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DUPLICATE OF ORIGINAL
ON FILE IN THE
OFFICE OF THE CITY CLERK
CITY OF HOLLISTER

ORDINANCE NO. 1055

AN ORDINANCE OF THE CITY OF HOLLISTER
AMENDING TTILE 15 *"BUILDING AND CONSTRUCTION"* OF THE
HOLLISTER MUNICIPAL CODE TO ADD
CHAPTER 22 WATER EFFICIENT LANDSCAPE

THE CITY COUNCIL OF THE CITY OF HOLLISTER HEREBY ORDAINS AS FOLLOWS:

Section 1. Title 15 Amended. Title 15 "Building and Construction" of the Hollister Municipal Code is hereby amended by adding Chapter 22, Water Efficient Landscape as described in "Exhibit A attached hereto and made a part there of by reference."

Section 2. Severability. Should any provision, section, paragraph, sentence, or word of this ordinance be rendered or declared invalid by any final court action in a court of competent jurisdiction or by reason of any preemptive legislation, the remaining provisions, sections, paragraphs, sentences, or words of this ordinance as hereby adopted shall remain in full force and effect.

Section 3. Forms. The Development Services Department, Planning Division staff is directed to prepare all applications, worksheets, certificates required by this ordinance.

Section 4. Effective Date. This ordinance shall take effect and be in force thirty (30) days from and after its final passage.

Section 5. Publication. Within fifteen (15) days after passage, the City Clerk shall cause this ordinance to be published one time in the *Free Lance*, a newspaper of general circulation.

INTRODUCED this 7th day of December 2009.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Hollister held on the 21st day of December, 2009 by the following vote:

AYES: Council Members Emerson, Sanchez, Valdivia, Friend and Mayor Gomez.
NOES: None.
ABSENT: None.

Victor Gomez, Mayor

ATTEST:

Geri Johnson, City Clerk

APPROVED AS TO FORM:

Stephanie Atigh, City Attorney

EXHIBIT A

Chapter 15.22 Water Efficient Landscape
(Note: Government Code Sections 65591.2, 65591.5, 65592, 65594, 65595, 65599 and 66696.5)

Sections:

15.22.010 Purpose
15.22.020 Applicability
15.22.030 Definitions
15.22.040 Provisions for Implementation of New Construction or Rehabilitated Landscapes
15.22.050 Compliance with Landscape Application Package
15.22.060 Penalties
15.22.070 Elements of the Landscape Application Package
15.22.080 Water Efficient Landscape Worksheet
15.22.090 Soil Management Report
15.22.100 Landscape Design Plan
15.22.110 Irrigation Design Plan
15.22. 120 Grading Design Plan
15.22.130 Certificate of Completion
15.22.140 Irrigation Scheduling
15.22.150 Landscape and Irrigation Maintenance Schedule
15.22.160 Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis
15.22.170 Irrigation Efficiency
15.22.180 Recycled Water
15.22.190 Stormwater Management
15.22.200 Public Education
15.22.210 Environmental Review
15.22.220 Provisions for Existing Landscapes
15.22.230 Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis
15.22.240 Water Waste Prevention
15.22.250 Effective Precipitation

15.22.010 Purpose.

A.) The City Council affirms the findings of the State Legislature as follows:

1.) That the waters of the state are of limited supply and are subject to ever increasing demands;

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

3.) That it is the policy of the State to promote the conservation and efficient use of water and to prevent the waste of this valuable resource;

4.) That landscapes are essential to the quality of life in California by providing areas for active and passive recreation and as an enhancement

to the environment by cleaning air and water, preventing erosion, offering fire protection, and replacing ecosystems lost to development; and

5.) That landscape design, installation, maintenance and management shall be water efficient; and

6.) That Section 2 of Article X of the California Constitution specifies that the right to use water is limited to the amount reasonably required for the beneficial use to be served and the right does not and shall not extend to waste or unreasonable method of use.

B.) The City Council affirms that consistent with the findings of the State Legislature, the purpose of this ordinance is to:

1.) Promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible;

2.) Establish a structure for planning, designing, installing, maintaining and managing water efficient landscapes in new construction and rehabilitated projects;

3.) Establish provisions for water management practices and water waste prevention for existing landscapes;

4.)Use water efficiently without waste by setting a Maximum Applied Water Allowance as an upper limit for water use and reduce water use to the lowest practical amount;

5.) Promote the benefits of consistent landscape ordinances with neighboring local and regional agencies;

6.) Encourage the use economic incentives that promote the efficient use of water, such as implementing a tiered-rate structure; and

7.) Encourage cooperation between the City of Hollister, the Sunnyslope Water District, and other local agencies to local agencies to enforce the provisions of this chapter

15.22.020 Applicability.

A.) After January 1, 2010, this ordinance shall apply to all of the following landscape projects:

1.) New construction and rehabilitated landscapes for public agency projects and private development projects with a landscape area equal to or greater than 2,500 square feet;

2.) New construction and rehabilitated landscapes which are developer-installed in single-family and multi-family projects with a landscape area equal to or greater than 2,500 square feet;

3.) New construction landscapes, which are homeowner-provided and/or homeowner-hired in single-family and multi-family residential projects with a total project landscape area equal to or greater than 5,000 square feet;

4.) Existing landscapes limited to Sections 15.22.220 Provisions for Existing Landscapes, 15.22.230 Irrigation Audit, Irrigation Survey, Irrigation Water Use Analysis, and 15.22.240 Water Waste Prevention.

5.) Cemeteries. Recognizing the special landscape management needs of cemeteries, new and rehabilitated cemeteries are limited to Sections 15.22.080 Water Efficient Landscape Worksheet, 15.22.150 Landscape and Irrigation Maintenance Schedule, 15.22.230 Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis; and existing cemeteries are limited to Sections 15.22.220 Provisions for Existing Landscapes, 15.22.230 Irrigation Audit, Irrigation Survey, Irrigation Water Use Analysis, and 15.22.240 Water Waste Prevention.

B.) 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.) Plant collections, as part of botanical gardens and arboretums open to the public.

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

15.22.030 Definitions.

The terms used in this ordinance have the meaning set forth below:

- **"Applied water,"** the portion of water supplied by the irrigation system to the landscape.
- **"Automatic irrigation controller,"** 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.
- **"Backflow prevention device,"** 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,"** the document required under Section 15.22.130 Certificate of Completion.
- **"Certified irrigation designer,"** 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,"** 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 Water Sense irrigation auditor certification program and Irrigation Association's Certified Landscape Irrigation Auditor program.

- "**Check valve**" or "**anti-drain valve,**" 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,**" community apartment projects, condominium projects, planned developments, and stock cooperatives per Civil Code Section 1351.
- "**Conversion factor (0.62),**" the number that converts acre-inches per acre per year to gallons per square foot per year.
- "**Drip irrigation,**" 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,**" a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.
- "**Effective precipitation**" or "**usable rainfall**" **(Eppt),** the portion of total precipitation, which becomes available for plant growth.
- "**Emitter,**" a drip irrigation emission device that delivers water slowly from the system to the soil.
- "**Established landscape,**" 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,**" 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.
- "**Estimated Total Water Use**" **(ETWU),** the total water used for the landscape as described in Section 15.22.080 Water Efficient Landscape Worksheet.
- "**ET adjustment factor**" **(ETAF),** a factor of 0.7, 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. A combined plant mix with a site-wide average of 0.5 is the basis of the plant factor portion of this calculation. For purposes of the ETAF, the average irrigation efficiency is 0.71. Therefore, the ET Adjustment Factor is (0.7)=(0.5/0.71). ETAF for a Special Landscape Area shall not exceed 1.0. ETAF for existing non-rehabilitated landscapes is 0.8.
- "**Evapotranspiration rate (ETo),**" the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.
- "**Flow rate,**" the rate at which water flows through pipes, valves and emission devices, measured in gallons per minute, gallons per hour, or cubic feet per second.
- "**Hardscapes,**" any durable material (pervious and non-pervious).
- "**Homeowner-provided landscaping,**" any landscaping either installed by a private individual for a single family residence or installed by a licensed contractor hired by a homeowner. A homeowner, for purposes of this

ordinance, is a person who occupies the dwelling he or she owns. This excludes speculative homes, which are not owner-occupied dwellings.

- **"Hydrozone,"** a portion of the landscaped area having plants with similar water needs. A hydrozone may be irrigated or non-irrigated.
- **"Infiltration rate,"** 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,"** 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. "Noxious weeds" means any weed designated by the Weed Control Regulations in the Weed Control Act and identified on a Regional District noxious weed control list. Lists of invasive plants are maintained at the California Invasive Plant Inventory and USDA invasive and noxious weeds database.
- **"Irrigation audit,"** an in-depth evaluation of the performance of an irrigation system conducted by a Certified Landscape Irrigation Auditor. An irrigation audit includes, but is not limited to: inspection, system tune-up, system test with distribution uniformity or emission uniformity, reporting overspray or runoff that causes overland flow, and preparation of an irrigation schedule.
- **"Irrigation efficiency" (IE),** 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 minimum average irrigation efficiency for purposes of this ordinance is 0.71. Greater irrigation efficiency can be expected from well designed and maintained systems.
- **"Irrigation survey,"** 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,"** an analysis of water use data based on meter readings and billing data.
- **"Landscape architect,"** a person who holds a license to practice landscape architecture in the state of California Business and Professions Code, Section 5615.
- **"Landscape area,"** all the planting areas, turf areas, and water features in a landscape design plan subject to the Maximum Applied Water Allowance 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,"** a person licensed by the state of California to construct, maintain, repair, install, or subcontract the development of landscape systems.
- **"Landscape Application Package,"** the documents required under Section 15.22.070

- "**Landscape project,**" total area of landscape in a project as defined in "landscape area" for the purposes of this ordinance, meeting requirements under Section 15.22.020 Applicability.
- "**Lateral line,**" the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.
- "**Local water purveyor,**" any entity, including a public agency such as the Sunnyslope County Water District, the City or Hollister or private water company that provides retail water service.
- "**Low volume irrigation,**" 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,**" the pressurized pipeline that delivers water from the water source to the valve or outlet.
- "**Maximum Applied Water Allowance" (MAWA),** the upper limit of annual applied water for the established landscaped area as specified in Section 15.22.080. It is based upon the area's reference evapotranspiration, the ET Adjustment Factor, and the size of the landscape area. The Estimated Total Water Use shall not exceed the Maximum Applied Water Allowance. 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.
- "**Microclimate,**" 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,**" any surface mining operation with a reclamation plan approved in accordance with the Surface Mining and Reclamation Act of 1975.
- "**Mulch,**" 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.
- "**New construction,**" 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.
- "**Operating pressure,**" the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.
- "Overhead sprinkler irrigation systems" means systems that deliver water through the air (e.g., spray heads and rotors).
- "**Overspray,**" the irrigation water, which is delivered beyond the target area.
- "**Permit,**" an authorizing document issued by local agencies for new construction or rehabilitated landscapes.

- "**Pervious,**" any surface or material that allows the passage of water through the material and into the underlying soil.
- "**Plant factor**" or "plant water use factor," when multiplied by ETo, estimates the amount of water needed by plants. For purposes of this ordinance, the plant factor range for low water use plants is 0 to 0.3, the plant factor range for moderate water use plants is 0.4 to 0.6, and the plant factor range for high water use plants is 0.7 to 1.0. Plant factors cited in this ordinance are derived from the Department of Water Resources 2000 publication "Water Use Classification of Landscape Species".
- "**Precipitation rate,**" the rate of application of water measured in inches per hour.
- "**Project applicant,**" the individual or entity submitting a Landscape Application Package required under Section 15.22.070 Elements of the Landscape Application Package, to request a permit, plan check, or design review from the City of Hollister. A project applicant may be the property owner or his or her designee.
- **"Public Agency,"** means any city, county or special purpose district. state board or department, educational institution or other state agency which is created pursuant to statute.
- "**Rain sensor**" or "rain sensing shutoff device" means a component which automatically suspends an irrigation event when it rains.
- "**Record drawing**" or "**As-builts,**" 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,**" areas dedicated to active play such as parks, sports fields, and golf courses where turf provides a playing surface.
- "**Recycled water**", "**reclaimed water**", or "**treated sewage effluent water,**" treated or recycled wastewater of a quality suitable for non-potable uses such as landscape irrigation and water features. This water is not intended for human consumption.
- "**Reference evapotranspiration**" or "**Eto,**" a standard measurement of environmental parameters that affect the water use of plants. ETo is expressed in inches per day, month, or year as represented in Table 15-22-1 of Section 15.22.080 Water Efficient Landscape Worksheet, 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 Allowance so that regional differences in climate can be accommodated.
- "**Rehabilitated landscape,**" any re-landscaping project that requires a permit, plan check, or design review, meets the requirements of 15.22.020 Applicability, and the modified landscape area is equal to or greater than 2,500 square feet, is 50% of the total landscape area, and the modifications are completed within one year.
- "**Runoff,**" water, which is not absorbed by the soil or landscape to which it, is applied and flows from the landscape area. For example, runoff may result

from water that is applied at too great a rate (application rate exceeds infiltration rate) or when there is a slope.

- **"Soil moisture sensing device" or "soil moisture sensor,"** a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.
- **"Soil texture,"** the classification of soil based on its percentage of sand, silt, and clay.
- **"Special Landscape Area" (SLA),** an area of the landscape dedicated solely to edible plants, 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.
- **"Sprinkler head,"** a device which delivers water through a nozzle.
- **"Static water pressure,"** the pipeline or municipal water supply pressure when water is not flowing.
- **"Station,"** an area served by one valve or by a set of valves that operate simultaneously.
- **"Swing joint,"** 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.
- **"Turf,"** 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,"** a device used to control the flow of water in the irrigation system.
- **"Water conserving plant species,"** a plant species identified as having a low plant factor.
- **"Water feature,"** 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,"** the time of day irrigation is allowed.
- **"WUCOLS,"** the Water Use Classification of Landscape Species published by the University of California Cooperative Extension, the Department of Water Resources and the Bureau of Reclamation, 2000.

15.22.040 Provisions for Implementation of New Construction or Rehabilitated Landscapes.

The City of Hollister may designate another agency, such as a water purveyor, to implement some or all of the requirements contained in this ordinance. It is the intention of the City of Hollister to collaborate with water purveyors to define each entity's specific responsibilities relating to this ordinance.

15.22.050. Compliance with Landscape Application Package

A.) Prior to new construction or rehabilitation of landscapes subject to this Chapter, the City of Hollister shall:

1.) Provide the project applicant with the requirements of this chapter and procedures for permits, plan checks, or design reviews;

2.) Review the Landscape Application Package submitted by the project applicant;

3.) Approve or deny the Landscape Application Package;

Issue a permit or approve the plan check or design review for the project applicant; and

4.) Upon approval of the Landscape Application Package, submit a copy of the Water Efficient Landscape Worksheet to the local water purveyor.

5.) Pay appropriate fees as established by City Council.

B.) Prior to new construction or rehabilitation of landscapes subject to this chapter, the project applicant shall:

1.) Submit a Water Efficient Landscape Plan to the City of Hollister Building Department

C) Upon approval of the Water Efficient Landscape Plan by the City of Hollister Building Department or the City's designee , the project applicant shall :

1.) Receive a permit for the approved Water Efficient Landscape Plan and record the date of the permit in the Certificate of Completion;

2.) Submit a copy of the approved Water Efficient Landscape Plan along with the record drawings, and any other information to the property owner or his/her designee; and

3.) Submit a copy of the Water Efficient Landscape Worksheet to the City of Hollister and the water purveyor.

4.) File Certificate of Completion with the City of Hollister Building Department

15.22.060 Penalties.

Any person violating any of the provisions of this chapter shall be guilty of an infraction.

15.22.070 Elements of the Water Efficient Landscape Plan Application Package.

A.) The Water Efficient Landscape Plan Application Package shall include the following six (6) elements:

1.) Project information;

a. Date
b. Project 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 Application Package
h. Project contacts to include contact information for the project 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 Application Package".

2.) Water Efficient Landscape Worksheet;
   a. Hydrozone information table
   b. Water budget calculations
      1. Maximum Applied Water Allowance (MAWA)
      2. Estimated Total Water Use (ETWU)

3.) Soil management report ;
4.) Landscape design plan;
5.) Irrigation design plan; and
6.) Grading design plan.

15.22.080 Water Efficient Landscape Worksheet

A. A project applicant shall complete the Water Efficient Landscape Worksheet, which contains two sections on a form that will be provided by the City of Hollister. At a minimum, the Water Efficient Landscape Worksheet shall include the following contents

1. A hydrozone information table for the landscape project; and
2. A water budget calculation for the landscape project. For the calculation of the Maximum Applied Water Allowance and Estimated Total Water Use, a project applicant shall use the Annual Evapotranspiration (ETo) values from the Reference Evapotranspiration in Table 15.22-1 as shown below

Table 15-22-1 - Reference Evapotranspiration (ETo) Table*

County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
Hollister	1.5	1.8	3.1	4.3	5.5	5.7	6.4	5.9	5.0	3.5	1.7	1.1	45.1

* The values in this table were derived from:
1.) California Irrigation Management Information System (CIMIS);
2.) Reference Evapotransporation Zones Map, UC Dept. of Land, Air & Water Resources and California Dept. of Water Resources 1999; and
3.) Reference Evapotransportation for California, University of California, Department of Agriculture and Natural Resources
(1987) Bulletin 1922, 4) Determining Daily Reference Evapotransportation, Cooperative Extension UC Division of Agriculture and Natural Resources (1987), Publication Leaflet 21426

B. Water budget calculations shall adhere to the following requirements:

1. The plant factor used shall be from Water Use Classification of Landscape Species (WULCOLS) published by the University of California Cooperative Extension, the Department of Water Resources and the Bureau of Reclamation, 2000 The plant factor ranges from 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. 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.
3. All Special Landscape Areas shall be identified and their water use calculated as described below.

   The Evapotransporation Adjustment Factor (ETAF) for Special Landscape Areas (SLA) shall not exceed 1.0.

4. The Maximum Applied Water Allowance (MAWA) shall be calculated using the following equation for applications with Special Landscape Areas SLA):

   MAWA = (ETo) (0.62) [(0.7 x LA) + (0.3 x SLA)]

   a. Example Calculations. The example calculations below are hypothetical to demonstrate proper use of the equations and do not represent an existing or planned landscape project. The annual evapotranspiration (ETo) values used in these calculations are from the Reference Evapotranspiration rate of 45.1 for the Hollister area in Table 15.22-1, for planning purposes only. For actual irrigation scheduling, automatic irrigation controllers are required to use current reference evapotranspiration data, such as from the California Irrigation Management Information System (CIMIS), other equivalent data, or soil moisture sensor data.

   Example 1: A 50,000 square foot Commercial landscape project – no Special Landscape Area

   Maximum Applied Water Allowance (MAWA) in Hollister with an irrigated landscape area of 50,000 square feet without any Special Landscape Area (SLA= 0, no edible plants, recreational areas, or use of recycled water). To calculate MAWA, the annual reference evapotranspiration value for Hollister is 45.1 inches as listed in the Reference Evapotranspiration Table 15-22-1.

MAWA = (ETo) (0.62) [(0.7 x LA) + (0.3 x SLA)]

MAWA = Maximum Applied Water Allowance (gallons per year)
ETo = Reference Evapotranspiration (inches per year)
0.62 = Conversion Factor (to gallons)
0.7 = ET Adjustment Factor (ETAF)
LA = Landscape Area including SLA (square feet)
0.3 = Additional Water Allowance for SLA
SLA = Special Landscape Area (square feet)

MAWA = (45.1 inches) (0.62) [(0.7 x 50,000 square feet) + (0.3 x 0)] = 978,600 gallons per year
= 27.96 x [35,000 + 0] gallons per year
= 27.96 x 35,000 gallons per year
MAWA = 978,600 gallons per year

To convert from gallons per year to hundred-cubic-feet per year:
978,600/748 = 1,308 hundred-cubic-feet per year (100 cubic feet = 748 gallons)

Example 2 In this next hypothetical example, the landscape project in Hollister, CA has the same ETo value of 45.1 inches and a total landscape area of 50,000 square feet. Within the 50,000 square foot project, there is now a 2,000 square foot area planted with edible plants. This 2,000 square foot area is considered to be a Special Landscape Area.

MAWA = (ETo) (0.62) [(0.7 x LA) + (0.3 x SLA)]
MAWA = (45.1 inches) (0.62) [(0.7 x 50,000 square feet) + (0.3 x 2,000 square feet)]
= 27.96 x [35,000 + 600] gallons per year
= 27.96 x 35,600 gallons per year
= 995,376 gallons per year or 1,331 hundred-cubic-feet per year

5. Estimated Total Water Use (ETWU). The Estimated Total Water Use shall be calculated using the equation below. The sum of the Estimated Total Water Use calculated for all hydrozones shall not exceed the Maximum Applied Water Allowance (MAWA).

ETWU = (Eto)(0.62)[(PF x HA / IE) + SLA]

Where:
ETWU = Estimated Total Water Use per year (gallons)
ETo = Reference Evapotranspiration (inches per year)
PF = Plant Factor from WUCOLS ([1])
HA = Hydrozone Area [high, medium, and low water use areas] (square feet)

[1] A plant factor or plant water use factor is a factor, when multiplied by the Reference Evapotranspiration rate ETo, estimates that amount of water needed by plants. For purposes of this chapter, the plant factor range for low water use plants is 0 to 0.3, the plant factor range for moderate water ruse plants is 0.4 to 0.6 and the plant factor range for high water use plants is 0.7 to 1.0. Plant factors cited in this chapter are derived from the Department of Water Resources 2000 publication "Water Use Classification forLandscape Species".

SLA = Special Landscape Area (square feet)
0.62 = Conversion Factor
IE = Irrigation Efficiency (minimum 0.71)

1) Example ETWU calculation: landscape area is 50,000 square feet; plant water use type, plant factor, and hydrozone area are shown in the table below. The ETo value is 45.1 inches per year. There are no Special Landscape Areas (recreational area, area permanently and solely dedicated to edible plants, and area irrigated with recycled water) in this example.

Hydrozone	Plant Water Use Types(s)	Plant Factor (PF)*	Hydrozone Area (HA) (square feet)	PF x HA (square feet)
1	High	0.8	7,000	5,600
2	High	0.7	10,000	7,000
3	Medium	0.5	16,000	8,000
4	Low	0.3	7,000	2,100
5	Low	0.2	10,000	2,000
			Sum	24,000

*Plant Factor from WUCOLS

ETWU = (45.1)(0.62)[(24,700/0.71) + 0]

= 27.96 x [(34,789 + 0)] gallons per year
= 27.96 x 34,789 gallons per year
ETWU = 972,700 gallons per year
Compare ETWU with MAWA: For this example MAWA = (45.1) (0.62) [(0.7 x 50,000) + (0.3 x 0)] = 978,600 gallons per year. The ETWU (972,700 gallons per year) is less than MAWA (978,600 gallons per year). In this example, the water budget complies with the MAWA.

2.) Example ETWU calculation: total landscape area is 50,000 square feet, 2,000 square feet of which is planted with edible plants. The edible plant area is considered a Special Landscape Area (SLA). The reference evapotranspiration value is 51.1 inches per year. The plant type, plant factor, and hydrozone area are shown in the table below.

Hydrozone	Plant Water Use Type (s)	Plant Factor (PF)*	Hydrozone Area (HA) (square feet)	PF x HA (square feet)
1	High	0.8	7,000	5,600
2	High	0.7	9,000	6,300
3	Medium	0.5	15,000	7,500
4	Low	0.3	7,000	2,100
5	Low	0.2	10,000	2,000
			Sum	23,500
6	SLA	1.0	2,000	2,000

* Plant Factor from WUCOLS

ETWU = (45.1)(0.62)[(23,500/0.71) + 2,000]

=(27.96)(32,394 + 2,000)
=27.96 x 34,394 gallons per year
ETWU = 961,656 gallons per year

Compare ETWU with MAWA. For this example:
MAWA = (45.1) (0.62) [(0.7 x 50,000) + (0.3 x 2,000)]
= 27.96 x [35,000 + 600]
= 27.96 x 35,600
=995,376 gallons per year

The ETWU (961,656 gallons per year) is less than MAWA (995,376 gallons per year). For this example, the water budget complies with the MAWA.

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

15.22.090 Soil Management Report.

In order to reduce runoff and encourage healthy plant growth, the project applicant, or his/her designee shall provide a soil management report, as follows:

A. Submit soil samples to a laboratory for analysis and recommendations.
   1. Soil sampling shall be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants.
   2. The soil analysis shall include:
      a. Soil texture;
      b. Infiltration rate determined by laboratory test or soil texture infiltration rate table;
      c. PH;

d. Total soluble salts;
e. Sodium;
f. Percent organic matter; and
g. Recommendations.

B. The project applicant, or his/her designee, shall comply with one of the following:

1. If significant mass grading is not planned, the soil analysis report shall be submitted to the City of Hollister as part of the Landscape Application Package; or
2. If significant mass grading is planned, the soil analysis report shall be submitted to the City of Hollister as part of the Certificate of Completion.
3. 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.
4. The project applicant, or his/her designee, shall submit documentation verifying implementation of soil analysis report recommendations to the City of Hollister with Certificate of Completion.

15.22. 100 Landscape Design Plan

For the efficient use of water, a landscape shall be carefully designed and planned for the intended function of the project. A landscape design plan meeting the following design criteria shall be submitted as part of the Landscape Application Package.

A. Plant Material

1. Any plant may be selected for the landscape, providing the Estimated Total Water Use (ETWU) in the landscape area does not exceed the Maximum Applied Water Allowance (MAWA). To ensure the efficient use of water, the following shall be considered:

a. Protection and preservation of native species and natural vegetation;
b. Selection of water-conserving plant and turf species;
c. Selection of plants based on disease and pest resistance;
d. Selection of street trees based on applicable local tree ordinances or tree shading guidelines; and
e. Selection of plants from local and regional landscape program plant lists.

2. 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 15.22.110 Irrigation Design (A)(2)(d).
3. Plants shall 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 shall be considered:

a. 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;

b. 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]; and

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

4. 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).

5. The use of invasive and/or noxious plant species is strongly discouraged.

6. 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.

B. Water Features

1. Re-circulating water systems shall be used for water features.

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

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

4. Pool and spa covers are required.

C. Mulch and Amendments

1. A minimum two inch (2") 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.

2. Stabilizing mulching products shall be used on slopes.

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

4. Soil amendments shall be incorporated according to recommendations of the soil report and what is appropriate for the plants selected (see Section 15.22090 Soil Management Report).

D. Landscape design plan contents

The plan shall include the following information:

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

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

3. Identify Special Landscape Areas
    a. recreational areas
    b. areas permanently and solely dedicated to edible plants
    c. areas irrigated with recycled water
4. Identify type of mulch and application depth;
5. Identify soil amendments, type, and quantity;
6. Identify type and surface area of water features;
7. Identify hardscapes (pervious and non-pervious);
8. Identify location and installation details of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater. Stormwater best management practices are required in the landscape design plan and examples include, but are not limited to:
    a. Infiltration beds, swales, and basins that allow water to collect and soak into the ground;
    b. Constructed wetlands and retention ponds that retain water, handle excess flow, and filter pollutants; and
    c. Pervious or porous surfaces (e.g., permeable pavers or blocks, pervious or porous concrete, etc.) that minimize runoff.
11. Identify any applicable rain harvesting or catchment technologies (e.g., rain gardens, cisterns, etc.);
12. Contain the following statement: "I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plan"; and
13. Bear the signature of a licensed landscape architect, licensed landscape contractor, or any other person authorized to design a landscape. (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 Title16 of the California Code of Regulations, and Section 6721 of the Food and Agriculture Code.)

15.22.110 Irrigation Design Plan

A.) 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 Application Package.

1.) System
    a.) Dedicated landscape water meters are highly recommended but not required on landscape areas smaller than 5,000 square feet to facilitate water management.
    b.) Automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data shall be required for irrigation scheduling in all irrigation systems.

c.) The irrigation system shall be designed to ensure that the dynamic pressure at each emission device is within the manufacturer's pressure range for optimal performance.

1. If the static pressure is above or below the required dynamic pressure of the irrigation system, pressure-regulating devices such as inline pressure regulators, booster pumps, or other devices shall be installed to meet the required dynamic pressure of the irrigation system.
2. Static water pressure, dynamic or operating pressure, and flow reading of the water supply shall be measured at the point of connection. These pressure and flow measurements shall be conducted at the design stage. If the measurements are not available at the design stage, the measurements shall be conducted at installation.

d.) 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 shall be avoided during windy or freezing weather or during rain.

e.) 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.

f.) Backflow prevention devices shall be required to protect the water supply from contamination by the irrigation system for landscaping at commercial, industrial, public, institutional and for common areas at residential development. A project applicant shall refer to the City of Hollister Engineering Department for backflow prevention requirements.

g.) High flow sensors that detect and report high flow conditions created by system damage or malfunction are required.

h.) 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.

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

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

k.) The irrigation system shall be designed and installed to meet, at a minimum, the irrigation efficiency criteria as described in Section 15.22.080 Water Efficient Landscape Worksheet, regarding the Maximum Applied Water Allowance.

l.) The project applicant shall inquire for information from their 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.

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

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

o.) Sprinkler spacing shall be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations and minimize overspray.

p.) Swing joints or other riser-protection components are required on all risers subject to damage that are adjacent to high traffic areas.

q.) Check valves or anti-drain valves are required for all irrigation systems.

r.) Narrow or irregularly shaped areas, including turf, less than eight (8) feet in width in any direction shall be irrigated with subsurface irrigation or low volume irrigation system.

s.) Overhead irrigation shall not be permitted within 24 inches of any non-permeable surface. Allowable irrigation within the setback from non-permeable surfaces may include drip, drip line, or other low flow non-spray technology. The setback area may be planted or unplanted. The surfacing of the setback may be mulch, gravel, or other porous material. These restrictions may be modified if:

1. the landscape area is adjacent to permeable surfacing and no runoff occurs; or
2. the adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping; or
3. the irrigation designer specifies an alternative design or technology, as part of the Landscape Application Package and clearly demonstrates strict adherence to irrigation system design criteria in Section 15.22.110 Irrigation Design Plan (A)(1)(h), Prevention of overspray and runoff shall be confirmed during the irrigation audit.

t.) Slopes greater than 25% shall 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 specifies an alternative design or technology, as part of the Water Efficient Landscape Application Package, and clearly demonstrates no runoff or erosion will occur. Prevention of runoff and erosion shall be confirmed during the irrigation audit.

2.) Hydrozone

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

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

c.) Where feasible, trees shall be placed on separate valves from shrubs, groundcovers, and turf.

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

1. plant factor calculation is based on the proportions of the respective plant water uses and their plant factor; or
2. the plant factor of the higher water using plant is used for calculations.

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

f.) On the landscape design plan and irrigation design plan, hydrozone areas shall be designated by number, letter, or other designation and correlated to a Hydrozone Information Table provided by the City of Hollister. 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 provided by the City of Hollister. This table can also assist with the irrigation audit and programming the controller.

B.) The irrigation design plan shall contain:

1.) Location and size of separate water meters for landscape;

2.) Location, type and size of all components of the irrigation system, including controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators, and backflow prevention devices;

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

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

5.) Recycled water irrigation systems as specified in Section 15.22.180 Recycled Water;

6.) The following statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the irrigation design plan"; and

7.) The signature of a 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.)

15.22.120 Grading Design Plan.

A.) For the efficient use of water, grading of a project site shall be designed to minimize soil erosion, runoff, and water waste. A grading plan shall be submitted as part of the Landscape Application Package. A comprehensive grading plan prepared by a civil engineer for other local agency permits satisfies this requirement.

1.) The project applicant shall submit a landscape grading plan that indicates finished configurations and elevations of the landscape area including:

a.) Height of graded slopes;
b.) Drainage patterns;
c.) Pad elevations;
d.) Finish grade; and
e.) Storm water retention improvements, if applicable.

2.) To prevent excessive erosion and runoff, project applicants shall consider:

a.) grade so that all irrigation and normal rainfall remains within property lines and does not drain on to non-permeable hardscapes;
b.) avoid disruption of natural drainage patterns and undisturbed soil; and
c.) avoid soil compaction in landscape areas.

3.) The grading design plan shall contain the following statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the grading design plan" and will bear the signature of a licensed professional as authorized by law.

15.22.130 Certificate of Completion.

A.) The Certificate of Completion shall be prepared on a form provided by the City of Hollister and shall include the following six (6) elements:

1.) Project information sheet that contains:

a.) Date;
b.) Project name;
c.) Project applicant name, telephone, and mailing address;
d.) Project address and location; and permit number
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 Application 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;

3.) Irrigation scheduling parameters used to set the controller (see Section 15.22.140 Irrigation Scheduling);

4.) Landscape and irrigation maintenance schedule (see Section 15.22.150 Landscape and Irrigation Maintenance Schedule);
5.) Irrigation audit report (see Section 15.22.160 Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis); and
6.) Soil analysis report, if not submitted with Landscape Application Package and documentation verifying implementation of soil report recommendations (see Section 15.22.090 Soil Management Report).

B.) The project applicant shall:
1.) Submit the signed Certificate of Completion to the City of Hollister for review;
2.) Ensure that copies of the approved Certificate of Completion are submitted to the City of Hollister, the water purveyor, and property owner or his or her designee.

C.) The City of Hollister shall:
1.) Receive the signed Certificate of Completion from the project applicant;
2.) Approve or deny the Certificate of Completion. If the Certificate of Completion is denied, the City of Hollister shall provide information to the project applicant regarding reapplication, appeal, or other assistance.

15.22.140 Irrigation Scheduling.

A.) For the efficient use of water, all irrigation schedules shall be developed, managed, and evaluated to utilize the minimum amount of water required to maintain plant health. Irrigation schedules shall meet the following criteria:
1.) Irrigation scheduling shall be regulated by automatic irrigation controllers.
2.) Overhead irrigation shall be scheduled between 8:00 p.m. and 10:00 a.m. unless weather conditions prevent it. If allowable hours of irrigation differ from the City of Hollister or Sunnyslope Water District, the stricter of the two shall apply. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.
3.) For implementation of the irrigation schedule, particular attention shall be paid to irrigation run times, emission device, flow rate, and current reference evapotranspiration, so that applied water meets the Estimated Total Water Use. Total annual applied water shall be less than or equal to Maximum Applied Water Allowance (MAWA). Actual irrigation schedules shall be regulated by automatic irrigation controllers using current reference evapotranspiration data (e.g., CIMIS) or soil moisture sensor data.
4.) Parameters used to set the automatic controller shall be developed and submitted for each of the following:
a.) The plant establishment period;
b.) The established landscape; and
c.) Temporarily irrigated areas.
5.) Each irrigation schedule shall consider for each station all of the following that apply:

a.) Irrigation interval (days between irrigation);
b.) Irrigation run times (hours or minutes per irrigation event to avoid runoff);
c.) Number of cycle starts required for each irrigation event to avoid runoff;
d.) Amount of applied water scheduled to be applied on a monthly basis;
e.) Application rate setting;
f.) Root depth setting;
g.) Plant type setting;
h.) Soil type;
i.) Slope factor setting;
j.) Shade factor setting; and
k.) Irrigation uniformity or efficiency setting.

15.22.150 Landscape and Irrigation Maintenance Schedule

A.) Landscapes shall be maintained to ensure water use efficiency. A regular maintenance schedule shall be submitted with the Certificate of Completion.
B.) A regular maintenance schedule shall include, but not be limited to, routine inspection; adjustment and repair of the irrigation system and its components; aerating and detaching turf areas; replenishing mulch; fertilizing; pruning; weeding in all landscape areas, and removing and obstruction to emission devices. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.
C.) Repair of all irrigation equipment shall be done with the originally installed components or their equivalents.
D.) A project applicant is shall consider the implementation of sustainable or environmentally friendly practices for overall landscape maintenance.

15.22.160 Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis.

A.) All landscape irrigation audits shall be conducted by a certified landscape irrigation auditor.
B.) For new construction and rehabilitated landscape projects installed after January 1, 2010, as described in Section 15.22.020 Applicability:
1.) The project applicant shall submit an irrigation audit report with the Certificate of Completion to the City of Hollister 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;
2.) The City of Hollister and its designee shall administer programs that may include, but not be limited to, irrigation water use analysis, irrigation audits, and irrigation surveys for compliance with the Maximum Applied Water Allowance.

15.22.170 Irrigation Efficiency.

For the purpose of determining Maximum Applied Water Allowance, average irrigation efficiency is assumed to be 0.71. Irrigation systems shall be designed, maintained, and managed to meet or exceed an average landscape irrigation efficiency of 0.71.

15.22.180 Recycled Water.

A.) The installation of recycled water irrigation systems shall allow for the current and future use of recycled water, unless a written exemption has been granted as described in subsection B of this section.
B.) Irrigation systems and decorative water features shall use recycled water unless a written exemption has been granted by the City of Hollister or Sunnyslope Water District stating that recycled water meeting all public health codes and standards is not available and will not be available for the foreseeable future.
C.) All recycled water irrigation systems shall be designed and operated in accordance with all applicable local and State laws.
D.) Landscapes using recycled water are considered Special Landscape Areas. The ET Adjustment Factor for Special Landscape Areas shall not exceed 1.0.

15.22.190 Stormwater Management.

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 retention and infiltration is required.
B.) Project applicants shall refer to the City of Hollister or Regional Water Quality Control Board for information on any applicable stormwater ordinances and stormwater management plans.
C.) Rain gardens, cisterns, and other landscapes features and practices that increase rainwater capture and create opportunities for infiltration and/or onsite storage are required.

15.22.200 Public Education.

A.) Publications. Education is a critical component to promote the efficient use of water in landscapes. The use of appropriate principles of design, installation, management and maintenance that save water is shall be considered in the community.

1.) The City of Hollister and its designee(s) shall provide information to owners of new, single-family residential homes regarding the design, installation, management, and maintenance of water efficient landscapes.

B.) Model Homes. All model homes that are landscaped shall use signs and written information to demonstrate the principles of water efficient landscapes described in this ordinance.

1.) Signs shall be used to identify the model as an example of a water efficient landscape featuring elements such as hydrozones, irrigation equipment, and others that contribute to the overall water efficient theme.

2.) Information shall be provided about designing, installing, managing, and maintaining water efficient landscapes.

15.22. 210 Environmental Review.

The City of Hollister shall comply with the California Environmental Quality Act (CEQA), as appropriate.

15.22.220 Provisions for Existing Landscapes.

The City of Hollister may designate another agency, such as a water purveyor, to implement some or all of the requirements contained in this ordinance. Local agencies may collaborate with water purveyors to define each entity's specific responsibilities relating to this ordinance.

15.22.230 Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis.

A.) This section shall apply to all existing landscapes that were installed before January 1, 2010 which are over one acre in size.

1.) For any landscape referenced by this subsection that has a water meter, the City of Hollister and its designee 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 Maximum Applied Water Allowance for existing landscapes. The Maximum Applied Water Allowance for existing landscapes shall be calculated as: MAWA = (0.8) (ETo)(LA)(0.62).

2.) For all landscape referenced by this subsection, that does not have a meter, the City of Hollister 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.

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

15.22.240 Water Waste Prevention

A.) The City of Hollister 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. Penalties for violation of these prohibitions shall be established locally.

B.) Restrictions regarding overspray and runoff may be modified if:

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

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

15.22. 250 Effective Precipitation.

A local agency may consider Effective Precipitation (25% of annual precipitation) in tracking water use and may use the following equation to calculate Maximum Applied Water Allowance (MAWA):

$$MAWA = (ETo - Eppt)\ (0.62)\ [(0.7 \times LA) + (0.3 \times SLA)].$$