demonstrated that no runoff or erosion will occur if other types of irrigation is used) and areas that are less than 10 feet wide in any direction.

(3) Overhead Spray Irrigation. Overhead spray irrigation may be used for clustered shrub plantings and turf areas at least 10 feet wide in any direction; however, it cannot be used for areas within two feet of a non-permeable surface unless it can be demonstrated that no runoff would occur, or the adjacent non-permeable surface is designed and constructed to drain entirely to landscaping.

(4) Valves. Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions and plant water needs. Valves and control circuits shall be separated based on the required rate and quantity of water used. Where feasible, trees shall be placed on separate valves from shrubs, groundcovers and turf. Manual shut-off valves are required. Master shut-off valves are required unless the irrigation system includes low pressure shut down features.

(5) Irrigation Controllers and Sensors. All irrigation controllers must utilize either evapotranspiration or soil moisture sensor data, and be capable of dual or multiple programming and capable of maintaining programming data in the event the primary power source is interrupted. Irrigation systems shall also incorporate sensors (rain, freeze, wind, etc.) that suspend or alter irrigation operation during unfavorable weather conditions.

(6) Pressure Regulators. Pressure regulators shall be installed if the water pressure is below or exceeds the recommended pressure of the irrigation devices.

(7) Spray Heads. Spray heads and other emission devices shall be selected based on what is appropriate for the plant type within the hydrozone. Spray heads must have matched precipitation rates within each circuit. All irrigation emission devices must meet the ANSI standard, ASABE/ICC 802-2014 "Landscape Irrigation Sprinkler and Emitter Standard".

(8) Flow Sensors. Flow sensors are required for any landscaped areas of 5,000 square feet or larger.

(c) [Text unchanged]

~~(d) Hydrozone Irrigation. Systems shall be designed to meet the individual needs of each plant group. Valves and control circuits shall be separated based on the required rate and quantity of water used.~~

~~(1) Valves. Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions and plant materials with similar water use. Where feasible, trees shall be placed on separate valves from shrubs, groundcovers, and turf.~~

~~(2) — Sprinkler Heads. Sprinkler heads and other emission devices shall be selected based on what is appropriate for the plant type within that hydrozone. Sprinkler heads must have matched precipitation rates within each circuit.~~

~~(e) — Low Volume Irrigation. Bubbler or drip type irrigation, or other low flow, non-spray technology shall be provided for:~~

~~(1) — Trees and shrubs.~~

~~(2) — Mulched areas.~~

~~(3) — Areas with slope greater than ten percent, unless it can be demonstrated that no runoff or erosion will occur if other types of irrigation is used.~~

~~(4) — Areas that are less than eight feet wide in any direction.~~

~~(f) — Overhead Sprinkler Irrigation. Overhead irrigation systems may be used for clustered shrub plantings. Areas within two feet of a non-permeable surface may not be irrigated using overhead sprinkler irrigation unless it can be demonstrated that no runoff would occur, or the adjacent non-permeable surface is designed and constructed to drain entirely to landscaping.~~

~~(g) — Irrigation Controllers and Sensors. All irrigation controllers must utilize either evapotranspiration or soil moisture sensor data and be capable of dual or multiple programming. Irrigation systems shall also incorporate sensors (rain, freeze, wind, etc.) that suspend or alter irrigation operation during unfavorable weather conditions.~~

~~(h)(d) - (i)(e)~~ [Renumbered; text unchanged]

### **19.37.120. Landscaping and irrigation approval.**

(a) Permit Required. Except as otherwise provided in this chapter, no person shall install or modify any landscaped area ~~described in Section 19.37.020~~ without first obtaining approval of a miscellaneous plan permit ~~for each such action~~, in accordance with the procedure described in Chapter 19.82, or as part of any discretionary permit the project is subject to pursuant to this title.

(b) Landscaping and Irrigation Plans Required. Landscaping and irrigation plans shall be required for any modification or installation of new landscaping that falls within the thresholds stated in this chapter. The plans shall ~~meet provide~~ the information ~~requirements necessary as~~ determined by the director of community development to comply with the provisions of this chapter.

~~(c) — (1) — Plan~~ Preparation by Certified Professional. Landscaping and irrigation plans shall be prepared by, and bear the signature of, a certified professional, except for new landscaping installations or landscaping rehabilitation projects with less than two thousand five hundred square feet of landscaped area.

### **19.37.130. Landscaping irrigation audit and maintenance.**

~~(a) — Irrigation Audit Required. Prior to approval of occupancy by a building official, a landscaping irrigation audit shall be conducted and an irrigation audit report shall be submitted for applicable projects described in~~

Section 19.37.020 (Applicability). ~~with landscaping and irrigation plans approved after June 10, 2010.~~

(1) Audit by Third-Party Certified Professional. The landscaping irrigation audit shall be conducted and the report shall be prepared by a third party certified professional, and not by the entity who designed or installed the landscaping. ~~except for new landscaping installations or landscaping rehabilitation projects with less than two thousand five hundred square feet of landscaped area.~~

(2) [Text unchanged]

(b) Submittal of Landscaping Maintenance Schedule. Prior to the final inspection by the building official, a regular maintenance schedule shall be submitted to the director of community development for review and approval. The maintenance schedule shall include, but not be limited to, routine inspection; 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 landscaped areas; and removing obstructions to irrigation spray heads or other emission devices. Landscaping shall be maintained in accordance with the approved maintenance schedule.

(c) [Text unchanged]

SECTION 2. SECTION 19.48.090 AMENDED. Section 19.48.090 (Pools and Spas) of Chapter 19.48 (Fences, Distances between Buildings and Extensions into Yards) of Title 19 (Zoning) of the Sunnyvale Municipal Code is hereby amended to read as follows:

**19.48.090. Pools and spas.**

(a) – (b) [Text unchanged]

(c) Covers are required for new pool or spa installations.

SECTION 3. CEQA - EXEMPTION. The City Council finds, pursuant to Title 14 of the California Code of Regulations (CEQA Guidelines), that this ordinance is categorically exempt in accordance with Section 15307 as an action taken by a regulatory agency as authorized by California law to assure maintenance or protection of natural resources; and in accordance with Section 15308 as an action taken by a regulatory agency as authorized by California law to assure maintenance or protection of the environment. The Council therefore directs that the Planning Division may file a Notice of Exemption with the Santa Clara County Clerk in accordance with the Sunnyvale Guidelines for the implementation of CEQA adopted by Resolution No. 118-04.

SECTION 4. CONSTITUTIONALITY; SEVERABILITY. If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be invalid, such decision or decisions shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance, and each section, subsection, sentence, clause and phrase thereof irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid.



SECTION 5. EFFECTIVE DATE. This ordinance shall be in full force and effect thirty (30) days from and after the date of its adoption.

SECTION 6. POSTING AND PUBLICATION. The City Clerk is directed to cause copies of this ordinance to be posted in three (3) prominent places in the City of Sunnyvale and to cause publication once in The Sun, the official publication of legal notices of the City of Sunnyvale, of a notice setting forth the date of adoption, the title of this ordinance, and a list of places where copies of this ordinance are posted, within fifteen (15) days after adoption of this ordinance.

Introduced at a regular meeting of the City Council held on \_\_\_\_\_, and adopted as an ordinance of the City of Sunnyvale at a regular meeting of the City Council held on \_\_\_\_\_, by the following vote:

AYES:  
NOES:  
ABSTAIN:  
ABSENT:  
RECUSAL:

ATTEST:

APPROVED:

\_\_\_\_\_  
City Clerk  
Date of Attestation: \_\_\_\_\_

\_\_\_\_\_  
Mayor

(SEAL)

APPROVED AS TO FORM:

\_\_\_\_\_  
City Attorney