

LANDSCAPE DOCUMENTATION PACKAGE (LDP) SUBMITTAL GUIDELINES

Landscape Design Plan

Title/Information Block

- Preparer name and statement of compliance
- Project scale and north arrow
- Type and amount of mulch to be applied
- Project description (total landscape area within hydrozones, total irrigated landscape area, landscape types (e.g., square footage of turf, (250% or 1500 sq. ft. max.), edible plants, hardscape, etc) and irrigation water supply type (e.g., public potable water, well, non-potable, etc.)
- Legend of plant names, container sizes, quantities, proposed seed mixes
- Recommendations for soil amendments from Soils Report, or specification for compliance with recommendations after completion of finish grading, if applicable

Statement of Compliance

I have complied with the criteria of Malibu Municipal Code Chapter 17.53 and applied them for the efficient use of water in the landscape (*or irrigation, as applicable*) design plan.

Preparer Name: _____

Preparer Signature: _____

Professional License/designation: _____

General Requirements

- Plans must be drawn to scale
- Identify natural features, e.g., environmentally sensitive habitat area (ESHA) and ESHA buffer, protected trees, drainage features, steep slopes, etc.
- Identify existing landscape to be retained and removed.
- Identify storm water best management practices (BMPs) to be implemented, as applicable
- Indicate proposed plant spacing, location and sizes, and the amount and type of any seed mixes to be used
- Identify pervious and impervious hardscape areas and the surface area and type of any proposed water features.
- Slopes - no turf is permitted on slopes steeper than 20% or 5 to 1.
- Turf 25% or 1500 sq. ft., whichever is less., if a request for additional turf area will be made to the Director, designate the proposed additional area and species. The landscape area of projects proposing commercial or industrial uses shall be designed without the use of turf and with one hundred (100) percent water wise plants.

Hydrozones

- All proposed new and altered existing landscape area must be included in hydrozones based on water use needs.
- Plants in a hydrozone should have similar water, sun, soil and shade requirements.
- Low and moderate water use plants, or moderate and high water use plants may be grouped together; however, low and high water use plants may not be planted in the same hydrozone.
- Label each hydrozone by letter, number or other designation.
- Categorize each hydrozone as low, moderate or high water use. The category assigned must reflect the water demand of the majority of plants/materials that will be installed within that hydrozone. Refer to the Water Budget Calculations section and discussion of WUCOLS below for more information on determining water use categories and plant factors. Note that the ordinance specifies how certain types of landscape areas are to be designated for purposes of water budget calculations, as summarized in the Hydrozone Category/Plant Factor box above.
- Identify Special Landscape Areas, i.e., passive and active recreational areas (not applicable to single-family residential), edible plant areas, areas irrigated with non-potable water, and any areas approved for additional turf).
- Planting areas less than 8 feet in width should be designed so they can be irrigated without residual overspray and runoff.

<i>Hydrozone Category</i>	<i>PF – Plant Factor</i>
High Water Use	0.7 to 1.0
Moderate Water Use	0.4 to 0.6
Low Water Use	0.0 to 0.3
Special Landscape Area	1.0

-Temporarily irrigated and non-irrigated areas and areas with non-plant materials (e.g., gravel, hardscape, walls, etc.) are considered Low Water Use.

-Surface area of water features is considered High Water Use.

-Artificial turf can be considered Low-Water Use if it will require less water than 0.3 x ETo.

-Special Landscape Areas include edible plant areas, recreational and approved additional turf areas, and areas irrigated with non-potable water.

For single-family residential uses

- List max. allowed turf square footage and proposed square footage, 25% or 1500 sq. ft., whichever is less, of total lot area.
- Identify 50 foot boundary from primary residence (and limit of irrigated fuel modification zone if different).
- List maximum allowed non-water wise plant square footage and proposed square footage.

For commercial and industrial uses

- Identify any proposed trees (non-native trees cannot be located along public street frontage).

For multi-family and institutional uses

- List maximum allowed turf square footage and proposed square footage, 25% or 1500 sq. ft., whichever is less, of the total lot area.

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Water Budget Calculations Worksheet

- Complete water budget calculation worksheet, including hydrozone information table, Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use (ETWU) calculations; **or**
- Use the online water budget spreadsheet available at the Department of Water Resources (DWR) website to make calculations (described below), and provide a printout with the LDP submittal.
- Refer to Example Water Budget Calculations Worksheets, Example Online DWR Printouts and Example Hydrozone Layout for guidance on completing forms manually or online.
- DWR spreadsheet: <http://www.water.ca.gov/wateruseefficiency/docs/WaterBudget.xls>
 - Click on the MAWA and ETWU tabs at the bottom of the screen to access individual spreadsheets and calculators.
 - On the MAWA spreadsheet, click on "Santa Monica" in the city dropdown list (the ordinance specifies Malibu will use the same reference evapotranspiration as Santa Monica, the nearest reference city).
- WUCOLS - Regardless of whether water budget calculations are completed manually or using the online spreadsheets, a numerical plant factor that reflects the water needs of the majority of the plants (and other non-plant materials, as applicable) must be assigned to each hydrozone. Plant water use categories are determined by referring to the Water Use Classification of Species (WUCOLS) evaluation list found within the Guide to Estimating Irrigation Water Needs of Landscape Plantings in California, published by the California Department of Water Resources. WUCOLS is Part 2 (beginning at page 45) of the document, and a copy is available at the public counter or can be found online at <http://www.water.ca.gov/wateruseefficiency/docs/wucols00.pdf>.
- The WUCOLS species evaluation list begins on page 63, with plants listed in order of the botanical names. A common name index can be found on page 101. A guide to WUCOLS and the species evaluation list begins on page 51.
- Look up the plant in the species evaluation list, and then find the water use category for the plant in column 3 (South Coastal Region, which includes Malibu).
- A numerical plant factor should be assigned to each hydrozone which reflects the water use needs of the majority of the plants (and other non-plant materials, as applicable).
- All pools, spas, and other water features shall be listed as a high water use zone with a Plant Factor of 1.0.

Soils Test and Report

- If no onsite grading will occur, submit a soils test and report including recommendations for fertilizers, amendments and horticultural maintenance practices, along with a letter stating no onsite grading will occur. See Ordinance (M.M.C. Section 9.22.090(A)(9)) and Ordinance Resources for more details and a list of soil testing labs in this region.
- If onsite grading will be conducted as part of the project, soil testing shall be conducted after completion of finish grading and the project grading plan shall be part of the LDP submittal. In that case, the Soils Test Report shall be submitted with the Certificate of Completion.

Irrigation Design Plan – to be submitted as part of Project Plan Check

Title/Information Block

- Preparer name and statement of compliance (see box page 1)
- Project scale and north arrow
- Project description (total landscape area within hydrozones, total irrigated landscape area, landscape types (e.g., square footage of turf, edible plants, hardscape, etc.) and irrigation water supply type (e.g., public potable water, well, non-potable))

General Requirements

- The irrigation design plan shall be a separate document from, but use the same format as, the landscape design plan, and shall conform to the hydrozones of the landscape design plan.
- The plan shall depict the following:
 - Hydrozones and valves labeled by number, letter or other method as used in hydrozone information table of water budget calculation worksheet. (This labeling can also assist with programming of controller and inspections of system.)
 - Size and type of water meter and any separate water meters for landscape
 - Location, size and type of all irrigation system components, including controllers, main and lateral lines, valves, irrigation heads, moisture sensing devices, rain switches, quick couplers, pressure regulators and backflow prevention devices, as applicable
 - Electrical service for the irrigation controllers, including battery operated valves or solar powered controllers
 - Static water pressure at the point of connection to the public water supply
 - The flow rate in gallons per minute, application rate in inches per hour, and design operating pressure in pressure per square inch for each station
 - Any non-potable water irrigation systems, as applicable
 - All planting areas must be designed to result in no overspray or runoff