



COUNTY OF SANTA CRUZ

WATER EFFICIENT LANDSCAPE ORDINANCE

PURPOSE

The limited water resources of Santa Cruz County must meet the needs of its residents, visitors, businesses, agriculture, fisheries and wildlife. Groundwater withdrawals currently exceed the sustainable yield of most groundwater basins in the County, a practice that is not sustainable. Addressing these concerns, the County Board of Supervisors in January, 2016, adopted a revised [Water Efficient Landscape Ordinance](#) (WELO) to promote efficient water use in landscapes – and to comply with a State law requiring all cities and counties to adopt revised landscape efficiency standards to consider drought and climate change.

All of the info linked here is available from the Zoning Counter or online at cdi.santacruzcountyca.gov, under [Unified Permit Center / Building Permits and Safety / Water Efficient Landscaping](#)

landscape efficiency standards to consider drought and climate change.



RESIDENTIAL APPLICATIONS

The County provides a streamlined application process for residential projects. The following procedure is for landscapes associated with a new house, reconstruction or detached structure (second units and remodels are exempt):

- 1) Submit a signed [Landscape Checklist](#) with your building permit application, confirming that your soil preparation, irrigation system, planting, mulch and other landscape elements will comply with Checklist standards.
- 2) Install your landscape in compliance with Checklist requirements. Make sure that underground components, such as your mandatory backflow preventer, manual shutoff and any check valves to prevent low-head drainage are inspected by a qualified third party prior to covering (see step three). The soil preparation is also inspected.
- 3) Contract with an independent inspector to confirm the landscape complies with the Landscape Checklist. The third party will submit a signed [Landscape Checklist Installation Certificate](#) to the County building inspector, allowing the removal of the hold on final inspection. The third-party inspector must be a professional, not involved with the initial application or installation of the landscape, with at least one of the following qualifications:

- Certified irrigation designer
- Certified landscape irrigation auditor
- Licensed landscape architect
- Licensed civil engineer

You can find a qualified landscape professional through the [California Landscape Contractors Association](#), the [Environmental Protection Agency](#), the [Irrigation Association](#) or a local irrigation supply store.

If your landscape, whether residential or non-residential, is exempt from WELO standards, fill-out the Landscape Checklist, check the appropriate box for the exemption, sign and submit with your building permit application.

The following types of plantings are exempt:

- Landscape areas irrigated only for a 2-5 year establishment period, after which time the irrigation system is removed. If you are installing all native or other climate-adapted plants, select this option on the Checklist. Many nurseries offer a wide variety of native, Mediterranean, Australian, South African and other plants that will create a unique, beautiful landscape, provide sustainable habitat for wildlife, and use no water once mature.
- Landscapes devoted to edible plants, such as vegetable gardens and orchards.
- Landscape areas installed solely for storm-water treatment.
- Landscapes irrigated entirely by graywater, captured rainwater or recycled water.

- Agricultural crops, feedlots or pastures.
- Ecological restoration projects.
- Plants cultivated by botanical institutions.
- Registered historical sites with a period landscape style.
- Residential landscapes of 500 square feet or less. Note: A 20-foot x 25-foot landscape installation is usually not a viable long-term option unless associated with a replacement, reconstruction or addition project where most of the landscape already exists.

Within the service areas of water purveyors that have adopted their own WELOs, including the Soquel Creek Water District and City of Santa Cruz (see [map](#)), those agencies will continue to review projects for compliance with water efficiency standards. If you apply to the County for a permit to build a new building in Soquel, for example, the Soquel Creek Water District will review your project for compliance with its landscape water efficiency standards. To learn which agency has jurisdiction in your area, visit the County's online [GIS system](#), map your site parcel or address, then check the Special Districts tab displayed beneath the map. If you are not in the Soquel Creek Water District or City of Santa Cruz Water Department Service Area, you are subject to the County WELO. Within the service area of the City of Watsonville, the County WELO applies, but the Watsonville Public Works Water Division implements its own [programs](#) to reduce landscape water use, including free landscape water consultations, rebates for lawn replacement and conservation references.

NON-RESIDENTIAL APPLICATION REQUIREMENTS

To establish a landscape for a commercial, public or institutional project, or for an agricultural service establishment, follow the procedure below:

1) Submit a landscape plan and a signed [Water Efficient Landscape Plan Submittal Compliance Statement](#) with your building permit application. The compliance statement, which lists the required information for your landscape plan, confirms that the landscape plan meets WELO standards.

2) Follow steps 2 and 3 from the residential application process above to complete the installation, inspection and certification of your landscape.

The landscape plan must state the Maximum Applied Water Allowance (MAWA) for your parcel and the Estimated Total Water Use (see box, right). Your plan will include an irrigation schedule (printed) for each month of first two years, including number of irrigation days per week, number of start times (cycles) per day and minutes of run time per cycle for each irrigation event; and a final irrigation schedule for use after the landscape is well established. Do not irrigate between 10 a.m. and 8 p.m. unless daytime irrigation is necessary for the health of the plants.

The landscape plan must be prepared by a certified irrigation designer or landscape irrigation auditor, licensed landscape architect, licensed landscape contractor or civil engineer.

LANDSCAPING TIPS

The first and best way to save water in your garden is to disturb as little native habitat as possible, consistent with fire district fuel modification and [defensible space guidelines](#). Conservation of existing habitat not only reduces your installation and maintenance costs, but

MAXIMUM WATER ALLOWANCE

The WELO limits the quantity of water that may be used to irrigate landscapes installed with new buildings or commercial remodels, primarily. The Maximum Applied Water Allowance (MAWA) for any landscape is set at 50% of reference evapotranspiration (ET_o) – the amount of water used by an average lawn in a year. To look up your ET_o , go to the County's online GIS system, find your parcel and check the Biotic and Water Resources tab. Calculate your MAWA with the County's online [Water Allowance Calculator](#).

If you prefer to manually calculate your MAWA, in inches per year, multiply the ET_o for your property by 0.5. To find out what this is in gallons for your landscape, multiply your ET_o by your landscape area and a gallon conversion, using the following equation:

$$\text{MAWA (gal/yr)} = ET_o \times 0.5 \times 0.62 \times \text{landscape area (sq.ft.)}$$

To make sure that your planned landscape will not exceed your Maximum Water Allowance, figure your Estimated Total Water Use (ETWU), using the County's online [calculator](#). The calculator will ask for the square footage in each of your hydrozones (low, medium and high), then calculate your overall water use based on your climate zone.

For help in using the calculator or with other questions, call the zoning information line (831-454-2130) or inquire at the Zoning Counter, 701 Ocean Street, 4th floor, Santa Cruz.

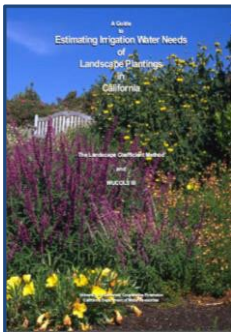
benefits the area wildlife that can enrich even urban environments with activity, color and song. With adequate care taken during the construction process, you can maximize the conservation of existing grasslands, oak woodland and other hardwood forests, chaparral and coastal scrub.

Use plants adapted to dry summers and moist winters. Native plants are not the only ones that do well in these conditions. Many local nurseries and other suppliers (box at right) offer diverse, interesting and non-invasive exotic plants well suited to our Mediterranean climate. Many of these provide nectar, cover and seeds for wildlife. With careful plant selection, you can create a garden that requires little or no water, yet provides sustainable habitat.

When using native plants, be careful not to select species that can invade local habitats or contaminate the gene pools of sensitive native species such as manzanita or lilac. *Arctostaphylos* and *ceanothus* varieties developed for landscape uses may hybridize with rare, endemic plants, jeopardizing the native species. Also, maintain your installed landscape free of [invasive plants](#) such as French broom, pampas grass and thistle.

Lawns often require extra water, so it is a good idea to find alternatives to planting a lawn. If you want a recreation surface, you might consider artificial turf. Look for one that minimizes petroleum products and other environmental effects and is biodegradable. Design the site to filter or capture the water that flows off the artificial surface into other landscape areas. Consider onsite stormwater treatment, where you filter runoff through vegetated areas before it enters storm drains. Landscape elements installed for stormwater treatment, such as vegetated swales, filter strips and rain gardens are exempt from WELO water limits. Garden areas watered with at least 60% harvested water, graywater or recycled water are Special Landscape Areas (SLAs), which are allowed to receive 100% of ET_o. If your landscape is watered *entirely* from graywater, captured rainwater or recycled water, it is exempt from efficiency requirements. Turf areas used for active recreation in parks, golf courses, sports fields and swimming pools are also SLAs and allowed extra water. The total water use of SLAs is evaluated separately from regular landscape areas, and then added to your total MAWA.

If you do plant a lawn, consider a “warm season” variety that uses minimal water, such as Zoysia grass. Use portable sprinklers or a controller with a rainfall sensor and a remote link to a local weather station, to minimize irrigation during fall and winter months, and shut-off automatically during and after rain. These features are required by the WELO for any controller installed in a landscape subject to WELO compliance.



Whether you are designing a landscape to comply with the Water Efficient Landscape Ordinance or simply installing a garden, it is a good idea to divide your landscape into watering areas, or hydrozones. Install low-water use plants in areas that get a lot of sun or are hard to reach with a hose. Shady sites, north-facing slopes and low spots help reduce the water demand of high-water use plants. Trees should be on their own irrigation circuits.

You can find out the water rating of most commercially available landscape plants from [A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California](#), published by the State of California and available online for free. The manual includes the Water Use Classifications of Landscape Species (WUCOLS) guide, which provides a water-use rating for

WHERE TO FIND MEDITERRANEAN PLANTS



Many of our local commercial nurseries carry – and some specialize in – native and non-native Mediterranean plants. Such plants are distinguished from varieties that may be “drought tolerant” but still require some watering. Check with nursery staff for the plants you need.

Each Spring, the California Native Plant Society (CNPS) teams up with the UC-Santa Cruz arboretum to offer a native plant sale on the UCSC campus. CNPS also offers a fall plant sale and propagation classes. The organization maintains a [website](#) that lists native plants by type and habitat, with locator maps, pictures and links to nurseries.

Plant Factors in WUCOLS

- High (H). 70 - 90% ET_o
- Moderate (M). 40 - 60% ET_o
- Low (L). 10 - 30% ET_o
- Very Low (VL). Less than 10% ET_o

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most commercially available landscape plants. The water-use ratings vary by climate zone: a plant that is considered moderate in one area might have a high water consumption rating in another. The rating, or “plant factor” for each species is expressed as a percentage of reference evapotranspiration (see box above). The U.C. Cooperative Extension provides a convenient [website](#) where you perform a general search for medium, low, and very low water use plants for the Santa Cruz area, or look up plant factors by species. WUCOLS lists relatively few plants in our County’s climate zones as requiring more than medium water application – mostly moisture-loving plants such as birch and alder, bamboo, certain ferns, horsetails, lobelia, forget-me-not and other wet meadow-habitat species. The majority of commercial landscape plants in our fog-influenced area will thrive with moderate water. If you do install high water use plants or a pond, swimming pool or other water feature, you will need to balance high water demand plants with low or very low-use plants. The combined area of turf, high water use plants and water features is not allowed to exceed 25 percent of the total landscape area, excluding exempt areas. (Remember – swimming pools are Special Landscape Areas.)

When installing or refurbishing a landscape, consider including rainwater harvesting and/or a graywater system. Both are relatively simple to install and can provide significant water savings. Information on rainwater collection and rain barrels is available [here](#); County building permit info, [here](#). For information about capturing water from showers, tubs, bathroom sinks and washing machines, visit the [Central Coast Greywater Alliance](#).

IRRIGATION DESIGN

Consider safety first: make sure you install a good backflow prevention device at the point of connection to your main water system – this is required by building codes to prevent the water in your irrigation system from mingling with tap water. Place a manual shutoff valve near the point of connection for emergencies and repairs, and a flow sensor to shut off the system automatically when it springs a leak. If your water pressure exceeds 80 psi, install a pressure regulator: this will inhibit sprinkler head blowouts and enhance operation of low-flow systems.

Top Three Irrigation Water Wasters

- Controller / timer schedule not adjusted to apply less water during rainy periods
- Irrigation system not inspected regularly for broken valves or heads
- Overspray onto sidewalks or driveways

You should design any fixed irrigation system to minimize water use. The most essential component is a weather-based controller that uses web-based weather station data to prevent irrigation during periods of rain or wet soils. The controller is required have a rain-detector to shut off the system during localized rain events, and to suspend irrigation for 48 hours after any detectable rainfall.

If you do install turf, minimize the size of your lawn and make sure your sprinkler heads, if used, are

aligned to provide uniform coverage. Adjust sprinklers to prevent overspray or leakage onto sidewalks or driveways. Use low-flow systems such as drip and microspray to irrigate flowers, shrubs and trees. Place a separate flow-control valve in each hydrozone irrigation circuit to apply the appropriate flow of water. Install check valves at low points in the system to insure that water does not drain out of sprinkler heads and emitters when the system is turned off. Diagrams of irrigation system components may be found online.

Maintenance is critical: drip systems and soaker hoses can deteriorate over time. Check your system regularly for leaks and malfunctioning valves, keep your sprinkler heads aligned correctly and adjust the watering schedule on your controller or timer to reflect the season.

The county Water Efficient Landscape Ordinance establishes reasonable standards for landscape water application, landscape design, and irrigation systems – standards that repay the installation cost in water savings. The tools provided in this handout and elsewhere online will help with the design and maintenance of landscapes sensitive to the water constraints of Santa Cruz County.

For more information or assistance in complying with the County’s Water Efficient Landscape Ordinance, help with other water efficiency questions or guidance in using an online County calculator, call the Zoning Information Line (831-454-2130) or inquire at the Zoning Counter, 701 Ocean Street, 4th floor, Santa Cruz. The State of California’s [Water-Efficient Landscaping page](#) also contains helpful resources and links, as does the local guide, [Water Smart Gardening](#). A good book reference is [Plants and Landscapes for Summer-Dry Climates](#).