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LANDSCAPE REVIEW PERMIT

What is a Landscape Review Permit?

A Landscape Review Permit applies to projects that require a building permit, plan check, or design review approval, and include at least 500 square feet (sf) of new landscape area or at least 2,500 sf of rehabilitated landscape area. This Permit ensures the project complies with the State Water Efficient Landscape Ordinance (WELO), adopted into the Vallejo Municipal Code (VMC), Chapter 16.71.

What is the approval process?

1. Submit a Planning Application, Application Fee, and required forms to the Planning Division for review and approval.

Application Fee Table				
Plans prepared by a CAPlans prepared by aLicensed ProfessionalNon-CA LicensedProfessionalProfessional				
Site/Planned Development Permit Required	No Fee	Planning Review Fee		
Site/Planned Development Permit Not Required	Noticing Fee	Planning Review and Noticing Fees		

Required Forms				
New Construction - Total Area	Required Form(s)			
501 - 2,499 sf	 Project Information Table Landscape Design Plan Irrigation Design Plan Certificate of Completion and Installation Prescriptive Compliance Checklist 			
≥ 2,500 sf	 Project Information Table Water Efficient Landscape Worksheet Landscape Design Plan adhering to Attachment 3 Irrigation Design Plan adhering to Attachment 4 Certificate of Completion and Installation 			
Refurbished Landscaping – Total Area	Required Form(s)			
≥ 2,500 sf	 Project Information Table Water Efficient Landscape Worksheet Landscape Design Plan adhering to Attachment 3 Irrigation Design Plan adhering to Attachment 4 Certificate of Completion and Installation 			

- 2. 10 days after the application is deemed "complete," the Planning Division will issue a 10-day Public Notice to property owners within 200 feet of the property, every identified neighborhood group within fie hundred feet of the property, and the Planning Commission.
- 3. 30 days after the public notice period closes, the Planning Division will make a decision on the application and issue any conditions of approval.
- 4. After the project is approved, the applicant must record the date of the permit on the Certificate of Completion, and submit a copy of the approved Landscape Documentation Package or Prescriptive Compliance Checklist to the property owner and to the Planning Division.
- 5. The applicant must submit a landscape irrigation audit report to the Planning Division, completed by a certified landscape irrigation auditor.

Where can I find more information about the WELO online?

- Plant Water Use Factor WUCOLS plants database: <u>http://ucanr.edu/WUCOLS</u>
- Native, Preferred and Invasive Plant Species "Don't Plant a Pest" Brochure: <u>http://cal-ipc.org/landscaping/dpp/</u>
- WELO Overview California Department of Water Resources: <u>https://water.ca.gov/Programs/Water-Use-And-</u> <u>Efficiency/Urban-Water-Use-Efficiency/Model-</u> <u>Water-Efficient-Landscape-Ordinance</u>
- Soil Amendments Soil labs: <u>http://cesonoma.ucanr.edu/files/27431.pdf</u>
- Soil Testing Locations Compost and Mulch Marketplace: <u>www.lawntogarden.org</u>



WATER EFFICIENT LANDSCAPE ORDINANCE (WELO) FLOWCHART





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Please completely fill out this checklist. If an item is not applicable, write N/A next to the box.

PROJECT INFORMATION			
Total Landscape Area (square feet):	Water Supply Type: Potable Recycled Well Name of Water Utility Provider:		
Land Use: Single-family residential Other (multifamily residential, commercial, mixed- use, industrial, etc.)	My project requires a Landscape Documentation Package: (Submit 1 copy each) Water Efficient Landscape Worksheet Landscape Design Plan Landscape Grading Design Plan (or Civil Grading Plan associated with project) Irrigation Design Plan Soil Management Report Certificate of Completion My project qualifies for Prescriptive Compliance: (Submit 1 copy) Prescriptive Compliance Worksheet		

"The information provided herein is accurate and I agree to comply with the requirements of the Water Efficient Landscape Ordinance and submit a complete Landscape Documentation Package or comply with the requirements of the Prescriptive Compliance Option."

Signature

Date



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Attachment 1 - Landscape Documentation Package

Water Efficient Landscape Worksheet. Complete the sample Worksheet included in this packet as Attachment 2. Use the following standards in preparing the Worksheet:

- The Estimated Total Water Use (ETWU) must be a number less than the Maximum Applied Water Allowance (MAWA).
- Use an annual ETo value of 40.3 to calculate the ETWU and MAWA.¹
- Water budget calculations must adhere to the following requirements:
 - The plant factor must either be from WUCOLS, horticultural researchers at an academic institution, or professional association as approved by the California Department of Water Resources (DWR). The plant water use factor range is:
 - Very low 0 to 0.10
 - Low 0.10 to 0.30 .
 - . Moderate - 0.40 to 0.60
 - High 0.70 to 1.0
 - Water features² must be included in the high water use hydrozone.
 - Temporarily irrigated areas must be included in the low water use hydrozone.
 - Special landscape areas³ must be identified and their water use calculated as shown in Attachment 2.
 - The ET adjustment factor (ETAF) for new and existing (non-rehabilitated) special landscape areas cannot exceed 1.0.
- **Landscape Design Plan.** See Attachment 3 for design criteria. The landscape design plan, must be completed by a licensed landscape architect or licensed landscape contractor, and include the following information:

Delineate and label each hydrozone, preferably by color, or by number or letter.

- Identify each hydrozone as very low, low, moderate, high, or mixed water use. Temporarily irrigated areas of the landscape must be included in the low water use hydrozone for the water budget calculation.
- □ Identify recreational areas⁴.
- □ Identify areas permanently and solely dedicated to edible plants.
- □ Identify areas irrigated with recycled water.
- Identify type of mulch and application depth.

¹ California Department of Water Resources, Model Water Efficient Landscape Ordinance, Contra Costa County, Benicia https://water.ca.gov/LegacyFiles/wateruseefficiency/docs/MWELO09-10-09.pdf.

² 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).

³ 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. ⁴ Areas dedicated to active play such as parks, sports fields, and golf courses where turf provides a playing surface.

□ Identify soil amendments, type	e, and quantity.
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- □ Identify type and surface area of water features.
- □ Identify hardscapes (pervious and non-pervious).

□ Identify location, and installation details, and twenty-four hour retention or infiltration capacity of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater. Stormwater best management practices are encouraged in the landscape design plan and are provided in <u>VMC Section 16.71.056</u>; the City uses the <u>Contra Costa County Stormwater C.3 Guidebook</u>, 7th Edition for technical requirements.

□ Identify any applicable rain harvesting or catchment technologies and their twenty-four hour retention or infiltration capacity.

☐ Identify any applicable graywater discharge piping, system components and area(s) of distribution.

□ Contain the following statement, signed by the licensed landscape architect or landscape contractor: "I have complied with the criteria of the Ordinance and applied them for the efficient use of water in the Landscape Design Plan."

Irrigation Design Plan. See Attachment 4 for design criteria. The Irrigation Design Plan must be prepared by a licensed landscape architect, certified irrigation designer, or licensed landscape contractor, and include the following information:

□ Location and size of separate water meters for the landscape area, if applicable⁵.

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

Static water pressure at the point of connection to the public water supply

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

Recycled water irrigation systems as specified in <u>VMC Section 16.71.054</u>

□ Contain the following statement, signed by the licensed landscape architect, certified irrigation designer, or licensed landscape contractor: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the Irrigation Design Plan."

Landscape Grading Design Plan. A comprehensive grading plan prepared by a Civil Engineer may satisfy this requirement. The Landscape Grading Design Plan must be prepared by a licensed professional and include the following information:

□ Finished configurations and elevations of the landscape area including:

- □ Height of graded slopes
- Drainage patterns
- Pad elevations
- □ Finish grade
- □ Stormwater retention improvements, if applicable.

⁵ Dedicated landscape water meters are highly recommended on landscape areas smaller than 5,000 square feet to facilitate water management.

To prevent excessive erosion and runoff, staff recommends the following:

- Grade so that all irrigation and normal rainfall remains within property lines and does not drain on to non-permeable hardscapes
- o Avoid disruption of natural drainage patterns and undisturbed soil
- o Avoid soil compaction in landscape areas.

Contain the following statement, signed by the licensed professional: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the grading design plan"

Soil Management Report. Submit soil samples to a laboratory for analysis and recommendations. Soil sampling must be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants. The soil analysis must include the following:

- □ Soil texture
- □ Infiltration rate determined by laboratory test or soil texture infiltration rate table
- 🗆 рН
- □ Total soluble salts
- □ Sodium
- □ Percent organic matter
- □ Recommendations

NOTE: In projects with multiple landscape installations (i.e. production home developments) a soil sampling rate of one in seven lots or approximately fifteen percent will satisfy this requirement.

Certificate of Completion. See Attachment 5 for a sample certificate. The certificate must include the following information:

□ Project information sheet containing the following:

- o Date.
- Project name and address.
- o Project applicant name, phone number, and mailing address.
- Property owner name, phone number, and mailing address.

□ Certification that the landscape project has been installed per the approved landscape documentation package, signed by either the preparer of the landscape design plan, or irrigation design plan, or the licensed landscape contractor.

- Where there have been significant changes made in the field during construction, these "as-built" or record drawings must be included with the certification; any changes must comply with WELO.
- A diagram of the irrigation plan showing hydrozones must be kept with the irrigation controller for subsequent management purposes.
- □ Irrigation scheduling parameters used to set the controller.
- □ Landscape and irrigation maintenance schedule. The regular maintenance schedule must include at least the following:
 - □ Routine inspection.
 - □ Auditing, adjustment and repair of the irrigation system and its components.
 - Aerating and dethatching turf areas.
 - □ Topdressing with compost, replenishing mulch.

- □ Fertilizing.
- □ Pruning.
- U Weeding in all landscape areas, and removing obstructions to emission devices.

□ Irrigation audit report conducted by a third party certified landscape irrigation auditor. The audit report must include at least the following:

- □ Inspection.
- □ System tune-up.
- □ System test with distribution uniformity.
- □ Reporting overspray or run off that causes overland flow.
- □ Irrigation schedule; including configuring irrigation controllers with application rate, soil types, plant factors, slope, exposure and any other factors necessary for accurate programming.
- Documentation verifying implementation of soil report recommendations.



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Attachment 2 – Water Efficient Landscape Worksheet

Reference Evapotranspiration (ETo) 40.3

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) ^e
Regular Landscap	e Areas						
Very-low	0 – .10						
Low	.1030						
Moderate	.4060						
High	.70 – 1.0						
				Totals	(A)	(B)	
Special Landscap	e Areas			•			
				1			
				1			
				1			
				Totals	(C)	(D)	
				1		ETWU Total	
		Maximum Allowed Water Allowance (MAWA) ^e					

^aHydrozone #/Planting Description

^bIrrigation Method overhead spray

or drip

^cIrrigation Efficiency 0.75 for spray head 0.81 for drip

^dETWU (Annual Gallons Required) =

40.3 x 0.62 x ETAF x Area

where 0.62 is a conversion factor that converts acreinches per acre per year to gallons per square foot per year.

2.) low water use plantings

E.g

1.) front lawn

3.) medium water use planting

^eMAWA (Annual Gallons Allowed) = (40.3) (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 .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	Β÷Α

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, and 0.45 or below for nonresidential areas.



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Attachment 3 – Landscape Design Criteria

- 1. Plant material.
 - A. Plants located within a required landscaped area must be drought tolerant. For all other areas, any plant may be selected, provided the ETWU does not exceed the MAWA. Water efficiency methods must include one or more of the following:
 - i. Protection and preservation of native species and natural vegetation
 - ii. Selection of water-conserving plant, tree and turf species, especially local native plants
 - iii. Selection of plants based on local climate suitability, disease and pest resistance
 - iv. Selection of City-approved street trees; the canopy spread at maturity must be appropriate for the planting area
 - v. Selection of plants from local and regional landscape program plant lists
 - vi. Selection of plants that are fire-safe (CalFire)
 - B. Each hydrozone must include plant materials that use a similar amount of water, except hydrozones designated as mixed water use.
 - C. Plants must be selected based on their suitability to the climatic, geologic, and topographical conditions of the project site. Water efficiency methods must include one or more of the following:
 - a. Use the <u>Sunset Western Climate Zone System</u>, which considers the influence of temperature, humidity, elevation, terrain, latitude, and continental/marine airflow on the 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); allow for adequate soil volume for healthy root growth.
 - c. Consider solar orientation in plant placement to maximize summer shade and winter solar gain.
 - d. Turf is not allowed on slopes greater than twenty-five (25) percent where the toe of the slope is adjacent to an impermeable hardscape. Twenty-five (25) percent slope means one (1) foot of vertical elevation change for every four (4) feet of horizontal length (rise ÷ run x 100 = % slope).
 - D. High water use plants (plant factor of 0.7 to 1.0), are prohibited in street medians.
 - E. If the project is located in a <u>Wildfire Risk Area</u>, the landscape design plan must address fire safety and prevention, which includes selecting fire-safe plant materials and mulches (Refer to the <u>CalFire</u> Guidelines), and creating defensible space of 100 feet from each side of the building (Pursuant to <u>Public Resources Code Section 4291(a) and (b)</u>).
 - F. Invasive plant species, such as those listed by the <u>California Invasive Plant Council</u>, are prohibited.
 - G. The architectural guidelines of a common interest development (community apartment projects, condominiums, planned developments, and stock cooperatives), must not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group.
- 2. Water features.

- a. Water features must use a recirculating water system.
- b. Recycled water must be used for decorative water features, where available.
- c. The surface area of a water feature must be included in the high-water use hydrozone area of the water budget calculation.
- d. Pool and spa covers are highly recommended.
- 3. Soil Preparation, mulch and amendments.
 - a. Prior to planting, compacted soils must be in a friable condition. On engineered slopes, only amended planting holes must meet this requirement.
 - b. Soil amendments must be incorporated according to the soil report recommendations, and be appropriate for the plants selected.
 - c. Compost, at a minimum of four cubic yards per one thousand square feet of permeable area, must be incorporated to a depth of six inches into the soil. Soils with more than six percent organic matter in the top six inches of soil are exempt from adding compost and tilling.
 - d. A minimum three inch layer of mulch must 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. To provide habitat for beneficial insects and other wildlife, mulch is not required on up to five percent of the landscape area. Designate any insect habitat in the landscape design plan.
 - e. Stabilizing mulching products must be used on slopes, which meet current engineering standards.
 - f. The mulching portion of the seed/mulch slurry in hydro-seeded applications must meet the mulching requirement.
 - g. Organic mulch materials made from recycled or post-consumer waste 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 in Wildfire Risk Areas.



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Attachment 4 – Irrigation Design Criteria

- 1. System.
 - a. Landscape water meters (dedicated water service meter or private submeter), must be installed for non-residential irrigated landscapes between one thousand (1,000) square feet and five thousand (5,000) square feet in size and residential irrigated landscapes that are at least five thousand (5,000) square feet. A landscape water meter may be either:
 - i. A customer service meter dedicated to landscape use provided by the City Water Division; or

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- ii. A privately-owned meter or submeter.
- b. Automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data and non-volatile memory are required.
- c. If the water pressure is below or exceeds the recommended pressure of the irrigation device, a pressure regulating device is required to ensure that the dynamic pressure at each emission device is within the recommended pressure range for optimal performance.
- d. Sensors (e.g., rain, freeze, wind), either integral or auxiliary, that suspend or alter irrigation operation during unfavorable weather conditions are required, as appropriate for local climatic conditions. Irrigation should be avoided during windy, raining or freezing weather.
- e. Manual shut-off valves (e.g., gate valve, ball valve, butterfly valve) are required, located as close as possible to the point of connection to the water supply, in order to minimize water loss in case of an emergency or routine repair.
- f. Backflow prevention devices are required to protect the water supply from contamination by the irrigation system. Refer to <u>VMC Chapter 11.38</u> for backflow prevention requirements.
- g. Flow sensors that detect high-flow conditions created either by system damage or malfunction are required for all non-residential landscapes and residential landscapes that are five thousand (5,000) square feet or larger.
- h. Master shut-off valves are required on all projects except those using technologies that allow for individual sprinkler control in a system equipped with low-pressure shut down features.
- i. The design must prevent runoff, low-head drainage, overspray, or other conditions that would result in water flowing onto non-targeted areas (e.g., adjacent property, non-irrigated areas, hardscapes, roadways, or structures).
- j. Relevant information from the soil management plan, such as soil type and infiltration rate, must be used.
- k. The irrigation system must conform to the hydrozones shown on the landscape design plan.
- I. The irrigation system must be designed and installed to meet the minimum irrigation efficiency level in the ETWU formula.
- m. Irrigation emission devices must meet the American National Standards Institute (ANSI) standards, and the American Society of Agricultural and Biological Engineers'/International Code Council's (ASABE/ICC) 802-2014 Landscape Irrigation Sprinkler and Emitter

Standard. All sprinkler heads must have a distribution uniformity low quarter of 0.65 or higher using the protocol defined in <u>ASABE/ICC 802-2014</u>.

- n. It is highly recommended to inquire with the City Water Division regarding peak water operating demands on the water supply system or water restrictions that may impact the irrigation system's effectiveness.
- o. In mulched planting areas, it is required to use low volume irrigation in order to maximize water infiltration into the root zone.
- p. Sprinkler heads and other emission devices must have matched precipitation rates, unless otherwise directed by the manufacturer's recommendations.
- q. Head to head coverage is recommended. However, sprinkler spacing must be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations.
- r. Swing joints or other riser-protection components are required on all risers subject to damage and located either adjacent to hardscapes, or in high traffic areas of turfgrass.
- s. Check valves or anti-drain valves are required on all sprinkler heads where low point drainage could occur.
- t. Areas less than ten (10) feet in width in any direction must be irrigated with subsurface irrigation or other methods that do not produce runoff or overspray.
- u. Overhead irrigation is not permitted within two (2) feet of any non-permeable surface. Allowable irrigation methods within the two-foot setback include drip, drip line, or other low flow non-spray technology. The setback area may be planted or unplanted, and may be covered with mulch, gravel, or other porous material. These restrictions may be modified if:
 - i. The landscape area is adjacent to permeable surfacing and no runoff occurs; or
 - ii. The adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping; or
 - iii. The irrigation system uses an alternative design or technology that complies with the irrigation system design criteria in <u>VMC Section 16.71.047A(1)(i)</u>, confirmed during the irrigation audit.
- v. Slopes greater than twenty-five (25) percent must not use an irrigation system with an application rate that exceeds 0.75 inches per hour. This restriction may be modified if the landscape designer specifies an alternative design or technology that clearly demonstrates no runoff or erosion will occur, confirmed during the irrigation audit.
- 2. Hydrozone.
 - a. Each valve must 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 must be appropriate for the plant type within a given hydrozone.
 - c. Trees must be placed on separate valves from shrubs, groundcovers, and turf to facilitate the appropriate irrigation, where feasible. The mature size and extent of the root zone must be considered in the tree irrigation design.
 - d. Individual hydrozones that mix plants of moderate and low water use, or moderate and high water use, may be allowed if:
 - i. The plant factor calculation is based on the proportions of the respective plant water uses and their plant factor; or
 - ii. The plant factor of the higher water using plant is used for calculations.
 - e. Individual hydrozones that mix high and low water use plants is prohibited.

f. Designate hydrozone areas by color, number, or letter on the landscape design and irrigation design plans. 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 (see Attachment 2). This table can also be helpful during the irrigation audit and when programming the irrigation controller.



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Attachment 5 – Certificate of Completion and Certification of Installation According to the Landscape Documentation Package

CERTIFICATE OF COMPLETION Project Information

Date		
Project	Number	(LRxx-xxxx)
Project Street		Address
	Parcel or Lot Number(s)	
Applicant Name		
Phone Number		
Email Address		
Street Address, City and Zip		
Property Owner Name		
Phone Number		
Email Address		
Street Address, City and Zip		

Property Owner:

"I/we certify that I/we have received copies of all the documents within the Landscape Documentation Package and the Certificate of the 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

Date

CERTIFICATION OF INSTALLATION ACCORDING TO THE LANDSCAPE DOCUMENTATION PACKAGE

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

Date					
Project Number	(LRxx-xxxx)				
Name					
Title					
Phone Number					
Email Address					
License No. or C	Certification No.				
Company.					
Street	Address,	City	and	Zip	_
License No.	or	Certifica	ation	No	
Signature*.					

*Signer of the landscape design plan, signer of the irrigation plan, or a licensed landscape contractor.

PART 3. IRRIGATION SCHEDULING

Attach parameters for setting the irrigation schedule on controller per VMC Section 16.71.050.

PART 4. SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE

Attach schedule of Landscape and Irrigation Maintenance per VMC Section 16.71.051.

PART 5. LANDSCAPE IRRIGATION AUDIT REPORT (Guidelines, page 14)

Attach Landscape Irrigation Audit Report per VMC Section 16.71.052.

PART 6. SOIL MANAGEMENT REPORT

Attach soil analysis report, if not previously submitted with the Landscape Documentation, per VMC Section 16.71.045.



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Attachment 6- Prescriptive Compliance Checklist

Landscape Design Plan

Include the following information:

- □ Turf Areas
- Hydrozones (Very low, low, moderate, and high-water use planting areas)
- □ Water features⁶, including swimming pools
- □ Edible planting areas
- □ Areas irrigated with recycled water
- Add note: "At the time of final inspection, the permit applicant must provide the owner of the property with a certificate of completion, certificate of installation, irrigation schedule of landscape and irrigation maintenance."

<u>Compost</u>

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

<u>Mulch</u>

Apply at least a 3-inch layer of recycled mulch on all exposed soil surfaces of planting areas, except turf areas or direct seeding applications where mulch is contraindicated.

Required Plant Selection

All projects:

- □ The landscape area must include only very-low or low-water use plants (WUCOLS plant factor of 0.3 or lower), excluding edible areas or areas using recycled water.
- □ Combined, no more than 25% of the landscape area can include turf, high water use plants, and water features.
- □ Turf is prohibited on slopes steeper than 1ft: 4ft, and in parkways less than 10 feet wide, except when the parkway is adjacent to a parking strip and is a vehicle entrance, and when the turf has subsurface irrigation.
- Invasive plants are prohibited. Please refer to the California Invasive Plant Council's "Don't Plant a Pest" brochure: <u>https://www.cal-</u> ipc.org/solutions/prevention/landscaping/dpp/?region=bayarea

Single-family residence projects:

 At least 75% of landscape area must include very low or low-water use plants (WUCOLS plant factor of 0.3 or lower), excluding edible areas or areas using recycled water.

⁶ 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).

□ No more than 25% of the landscape area can be planted with high-water use plants (WUCOLS plant factor of 0.7 of higher).

Irrigation System

All projects:

- Automatic irrigation controllers that capture evapotranspiration or soil moisture data, and include a rain sensor.
- □ Pressure regulators to ensure that the dynamic pressure of the components are within the manufacturer's recommended pressure range.
- ☐ Manual-shut-off valves (e.g., gate, ball or butterfly valves), which must 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 must have a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.
- Areas less than 10 feet in width in any direction must be irrigated with subsurface irrigation or other means that do not produce runoff or overspray.

Projects that are not single-family residences, with landscape areas of at least 1,000 sf: Private sub-meter(s) to measure landscape water use are required.