

Garden/Garden — A Comparison in Santa Monica

Santa Monica, California, U.S.A.

In 2004, the city of Santa Monica launched a demonstration garden composed of two adjacent front yards that contrast the benefits of climate-adapted, native plantings to traditional suburban landscapes that include exotic species and lawn. In southern California's hot, arid climate, water is a precious natural resource. Water demand in the Los Angeles metropolitan area far exceeds the supply. In fact, over 90 percent of Santa Monica's water is imported from Northern California and the Colorado River, more than 400 miles away. The average household dedicates nearly 40 percent of its water consumption to irrigate traditional gardens and lawns. This project aims to raise awareness of this unsustainable water use while showcasing the aesthetic, environmental, and economic advantages of native landscapes.

The side-by-side 1,900-square-foot gardens function as a living laboratory that allows visitors to directly compare and evaluate the distinctly different landscapes. The native garden features California native plants, a water-efficient drip irrigation system, a weather-sensitive irrigation controller and a sand filtration pit that facilitates groundwater recharge. Next door, the traditional garden exemplifies the typical "mow and blow" landscape found in suburban Southern California. It features exotic plants native to Northern Europe and the Eastern United States, a standard, user-controlled sprinkler irrigation system, and no systems for storing or filtering runoff.

Data has been recorded throughout the life of the project to track water-use, green waste, and maintenance labor. The initial cost of the native garden was \$4,300 more than the traditional garden. This difference is due to the construction of a stormwater management system, which includes rain gutters, an infiltration pit, and permeable pavement, none of which were installed on the traditional garden site. Educational signage summarizes the characteristics and resource-use of each garden, enabling visitors to make an informed comparison.

Despite its higher initial cost, the native garden is more economically sustainable than the traditional garden, saving the homeowner \$2,200 per year in reduced maintenance costs. The native garden uses 77 percent less water than the traditional garden because climate-adapted local plants require less water to grow. The high-efficiency drip irrigation system distributes only the water needed for each plant and reduces water lost through evaporation. Because the native garden contains no lawn, it produces 66 percent less waste destined for the landfill. Without the need for lawn mowing, hand-watering, and fertilizer and pesticide application, the native garden requires 68 percent less labor than the traditional garden.

Adding to its environmental advantages, the native garden creates new habitat for local birds and wildlife. Because widespread urban sprawl has destroyed much of the southern California ecosystem, local animals and insects are being driven to extinction. Small household landscapes can make a difference in stabilizing the food chain. At 1,900-square feet, the native demonstration garden supports ladybugs, butterflies, and numerous bird species. Local plants and animals are not well-adapted to foreign plants and lawn, and can be poisoned from pesticide application. As a result, less wildlife can be spotted in the traditional garden. When applied across whole communities, native landscaping helps natural and human ecosystems function in harmony.

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Project Resources

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IRRIGATION DESIGNER

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INITIAL LANDSCAPE INSTALLER

Landscape Contractors
Live Art Landscapes

MAINTENANCE CONTRACTOR

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