



Introduction to *Smart From the Start*

Smart from the Start is a water conservation program that provides user-friendly tools and landscape templates to assist new homeowners and developers design and install beautiful, water-smart landscapes. The concepts and tools provided, however, may also be useful to people who are considering converting their existing water-thirsty landscapes to less thirsty ones.

Smart from the Start benefits include:

- Lower water and garbage bills for single family residents– reduced water use and reduced yard waste
- Eye-catching, attractive, and regionally appropriate landscapes
- Reduced stormwater runoff
- Cleaner water and air
- Protection of natural resources for future generations

A water-smart landscape design is one that:

- Includes drought tolerant, California-native or climatic appropriate, non-invasive plants
- Groups plants based on similar watering needs
- Provides permeable surfaces to limit runoff and allow infiltration
- Minimizes turf areas
- Incorporates fire-safe techniques
- Responds to site-specific conditions including climate and micro-climate, including sun and shade patterns, wind, and soil.

A water-smart irrigation system is one that is:

- Designed to appropriately address each hydrozone's watering needs
- Comprised of high-efficiency, high-quality components
- Installed correctly
- Checked regularly to identify maintenance needs and leaks
- Adjusted monthly to address seasonal watering needs.

The California Urban Water Conservation Council (CUWCC) worked with many landscape industry, government, and business industry organizations to develop the Water Smart Landscape Checklist and the Landscape and Irrigation Templates to help achieve these benefits and meet these basic principles of water-smart landscape and irrigation system design. This project was funded by the U.S. Bureau of Reclamation, Lower Colorado Region, Southern California Area Office.

Water Smart Landscape Checklist: The Checklist forms the basis of the front and back yard templates. This list highlights components to be incorporated or considered in landscape and irrigation design. It was created through a comparative, collaborative process that began with reviewing existing state, local and federal programs and their requirements. *Smart from the Start* was developed to illustrate how implementing landscape water conservation concepts might look, and to support, not supersede, other existing landscape water conservation programs. This list may be revised to reflect local requirements and preferences and to meet the particular needs of the users such as: homeowners, landscape professionals, developers, planners, and water agency staff.

Front Yard Templates address the diverse needs of California's different climatic zones. Sample plant material lists provide a starting point for design; variety is encouraged and plants can be exchanged as long as site conditions and water needs are considered. Local planning agencies and water suppliers may have specific regional requirements for their areas. Templates have been created for both traditional single-family homes and dense, urban lots for each of seven climatic regions with reduced water needs well below the Maximum Allowable Monthly Allowance (MAWA) established in California's Model Water Efficient Landscape Ordinance.

Irrigation Plans are varied to show examples with spray, drip and a combination of both. Sample irrigation schedules and annual water use estimates are also included. Drip and spray irrigation systems are both shown on the templates to show differences in projected water use. Some plants respond better to spray irrigation while many others prosper with drip. The irrigation design will need to respond to plant needs but also to avoid runoff and potential blockage where the planting grows in front of the spray heads. Irrigation systems can be modified to incorporate alternative water sources such as rainwater catchment, recycled water, or graywater use.

Back Yard Templates also address the diverse needs of California's different climatic zones while considering that back yards are a more private space and that the individual resident may be the one coordinating or providing for its installation and maintenance. As with the front yard, the templates provide sample designs with appropriate plantings, irrigation and site elements to envision how water conservation can be accomplished with good design. The back yard templates illustrate active and a passive uses of the space so that one can adapt the template to complement the intended use of the space. Plant materials may be substituted as site conditions and water needs allow and the templates can be modified to address site specific condition including sun and shade patterns and microclimates.

There are numerous resources to help a person design a water efficient landscape and home. Refer to CUWCC's Water Saver Home at <http://www.h2ouse.org> for more information.

CUWCC is indebted to the research and work done by the following programs which provided guidance:

- Bay Friendly Landscape Guidelines from StopWaste.Org: <http://www.stopwaste.org/home/index.asp?page=8>
- Built Green [Colorado]: <http://www.builtgreen.org/>
- Build-It-Green [California]: <http://www.builditgreen.org/>

- California Friendly Program from the Metropolitan Water District of Southern California: <http://www.bewaterwise.com/>
- East Bay Municipal Utility District WaterSmart: http://www.ebmud.com/conserving_&_recycling/
- Florida Water Star from the St. Johns River Water Management District (and partners): <http://www.floridawaterstar.com/>
- LEED-Homes (new draft): www.usgbc.org/LEED/homes/
- National Association of Home Builders National Green Building Program: <http://www.nahbgreen.org/>
- River Friendly Landscape Guidelines from the Sacramento Stormwater Quality Partnership with permission and assistance from StopWaste. Org: http://www.sacramentostormwater.org/SSQP/Riverfriendly/Documents/RiverFriendly_Guidelines.pdf
- Single Family Residential Landscape Policy, City of Santa Rosa, California: <http://ci.santarosa.ca.us/doclib/Documents/sfrbrochure.pdf>
- Southern Nevada Water Authority Water Smart Landscape Rebate Program: http://www.snwa.com/html/cons_wsl.html

These tools have been developed through a collaborative, statewide process involving numerous individuals, agencies and their water conservation programs. CUWCC would like to thank the following individuals, organizations and programs for their assistance in the creation of these tools:

- Build It Green, Tenaya Asan and Jennifer R. Love: www.builditgreen.org
- California Department of Water Resources, Julie Saare-Edmonds: www.water.ca.gov
- California Energy Commission, Gary Klein and Lorraine White: www.energy.ca.gov
- City of Roseville Environmental Utilities, Lisa Amaral: www.roseville.ca.us/eu/
- City of San Diego, Kyrsten Burr-Rosenthal: www.sandiego.gov/water/
- City of Santa Barbara Public Works Department, Alison Jordan: www.santabarbaraca.gov/Resident/Water/
- City of Santa Rosa, Deb Lane and Dan Muelrath: <http://ci.santarosa.ca.us/departments/utilities/conserve/Pages/default.aspx>
- Contra Costa Water District, Chris Dundon: www.ccwater.com/conserve/
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- North Marin Water District, Ryan Grisso: www.nmwd.com/conservation.php
- Otay Water District, William Granger and Rianna Pensa: www.otaywater.gov
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- Sonoma County Water Agency, Carrie Pollard: www.scwa.ca.gov
- Stopwaste.org, Cynthia Havstad, www.stopwaste.org
- Valencia Water Company, J.J. Stockton: www.valenciawater.com
- U.S. Bureau of Reclamation, Lower Colorado Region, Southern California Area Office, Deb Whitney: www.usbr.gov/lc/region/g4000/wtrconsrv.html

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