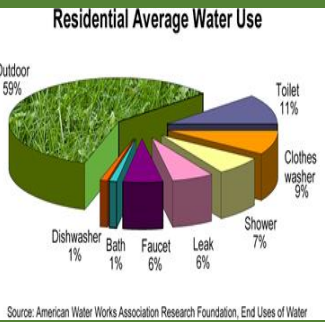


## WATER CONSERVATION PRACTICES

Water conservation measures and practices are here to stay. The following identifies areas in which conservation methods have been successfully applied.

### WATER CONSUMPTION:

The average household consumes approximately 150,000 gallons of water annually. Of that, outdoor water use accounts for up to 59%, most of which is used for turf areas. Therefore, your landscaping is the most vulnerable item on your water conservation list. The good news is that your outdoor usage numbers can be improved by modifying one or both of the following key landscape elements.



## THE URBAN FOREST

Urban forestry is the care and maintenance of tree populations in an urban environment, whether the trees grew there naturally or were introduced into their setting. It is hard to image what legendary icons such as New York's Central Park and San Francisco's Golden Gate Park would look like without the introduction of an urban forest. In addition to aesthetic qualities, the benefits of urban forests also include social, recreational, wildlife, and economic contributions. They are also an important factor in aiding to reduce air pollution. Moreover, trees are a significant contributor to oxygen production.

The three primary components of urban forestry discipline are tree planting, maintenance, and management. Since each species of tree has its own unique characteristics, such as height, canopy, root system, tolerances, and watering needs, location and proper placement are therefore critical to a tree's lifespan. Constraints such as hardscape and proximity to buildings can result in undue stress on a tree, as well as potentially causing damage to adjacent structures.

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Maintenance is critical to a tree's health and vitality. Proper tree pruning has several benefits including promoting healthy growth, aesthetic qualities, and structural integrity, as well as managing safety issues by reducing the potential risk of broken limbs and falling branches.

Developing an urban forestry management plan can be challenging, but the benefits are rewarding. A management plan should include establishing and maintaining a tree inventory. The inventory will assist agencies in developing a budget to fund tree planting, replacement, and maintenance, serving to quantify and maximize benefits, while minimizing costs. A cohesive tree master plan will also help to reduce and mitigate the challenges impacting trees, such as drought, insects, disease, and the consequences of urbanization.



## WATER CONSERVATION PRACTICES, Cont.

### PLANT MATERIALS:

Southern California water agencies have assembled a plant list of recommended plant materials for our area. They are more adaptive to our environment and require less water. You will be amazed at the wide spectrum and varieties of plants to choose from. Visit [bewaterwise.com](http://bewaterwise.com) to see snapshots of the recommended plant materials. Look for the California Friendly Gardening Guide or Gardening Tips links.

**IRRIGATION SYSTEM:** In addition to the above, there are also modifications that can be made to your irrigation to improve the efficiency of your irrigation system, thus reducing consumption and lowering your water bill. Some local water companies also offer rebates for "Smart" controllers to help offset system upgrade expenses. The same rewards can also be gained by switching to an efficient sprinkler, especially when taking advantage of available sprinkler rebates.



## THE BALANCE BETWEEN QUALITY & QUANTITY

HOAs, property managers, and landscape maintenance contractors are faced with making difficult decisions regarding balancing landscape quality with limited water quantity under drought restrictions. Although mandatory reductions were rescinded at the state level, many local water districts are still enforcing water allocations and watering cutbacks.

There have been several advancements in the irrigation industry, such as smart controllers and efficient sprinkler nozzles. However, the vast majority of the older irrigation systems were not designed to adapt to the current changes in watering practices. Plant materials and turf grass need a set amount of water to survive based on daily evapotranspiration (ET) losses. ET rates change seasonally, as well as on a daily basis, depending on weather conditions. Smart controllers respond to these changes by adjusting the watering schedules accordingly. Environmental factors, such as slope and shade, and irrigation system efficiency, also determine plant and turf grass watering needs. These factors are not recognized by the controller and require manual adjustment.

When there was an issue with plant or turf quality in the past, the solution was to throw water at the problem. This is no longer an option, and as a result, emphasizes the need for input from an experienced irrigation water management team. A well-trained and experienced landscaper can identify problem areas, making the necessary adjustments. The fine-tuning of sprinkler heads and recalculating the watering times make a noticeable difference in the quality of plant materials and turf areas.



Multiply this process by the number of watering stations per irrigation controller (18 to 36 on average), times the number of controllers on the irrigation system, (20 to 40 on average) and you have a feel for the magnitude of the issue. The ultimate challenge however, is making the necessary adjustments without exceeding water allocations and while staying within the water budget.

Under these conditions, an irrigation system's limitations, such as poor water pressure or insufficient sprinkler coverage, become apparent, especially in turf areas. Poor soils and slopes also have a negative impact on plant and turf quality. These deficiencies become apparent when temperatures are at their peak and will appear as dry patches in turf areas.

Monitoring landscaping and irrigation performance, making the necessary system adjustments, and managing the water budget, are practices that are here to stay as water becomes less and less available. An efficient irrigation system, together with an experienced landscape and irrigation maintenance team are critical in helping to reduce the challenge of balancing landscape quality with water quantity.

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