EXHIBIT A

Town of Yountville

Water Efficient Landscape Guidelines

Town of Yountville Planning & Building Department
6550 Yount Street
Yountville, CA. 94559

August 2016

Introduction

Adoption of a Water Efficient Landscape Ordinance is required by State law. The Town of Yountville is implementing guidelines that comply with the 2015 State Model Water Efficient Landscape Ordinance. These Guidelines establish a structure for planning, designing, installing, and maintaining water efficient landscapes in new construction and rehabilitated projects. They promote the values and benefits of local landscapes while recognizing the need to invest water and other resources as efficiently as possible. To establish the efficient use of water without waste, a Maximum Applied Water Allowance is set as an upper limit to reduce water use in the landscape to the lowest practical amount.

The Town of Yountville Municipal Code for which these guidelines are established read as follows:

Section 17.94 Water Efficient Landscaping:

A. Purpose. Intelligent, skillful design and water management can enable the citizens of the Town of Yountville to enjoy a well landscaped community, while at the same time conserving natural resources. The purpose of this Chapter is to reduce water waste and provide for efficient water use in new and rehabilitated landscaping by promoting the use of regionally-appropriate plants that require minimal supplemental irrigation and by establishing standards for irrigation efficiency and landscape maintenance. The goal of this chapter is to achieve water conservation, prevention of the waste of this natural resource, improved water quality, and enhancement to the environment.

B. Definitions. For the purposes of this Section, the following definitions apply:

1. "Landscape Projects" shall mean any new or rehabilitated landscape projects that require design review or a building or grading permit that fall under any of the following categories:

    a. New construction project with a landscape area equal to or greater than 500 square feet.
    b. Rehabilitated landscape project with a landscape area equal to or greater than 2,500 square feet.

    Exemptions. A Landscape Project shall not include any of the following:
    (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;
    (4) Existing plant collections, as part of botanical gardens and arboretums open to the public.

2. "Guidelines" shall mean the Water Efficient Landscape Guidelines and accompanying appendices and worksheets that shall implement the requirements for Landscape Projects as set forth in this Section. The Guidelines shall be established by resolution of the Town Council. The Guidelines shall establish an administrative structure and submittal framework for planning, design, installing, and maintaining water efficiently landscapes in new construction and in rehabilitated or remodeled development and residential homeowners.

3. “Landscaped 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).
4. “Planning Officer” shall mean any person employed or retained by the Town to enforce the Municipal Code.

C. Prior to issuance of a building permit or grading permit, each Landscape Project shall provide documentation to the satisfaction of the Planning Officer that demonstrates compliance with either:
   1. The requirements of this Section and the Guidelines.
   2. The requirements of the State of California Model Water Efficient Landscape Ordinance, California Code of Regulations Title 23, Division 2, Chapter 2.7, in a manner that meets or exceeds the design requirements of the Guidelines, as may be amended.

Prior to building permit issuance, Landscape Projects as defined in Yountville Municipal Code Chapter 17. 94, must show compliance with the Town of Yountville Water Efficient Landscape Guidelines by submitting required components of a Landscape Documentation Package. Upon installation and completion of the landscape, a signed Certificate of Completion must be submitted, accompanied by an Irrigation Audit Report and Maintenance Schedule. All documents are submitted through the Planning and Building Department, and must be approved by the Planning Officer prior to the next step in the project approval process (e.g., permit issuance, occupancy). Landscape projects subject to these guidelines shall be subject to final inspection by the Planning Officer to verify compliance with the approved plans.

A Water Efficient Landscape Review Fee will be collected as part of the Design Review application for affected projects. Applicants shall be obligated to pay this non-refundable fee, established by Town Council resolution, to cover the administrative costs associated with Landscape Documentation Package review and final site inspection.

The landscape design elements, irrigation design elements, and compliance documentation requirements of the Town of Yountville Water Efficient Landscape Guidelines are described on the following pages. All forms and worksheets are available electronically on the Town Website.

Alternative Compliance

In lieu of the full performance requirements of the Water Efficient Landscape Guidelines that follow, less complex alternative compliance options are available for:

1. Landscape Projects with an aggregate landscape area less than 2,500 square feet.
   - Conform to all prescriptive measures contained in Appendix D.

2. Landscape Projects with an aggregate landscape area less than 2,500 square feet irrigated entirely using Graywater or Capture Rainwater.

- Conform to irrigation system prescriptive measures in Appendix D Section (5).

Definitions

For the purposes of these Guidelines the following definitions apply:

Applied Water: the portion of water supplied by the irrigation system to the landscape.
Automatic Irrigation Controller: a timing device used to remotely control valves that operate an irrigation system. Automatic irrigation controllers are able to self-adjust and schedule irrigation events using either evapotranspiration (weather-based) or soil moisture data.
Backflow Prevention Device: an approved device installed to City standards which will prevent backflow or back-siphonage into the City potable water system.
Certificate of Completion: as referenced in this ordinance see Appendix C.
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 WaterSense irrigation auditor certification program and Irrigation Association's Certified Landscape Irrigation Auditor (CLIA) 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.
Compost: the safe and stable product of controlled biologic decomposition of organic materials that is beneficial to plant growth.
Conversion Factor (0.62): the number that converts acre-inches per acre per year to gallons per square foot per year.
Distribution Uniformity: means the measure of the uniformity of irrigation water over a defined area.
Drip Irrigation: 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.
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. Native habitat mitigation areas and trees may need three to five years for establishment.
Estimated Total Water Use (ETWU): the total water used for the landscape in gallons as shown in Appendix B and described in the equation ETWU = ETo x 0.62 x ETAF x Area where ETo is annual Reference Evapotranspiration (inches), 0.62 is a unit conversion factor (to gallons), ETAF is Plant Factor (PF) divided by Irrigation Efficiency (IE), and Area is in square feet.

ET Adjustment Factor (ETAF): a factor of 0.55 for residential areas and 0.45 for non-residential areas, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape. The ETAF for Special Landscape Areas shall not exceed 1.0.
Evapotranspiration Rate: 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.
Flow Sensor: an inline device installed at the supply point of the irrigation system that produces a repeatable signal proportional to flow rate. Flow sensors must be connected to an automatic irrigation controller, or flow monitor capable of receiving flow signals and operating master valves. This combination flow sensor/controller may also function as a landscape water meter or submeter.
Friable: a soil condition that is easily crumbled or loosely compacted down to a minimum depth per planting material requirements, whereby the root structure of newly planted material will be allowed to spread unimpeded.
Graywater: untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. “Graywater” includes, but is not limited to, wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers.
Hardscapes: any durable material (pervious and non-pervious).
Hydrozone: a portion of the landscaped area having plants with similar water needs and rooting depth. A hydrozone may be irrigated or non-irrigated.
Infiltration Rate: 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 and/or that spread outside cultivated areas and can damage environmental or economic resources as determined by the California Invasive Plant Council (www.cal-ipc.org).
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. The audit must be conducted in a manner consistent with the Irrigation Association's Landscape Irrigation Auditor Certification (CLIA) program or other U.S. Environmental Protection Agency “Watersense” labeled auditing program.
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 irrigation efficiency for purposes of this ordinance is 0.75 for overhead spray devices and 0.81 for drip 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.
Landscaped 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 Projects shall mean any new or rehabilitated landscape projects that require design review or a building or grading permit that fall under any of the following categories:

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b. Rehabilitated landscape project with a landscape area equal to or greater than 2,500 square feet.

Exemptions. A Landscape Project shall not include any of the following:

(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;
(4) Existing plant collections, as part of botanical gardens and arboretums open to the public.

Landscape Water Meter: an inline device installed at the irrigation supply point that measures the flow of water into the irrigation system and is connected to a totalizer to record water use.
Lateral Line: the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.
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.
Master Shut-Off Valve: is an automatic valve installed at the irrigation supply point which controls water flow into the irrigation system. When this valve is closed water will not be supplied to the irrigation system. A master valve will greatly reduce any water loss due to a leaky station valve.
Maximum Applied Water Allowance (MAWA): the upper limit of annual applied water for the established landscaped area as specified in Appendix B. It is based upon the area's Reference Evapotranspiration (ETo), the ET Adjustment Factor (ETAF), and the size of the Landscape Area (LA). 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. MAWA = (ETo) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]
Median: is an area between opposing lanes of traffic that may be unplanted or planted with trees, shrubs, perennials, and ornamental grasses.
Microclimate: the climate of a small, specific area that may contrast with the climate of the overall landscape area due to factors such as wind, sun exposure, plant density, or proximity to reflective surfaces.
Mulch: any organic material such as leaves, bark, straw, compost, or inorganic mineral materials such as rocks, gravel, or decomposed granite left loose and applied to the soil

surface for the beneficial purposes of reducing evaporation, suppressing weeds, moderating soil temperature, and preventing soil erosion.
New Construction: for the purposes of this ordinance, a new building with a landscape or other new landscape, such as a park, playground, or greenbelt without an associated building.
Non-Residential Landscape: landscapes in commercial, institutional, industrial and public settings that may have areas designated for recreation or public assembly. It also includes portions of common areas of common interest developments with designated recreational areas.
Operating Pressure: the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.
Overhead Sprinkler Irrigation Systems or **Overhead Spray Irrigation Systems**: systems that deliver water through the air (e.g., spray heads and rotors).
Overspray: the irrigation water which is delivered beyond the landscaped target area,
Parkway: the area between a sidewalk and the curb or traffic lane. It may be planted or unplanted, and with or without pedestrian egress.
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 (PF) or **Plant Water Use Factor**: is a factor, when multiplied by Reference Evapotranspiration (ETo), estimates the amount of water needed by plants. For purposes of this ordinance, the plant factor range for **very low water use plants is 0 to 0.1**, the plant factor range for **low water use plants is 0.1 to 0.3**, the plant factor range for **moderate water use plants is 0.4 to 0.6**, and the plant factor range for **high water use plants is 0.7 to 1.0**. Plant factors cited in this ordinance are derived from the publication "Water Use Classification of Landscape Species (WUCOLS)". Plant factors may also be obtained from horticultural researchers from academic institutions or professional associations as approved by the California Department of Water Resources (DWR).
Planning Officer shall mean any person employed or retained by the Town to administer and enforce the Municipal Code.

Point of Connection: the point at which an irrigation system taps into the main water supply line
Project Applicant: the individual or entity submitting a Landscape Documentation Package required under this ordinance, to request a permit, plan check, or design review from the local agency. A project applicant may be the property owner or his or her designee.
Rain Sensor or **Rain Sensing Shutoff Device**: a system component which automatically suspends an irrigation event when it rains.
Recreational Area: areas, excluding private single family residential areas, designated for active play, recreation or public assembly in parks, sports fields, picnic grounds, amphitheaters or golf course tees, fairways, roughs, surrounds and greens.
Recycled Water, **Reclaimed Water**, or **Treated Sewage Effluent Water**: treated or recycled waste water of a quality suitable for nonpotable uses such as landscape irrigation and water features. This water is not intended for human consumption.
Reference Evapotranspiration or **ETo**: a standard measurement of environmental parameters which affect the water use of plants. ETo is expressed in inches per day, month, or year, and is an estimate of the evapotranspiration of a large field of four- to seven-inch tall, cool-season grass that is well watered. Reference evapotranspiration is used as the basis of determining the Maximum Applied Water Allowances so that regional differences in climate can be accommodated. ETo is **47.7 inches per year** for purpose of this ordinance, based on the Oakville weather station historical average.

Rehabilitated Landscape: any landscaping project that requires design review or a building or grading permit, where the modified landscape area is equal to or greater than 2,500 square feet.
Residential Landscape: landscapes surrounding single or multifamily homes.
Runoff: water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape area. For example, run off may result from water that is applied at too great a rate (application rate exceeds infiltration rate) or when there is a slope.
Soil Moisture Sensing Device or **Soil Moisture Sensor**: 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, recreational areas, areas irrigated with recycled water, or water features using recycled water.
Sprinkler Head or Spray 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.
Submeter: a metering device to measure water applied to the landscape that is installed after the primary utility water meter.
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 very low or 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: means the “Water Use Classification of Landscape Species” published by the University of California Cooperative Extension and the Department of Water Resources 2014. WUCOLS is a key source for determining plant factors for purposes of this ordinance. It is available online at http://ucanr.edu/sites/WUCOLS/.

Town of Yountville Landscape Application

Prior to issuance of a building permit or improvement plans, the project applicant shall submit this application to the Town for review and approval. The landscape documentation package shall contain the information noted below; and shall be incorporated into the improvement plan and/or landscape plan set.

PROJECT NAME: _____

Address: _____ Parcel Size: _____sq ft.

Project Type (check all that apply):

☐ - New ☐ - Rehabilitated ☐ - Public ☐ - Private

☐ - Single-Family Residential ☐ - Multi-Family Residential

☐ - Non-Residential

Water Supply Source (public, recycled, well, graywater, rainwater): _____

Property Owner's Name: _____

Mailing Address: _____

Telephone #: _____ Cell #: _____

E-Mail: _____

Proposed Landscape Area _____ sq ft.

Applicant's Name (if different): _____

Applicant Mailing Address (if different): _____

Telephone #: _____ Cell#: _____ E-Mail: _____

"I agree to comply with the requirements of the Town of Yountville Water Efficient Landscape Guidelines and submit a complete Landscape Documentation Package."

_____ ____/____/____

Signature of Property Owner Date

_____

Print Property Owner Name

_____ ____/____/____

Signature of Applicant Date

_____

Print Applicant Name

To Be Attached:

- ☐ Water Efficient Landscape Worksheet - Appendix A
- ☐ Landscape Design Plan Requirements - See Appendix B
- ☐ Irrigation Design Plan Requirements - See Appendix C
- ☐ Grading Design Plan - For the efficient use of water, grading of a project site shall be designed to minimize soil erosion, runoff, and water waste. The Plan shall accurately and clearly identify finished grades, drainage patterns, pad elevations, spot elevations, and stormwater retention. The Plan shall bear the signature of a licensed professional as authorized by law. A comprehensive grading plan prepared by a civil engineer for other local permits satisfies this requirement. The contours may be shown on the Landscape Design Plan.

  Soil Management Report - In order to reduce runoff and encourage healthy plant growth, a soil management report shall be completed by the project applicant. The Report shall include soil sampling conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants. The Report shall include documentation from the applicant, or designee, verifying implementation of soil analysis report recommendations to the local agency with Certificate of Completion. The Report shall not be required if the project fulfills Landscape Design Plan Guidelines 2.a.b.c.

☐ Irrigation Scheduling- 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 include: Preparation of an Irrigation Schedule including Plant establishment irrigation schedule and parameters used to set the sensor-based automatic irrigation controller, including as applicable: plant type, root depth, soil type, slope factor, shade factor, irrigation interval (days per week), irrigation runtimes, number of start times per irrigation day, gallons per minute for each valve, precipitation rate, distribution uniformity, and monthly estimated water use.

To be submitted if desired:

☐ Alternative Compliance Option – Appendix D

To be submitted upon Completion:

☐ Landscape Certificate of Completion – Appendix E

☐ Landscape and Irrigation Maintenance Schedule -
A Landscape and Irrigation Maintenance Schedule timeline must be attached to the Certificate of Completion and shall include routine inspections, adjustment and repairs to the irrigation system, aerating and dethatching turf areas, replenishing mulch, fertilizing, pruning, and weeding.

To be submitted upon Completion:

☐ Irrigation Audit Report shall include the following:

1. Operating pressure of the irrigation system.
2. Distribution uniformity of overhead irrigation.
3. Precipitation rate of overhead irrigation.
4. Report of any overspray or broken irrigation equipment.

The Irrigation Audit Report shall be prepared by a certified landscape irrigation auditor. The Irrigation Audit Report shall not be conducted by the person who designed the landscape or installed the landscape.

APPENDIX A
Water Efficient Landscape Worksheet

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

Reference Evapotranspiration (ETo) = 47.7

Hydrozone # /Planting Description[a]	Plant Factor (PF)	Irrigation Method[b]	Irrigation Efficiency (IE)[c]	ETAF (PF/IE)	Landscape Area (sq. ft.)	ETAF x Area	Estimated Total Water Use (ETWU)[d]
Regular Landscape Areas							
				Totals	(A)	(B)	
Special Landscape Areas							
				1.0			
				1.0			
				1.0			
				Totals	(C)	(D)	
						ETWU Total	
						Maximum Allowed Water Allowance (MAWA)[e]	

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

[b] ***Irrigation Method***
Overhead Spray or Drip

[c] ***Irrigation Efficiency***
***0.75** for Spray Head*
***0.81** for Drip*

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

[e] ***MAWA (Annual Gallons Allowed)***
= (ETo) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year, LA is the total landscape area in square feet, SLA is the total Special Landscape Area in square feet, and **ETAF is 0.55 for Residential areas and 0.45 for Non-Residential areas**.

ETAF Calculations

Regular Landscape Areas

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

All Landscape Areas

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

Average ETAF for Regular Landscape Areas must be:
0.55 or below for Residential areas
0.45 or below for Non-Residential areas

MAWA and ETWU Calculation Worksheets (Excel) for Residential and Non-Residential Projects available at:

Town of Yountville
6550 Yount Street
Yountville, California 94599

Appendix B
Landscape Design Plan Requirements

For each Landscape Project, the applicant shall submit a Landscape Design Plan in accordance with the following prior to the issuance of a building permit:

1. Landscape Design Plan shall include the following:
   a. property lines, new and existing building footprints, streets, driveways, sidewalks and other hardscape features
   b. new and existing trees, shrubs, groundcovers, turf, and any other planting areas
   c. plants by botanical name and common name
   d. plant sizes and quantities
   e. each hydrozone as low, moderate, high, or mixed water use
   f. recreational areas (excluding private single-family residential)
   g. areas permanently and solely dedicated to edible plants
   h. areas irrigated with recycled water
   i. type of mulch and application depth
   j. surface area of pools, fountains, and other water features
   k. any rain harvesting or catchment technologies
   l. any graywater discharge piping, system components, and areas of distribution
   m. the signature of a licensed landscape architect, licensed landscape contractor, or any other person authorized to design a landscape

2. Soil Preparation, Mulch, and Amendments
   a. Prior to planting, compacted soil shall be transformed to a friable condition.
   b. Incorporate compost into the soil to a minimum depth of 6 inches at a minimum rate of 4 cubic yards per 1,000 square feet.
   c. A minimum 3-inch 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.

3. Plants
   a. Any plant may be selected, provided that the Estimated Total Water Use (ETWU) does not exceed the Maximum Applied Water Allowance (MAWA). For plant species information see the Water Use Classification of Landscape Species it is available online at http://ucanr.edu/sites/WUCOLS/
   b. Plants with similar water use needs shall be grouped together in distinct hydrozones and where irrigation is required the distinct hydrozones shall be irrigated with separate valves.
   c. Hydrozones that mix low and moderate water use plants, or moderate and high water use plants, are allowed. A mixed hydrozone plant factor may be calculated based on either the proportion of the respective plant factors or the plant factor of the highest water using plant.
   d. Hydrozones that mix high and low water use plants shall not be permitted.

LANDSCAPE DESIGN PLAN REQUIREMENTS
continued

e. Plants shall be selected, spaced, and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site.
f. Turf shall not be planted on slopes exceeding 25% where the toe of the slope is adjacent to an non-permeable hardscape
g. High water use plants (Plant Factor 0.7 to 1.0), including turf, are prohibited in street medians.
h. The use of invasive plants as listed by the California Invasive Plant Council (CAL-IPC) is strongly discouraged.

4. Water Features
   a. Recirculating water systems shall be used for water features.
   b. Recycled water shall be used when available onsite.
   c. The surface area of water features shall be included in the high water use hydrozone for water budget calculations.

Appendix C
Irrigation Design Plan Requirements

For each Landscape Project, the applicant shall submit an Irrigation Design Plan prior to the issuance of a building permit that meets the water budget (ETWU<MAWA) as described in the Water Efficient Landscape Worksheet and is in accordance with the following:

1. Landscape water meter shall be installed for all non-residential landscapes equal to or greater than 1,000 square feet and all residential landscapes equal to or greater than 5,000 square feet:
    a. may be a private submeter for non-residential landscapes less than 5,000 square feet and residential landscapes.
    b. must be a dedicated Town irrigation meter for non-residential landscapes equal to or greater than 5,000 square feet.
2. High-flow sensors that can detect high flow conditions and have the capabilities to shut off the system are required for all non-residential landscapes and residential landscapes equal to or greater than 5,000 square feet.
3. Isolation valves shall be installed at the point of connection and before each valve or valve manifold.
4. Automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data utilizing non-volatile memory shall be required ("Smart Controllers").
5. Rain sensors, either integral or auxiliary, shall be installed for each irrigation controller.
6. Pressure regulation and/or booster pumps shall be installed so that all components of the irrigation system operate at the manufacturer's recommended optimal pressure.
7. Irrigation system shall be designed to prevent runoff or overspray onto non-targeted areas.
8. The design of the irrigation system shall conform to the hydrozones on the landscape design plan.
9. All irrigation emission devices must meet the requirements set in the American National Standards Institute (ANSI) standard, American Society of Agricultural and Biological Engineers'/International Code Council's (ASABE/ICC) 802-2014 "Landscape Irrigation Sprinkler and Emitter Standard." All sprinkler heads installed in the landscape must document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.
10. Areas less than 10 feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no runoff or overspray.
11. Overhead irrigation shall not be permitted within 24 inches of a continuous non-permeable surface unless constructed to drain entirely to landscaping.
12. Slopes greater than 25% shall not be irrigated with an irrigation system with an application rate exceeding 0.75 inches per hour.
13. Where feasible, trees shall be placed on separate valves from shrubs, groundcovers, and turf to facilitate appropriate irrigation of trees.
14. In mulched planting areas, the use of low volume irrigation is required to maximize water infiltration into the root zone.

IRRIGATION DESIGN PLAN REQUIREMENTS
continued

15. Sprinkler heads, rotors, and other emission devices on a valve shall have matched precipitation rates, unless otherwise directed by the manufacturer's recommendations.
16. Head to head coverage is required, unless otherwise directed by the manufacturer's recommendations to achieve the highest possible distribution uniformity.
17. Swing joints or other riser protection components are required on all risers.
18. Check valves or anti-drain valves shall be installed to prevent low-head drainage.

The **Irrigation Design Plan** shall be drawn at the same scale as the planting plan that accurately and clearly identifies and depicts:

1. location and size of separate landscape water meters.
2. irrigation system components, e.g. controllers, pipes, valves, sprinklers and other application devices, rain shut-off devices, check valves, pressure regulating devices, backflow prevention devices.
3. hydrozone areas irrigated by each valve.
4. static water pressure at the point of connection.
5. flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (psi) for each station.
6. recycled water irrigation systems.
7. the signature of a licensed landscape architect, certified irrigation designer, licensed landscape contractor, or any other person authorized to design an irrigation system.

APPENDIX D
ALTERNATIVE COMPLIANCE OPTION

In lieu of the full performance requirements of the Water Efficient Landscape Guidelines, this alternative option is available for new development projects with an aggregate landscape area less than 2,500 square feet. Compliance with the following items must be documented on a landscape plan in order to use the alternative compliance option. *Projects irrigated entirely with graywater or captured rainwater are subject to Irrigation section (5) only.*

(1) Landscape Documentation Package which includes:

- date, project applicant, project address (if available, parcel and/or lot number(s))
- total landscape area (square feet) including breakdown of turf and plant material
- project type (e.g., public, private, single-family residential)
- water supply type (e.g., Town, recycled, well, graywater, rainwater)
- contact information for the project applicant and property owner
- applicant signature and date with statement, "I agree to comply with the requirements of the alternative compliance option to the Water Efficient Landscape Guidelines".

(2) Incorporate compost at a rate of at least 4 cubic yards per 1,000 square feet to a depth of 6 inches into landscape area (unless contra-indicated by a soil test).

(3) Plant material shall comply with all of the following:

- **Residential areas** - Climate adapted plants that require occasional, little, or no summer water (average WUCOLS plant factor 0.3) for **75%** of the plant area excluding edibles and areas using recycled water.
- **Non-Residential areas** - Climate adapted plants that require occasional, little, or no summer water (average WUCOLS plant factor 0.3) for **100%** of the plant area excluding edibles and areas using recycled water.
- Minimum 3-inch 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.

(4) Turf shall comply with all of the following:

- **Residentia**l **areas** - Turf shall not exceed **25%** of the landscape area.
- **Non-Residential areas** - There shall be **no turf**.
- Turf shall not be planted on slopes exceeding 25% (1-foot vertical elevation change for every 4 feet of horizontal length).
- Turf is prohibited in parkways less than 10 feet wide, unless the parkway is adjacent to a parking strip and used to enter and exit vehicles. Any turf in parkways must be irrigated by sub-surface irrigation or by other technology that creates no overspray or runoff.

APPENDIX D
ALTERNATIVE COMPLIANCE OPTION
continued

(5) Irrigation systems shall comply with the following:

- Automatic irrigation controllers are required and must use evapotranspiration or soil moisture sensor data and utilize a rain sensor ("Smart Controllers").
- Irrigation controllers shall be of a type which does not lose programming data in the event the primary power source is interrupted.
- Pressure regulators shall be installed on the irrigation system to ensure the dynamic pressure of the system is within the manufacturers recommended pressure range.
- Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be installed as close as possible to the point of connection of the water supply.
- All irrigation emission devices must meet the requirements set in the ANSI standard, ASABE/ICC 802-2014. "Landscape Irrigation Sprinkler and Emitter Standard." All sprinkler heads installed in the landscape must document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.
- Areas less than ten 10 feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no runoff or overspray.

(6) Non-Residential projects with landscape area of 1,000 square feet or more shall install a private submeter to measure landscape water use.

At the time of final inspection, the permit applicant must provide the owner of the property with a Certificate of Completion/Certificate of Installation (Appendix E), Irrigation Schedule and Landscape and Irrigation Maintenance Schedule.

APPENDIX E
CERTIFICATE OF COMPLETION

Upon installation and completion of the landscape, applicant shall submit the Certificate of Completion. A final Site Inspection shall be performed by Town of Yountville Planning and Building Department staff to verify compliance with these guidelines. Certificate of Occupancy shall not be issued until the landscape inspection is approved.

Filled out by the applicant and landscape architect or contractor/installer upon completion of the landscape project.

Part 1. Project Information Sheet

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

Property Owner or his/her representative:

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

APPENDIX C
CERTIFICATE OF COMPLETION
continued

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

Property Owner Signature Date

Part 2. Certification of Installation (Landscape Architect or Contractor/Installer)

Landscape Architect Name	Telephone No. Fax No.	
Title	Email Address	
License No. or Certification No.		
Company	Street Address	
City	State	Zip Code

or

Landscape Contractor/Installer Name	Telephone No. Fax No.	
Title	Email Address	
License No. or Certification No.		
Company	Street Address	
City	State	Zip Code

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

Landscape Architect or Contractor/Installer Signature Date