

PLANNING AND LAND USE

18 Attachment 3

**Appendix C**

Water-Efficient Landscaping Ordinance

Chapter 18.105

**Certificate of Compliance: Landscape Design Sheet**

[Note: the Certificate of Compliance: Landscape Design Sheet used by the zoning administrator shall be in substantially the following form.]

**Project Name:** \_\_\_\_\_ **Project Address/ Parcel No.:** \_\_\_\_\_

**Applicant Name:** \_\_\_\_\_ **Applicant Address:** \_\_\_\_\_

Landscape and Irrigation Plans Includes the Following:

- ☐ Identify each hydrozone by number, letter or other method.
- ☐ 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.
- ☐ Identify recreational areas, areas permanently and solely dedicated to edible plants, and areas irrigated with recycle water.
- ☐ Identify special landscape areas.
- ☐ Identify plants by their common and botanical names.
- ☐ Identify type of mulch and application depth.
- ☐ Identify soil amendments, type and quantity.
- ☐ Identify type and surface area of water features.
- ☐ Show the location and size of the landscape irrigation water meter.
- ☐ Show the location, type and size of all components of the irrigation system, including, but not limited to, controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators, and backflow prevention devices.
- ☐ Identify hardscapes (pervious and non-pervious)
- ☐ Identify location, installation details, and 24-hour retention or infiltration capacity of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater.
- ☐ Identify any applicable graywater discharge piping, system components and area(s) of distribution.
- ☐ Identify the static water pressure at the point of connection to the public water supply.
- ☐ Identify the flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (pressure per square inch) for each station.

Project Area Measurements (irrigated)

Total turf area: \_\_\_\_\_ square feet

Total non-turf landscape area: \_\_\_\_\_ square feet

Total water feature area: \_\_\_\_\_ square feet

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### Landscape Design Requirements:

- The plan shall protect and preserve native species and natural vegetation.
- Plants selected shall be appropriate to the area's climate suitability and the site's soil conditions.
- Select water-conserving plants, trees and turf species, especially local native plants.
- Select plants from applicable local Fuel Modification Plan Guidelines (particularly to avoid fire-prone plant materials and highly flammable mulches).
- The proposed landscape shall be designed so that distinct hydrozones are irrigated separately by one or more irrigation valves. Refer to the WUCOLS report for plant water needs. (See definitions at PHMC 18.105.020, water efficient landscape.)
- Plants shall be spaced appropriately based on their expected mature spread.
- If the geometry of the planting area does not conform to the spray pattern of the sprinkler, resulting in overspray onto the adjacent pavement, then overhead irrigation shall not be used.
- Plants shall be spaced so that at mature size they do not block sprinklers.
- Turf shall not be planted on slopes steeper than 25%.
- Turf shall not be planted in any medians or in areas narrower than 10'0" unless an alternative irrigation method, that does not incorporate overhead irrigation, is provided that does not result in overspray of adjacent surfaces or allow excessive evaporation prior to plant material utilization.
- Plants selected shall emphasize water and energy efficiency; color, form and pattern; solar access for solar heat gain of buildings in winter and to allow photovoltaic (PV) facilities and plant shading for buildings in summer; reduction of the heat island effect, particularly in parking lots and on roadways; soil retention; and fire resistance. The overall landscape plan must be integrated into all elements of the project, including but not limited to buildings, structures, parking lots and streets, so as to achieve a desirable microclimate and to minimize energy demands.
- Use the Sunset Western Climate Zone system, recognize the horticultural attributes of plants to minimize damage to property or infrastructure, allow for adequate soil volume for healthy root growth.
- High water use plants, characterized by a plant factor of 0.7 to 1.0, are prohibited in street medians.
- At least 90% of the plants selected for planting in non-turf areas shall be drought resistant and require minimal water once established.
- Plants selected shall be spaced so that, at maturity, they do not interfere with visibility of vehicular, bicycle or pedestrian traffic; do not conflict with overhead utility lines, overhead lights or walkway lights; and do not block or interfere with pedestrian or bicycle right-of-way.
- Planting areas shall be a minimum of three feet wide, excluding curbs or other hardscape, except for turf areas (turf shall not be planted in any medians or in areas narrower than 10'0" unless an alternative irrigation method, that does not incorporate overhead irrigation, is provided that does not result in overspray of adjacent surfaces or allow excessive evaporation prior to plant material utilization) and planter fixtures.
- When shrub groupings are proposed without plant groundcover, the shrubs shall be spaced so that at maturity, they cover at least 90 percent of the landscaped area in which they are placed.
- Deciduous trees proposed shall be planted 20' to 40' apart on the south and west sides of buildings to maximize energy efficiency.

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- A minimum of 30% of all hardscape areas (including parking lots) shall be naturally shaded in the summer when plants are at maturity. Shading of 50% of the hardscape areas is preferred if feasible.
- All water features shall have re-circulating water systems.
- Water fountain(s) shall be designed so that no wind drift or overspray occurs.
- Recycled water shall be used as the source for decorative water features, where available.
- Swimming pools are not considered water features pursuant to this ordinance and are not subject to the requirements of this section.
- Comply with Storm Water Control Plan requirements (C.3), if applicable.
- Improve or maintain the infiltration rate of landscape soils typical of their soil texture and minimize soil erosion.
- Avoid drainage onto non-permeable hardscapes within the property lines and prevent runoff of all irrigation and natural rainfall outside property lines.
- The use of crushed rock or gravel to serve as landscaping for large area coverage shall be avoided, except for walkways.
- The use of invasive plant species, such as those listed by the California Invasive Plant Council, is strongly discouraged.

### Soil preparation, mulch and amendments (Landscape):

- Only specify soil amendments if appropriate for the selected plants.
- Specify a minimum three-inch layer of mulch which shall be applied on all exposed soil surfaces of planting areas unless there is a horticultural reason not to use mulch in a portion of the planting area. Mulch, such as shredded bark, shall be specified in bioretention areas so that they will stay in place during rain events.
- Soil sampling shall be submitted to a laboratory for analysis and recommendations and in projects with multiple landscape installations (i.e. residential subdivisions) a soil sampling rate of 1 in 7 lots or approximately 15% will satisfy this requirement, and is required to include:
  - a. Soil texture;
  - b. Infiltration rate determined by the laboratory test or soil texture infiltration rate table;
  - c. pH;
  - d. Total soluble salts;
  - e. Sodium;
  - f. Percent organic matter; and
  - g. Recommendations
- Prior to the planting of any materials, compacted soils shall be transformed to a friable condition. On engineered slopes, only amended planting holes need meet this requirement.
- Soil amendments shall be incorporated according to recommendations of soil report and what is appropriate for the plants selected.
- For landscape installations, compost at a rate of a minimum of four cubic yards per 1,000 square feet of permeable area shall be incorporated to a depth of six inches into the soil. Soils with greater than 6% organic matter in the top 6 inches of soil are exempt from adding compost and tilling.
- Specify a minimum three-inch layer of mulch which shall be applied on all exposed soil surfaces of planting areas unless there is a horticultural reason not to use mulch in a portion of the planting area. To provide habitat for beneficial insects and other wildlife, up to 5% of the

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landscape area may be left without mulch. Designated insect habitat must be included in the landscape design plan as such.

- Mulch, such as shredded bark, shall be specified in bioretention and on slope areas so that they will stay in place during rain events and meet current engineering standards.
- Organic mulch materials made from recycled or post-consumer shall take precedence over inorganic materials or virgin forest products unless the recycled post-consumer organic products are not locally available. Organic mulches are not required where prohibited by local Fuel Modification Plan Guidelines or other applicable local ordinances.

### Stormwater Management and Rainwater Retention

- Comply with storm water control plan requirements (C.3), if applicable.
- Improve or maintain the infiltration rate of landscape soils typical of their soil texture and minimize soil erosion.
- Avoid drainage onto non-permeable hardscapes within the property lines and prevent runoff of all irrigation and natural rainfall outside property lines.
- All planted landscape areas are required to have friable soil to maximize water retention and infiltration.
- It is strongly recommended that landscape areas be designed for capture and infiltration capacity that is sufficient to prevent runoff from impervious surfaces (i.e. roof and paved areas) from either: the one inch, 24-hour rain event or (2) the 85th percentile, 24-hour rain event, and/or additional capacity as required by any applicable local, regional, state or federal regulation.
- It is recommended that storm water projects incorporate any of the following elements to improve on-site storm water and dry weather runoff capture and use:
  - i. Grade impervious surfaces, such as driveways, during construction to drain to vegetated areas.
  - ii. Minimize the area of impervious surfaces such as paved areas, roof and concrete driveways.
  - iii. Incorporate pervious or porous surfaces (e.g., gravel, permeable pavers or blocks, pervious or porous concrete) that minimize runoff.
  - iv. Direct runoff from paved surfaces and roof areas into planting beds or landscaped areas to maximize site water capture and reuse.
  - v. Incorporate rain gardens, cisterns, and other rain harvesting or catchment systems.
  - vi. Incorporate infiltration beds, swales, basins and drywells to capture storm water and dry weather runoff and increase percolation into the soil.
  - vii. Consider constructed wetlands and ponds that retain water, equalize excess flow, and filter pollutants.

### Landscape Irrigation Requirements:

- Smart irrigation controller(s) using one of the below methods shall be required on all irrigation systems:
  - i. Daily evapotranspiration data utilizing non-volatile memory.
  - ii. Daily soil moisture sensor data utilizing non-volatile memory.
- A landscape water meter, defined as either a dedicated water service meter or private submeter, shall be installed for all non-residential irrigated landscapes of 1,000 square feet but not more than 5,000 square feet or greater.

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- The installation of recycled water irrigation systems shall allow for the current and future use of recycled water. Recycled water shall be used for landscape irrigation if it is available at the project site.
- Specify technology and practices to prevent runoff, low head drainage, overspray, or other water waste.
- Overhead irrigation shall not be permitted within 12" of any impervious surface (walkways, driveways, etc.).
- Specify sprinkler heads and other emission devices that have matched precipitation rates within each irrigation zone. No irrigation zone shall specify a precipitation rate greater than 1.2 inches per hour. On slopes steeper than 25%, the specified application rate shall not exceed 0.75 inches per hour.
- Specify irrigation controls so the dynamic water pressure at sprinkler head or other emission device is within manufacturer's recommended optimal operating range. If the water pressure is below or exceeds the recommended pressure of the specified irrigation device, the installation of a pressure regulating device is required.
- Flow sensors that detect high flow conditions created by system damage or malfunction are required for all non-residential landscapes and residential landscape of 5,000 square feet or larger.
- No overhead irrigation shall be specified in planting areas less than 10'0" wide in any dimension.
- Sensors, either integral or auxiliary, that suspend or alter irrigation operation during unfavorable weather conditions shall be required on all irrigation systems, as appropriate for local climatic conditions. Irrigation should be avoided during windy or freezing weather or during rain.
- Specify a manual shut-off valve for each point of connection and specify that each shut-off valve be identified on the controller map.
- Master shut-off valves are required on all projects except landscapes that make use of technologies that allow for the individual control of sprinklers that are individually pressurized in a system equipped with low pressure shut down features.
- Check valves or anti-drain valves are required on all sprinkler heads where low point drainage could occur.
- Prepare a controller map and programming table and specify that this be stored in the controller cabinet. The controller map shall visually differentiate each controller zone. For each irrigation valve, the controller programming table shall list the plant water requirement (high, medium, low, or very low), the sun exposure, irrigation emission device type, precipitation rate, station flow rate, optimal pressure, soil type, infiltration rate, square foot area, and degree of slope.
- Each irrigation valve shall control irrigation to only one distinct hydrozone. A hydrozone is an area with similar sun exposure, irrigation precipitation rate, soil conditions, slope, and plant material with similar water needs. Refer to the WUCOLS report for plant water needs.
- Trees shall be placed on separate valves from shrubs, groundcovers, and turf to facilitate the appropriate irrigation of trees. The mature size and extent of the root zone shall be considered when designing irrigation for the tree.
- Specify a separate irrigation valve and hydrozone for the top of a slope and the bottom of a slope.
- 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 Councils (ASABE/ICC) 802-2014 "Landscape Irrigation

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Sprinkler and Emitter Standard,” All sprinkler heads installed in the landscape must document a distribution uniformity low quarter 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.

**I/we certify that the landscape plans for the above-listed project comply with the Water-Efficient Landscape Standards and Landscape Plan Requirements of the City of Pleasant Hill Water-Efficient Landscape Ordinance.**

|                              |                                          |                                          |
|------------------------------|------------------------------------------|------------------------------------------|
| <hr/> <b>Designer's Name</b> | <hr/> <b>Company Name</b>                | <hr/> <b>Date</b>                        |
| <hr/> <b>Address</b>         | <hr/> <b>Telephone</b>                   | <div><b>Professional<br/>Stamp</b></div> |
| <hr/> <b>Email</b>           | <hr/> <b>Professional License Number</b> |                                          |

(Ord. 900 § 1, 2016; Ord. 979, 12/1/2025)