

# THE ENVIRONMENTAL BENEFITS OF THE LANDSCAPE – OUR GREEN URBAN ECOSYSTEM

***A green environment really does begin in our own backyards—and front yards, too.***

*Plants in our cities are as environmentally important as those in our wild areas. They provide oxygen, homes to wildlife, and cooling without burning fossil fuels. Plants clean our air and water, prevent erosion, and reduce glare and noise pollution. On the most basic level our landscapes are a green urban ecosystem mitigating the effects of intensive urban and suburban living. As California grows, the environmental challenges will increase. Plants are our most important assets for protecting and enhancing our environment.*

## Clean Air

The quality of the air we breathe is fundamental. The trees, shrubs and lawns of our communities constantly work to clean our air of dust and certain chemical compounds. The process works in two ways. Physically, the leaves trap particles from the air, and eventually those particles are washed into the soil. Also, through the process of photosynthesis, plant leaves effectively absorb and cleanse the air of carbon dioxide, and in many plant species, other compounds such as sulfur dioxide. In return, they emit oxygen.

According to the US Forest Service, a healthy ash tree produces 260 pounds of oxygen a year. Lawns and other plants also produce oxygen, just like plants in the rainforest.

## Natural Cooling

Our communities' plants are natural air conditioners, cooling without harming our environment.

Utility companies are so convinced that trees provide significant air-cooling by the shade they produce, they fund neighborhood tree planting programs. Studies show that lawns are more than 25% cooler than hard surfaces. Step from the lawn onto the street on a hot summer day to demonstrate. Plants accomplish this cooling without need for electricity, including burning fossil fuels to create that electricity.

More is at stake than just keeping our individual homes cool. The heat island effect is a well-documented climate phenomenon. In studies funded by the U.S. Environmental Protection Agency, and Lawrence Berkeley Laboratory among others, researchers have found that the temperatures in urban areas are rising steadily when compared to rural and natural areas. This causes increased need for air conditioning and could contribute to global warming. The same studies find that intensive tree planting programs can reduce the heat island effect, cooling entire cities.

## Clean Water

Plants in our communities protect our water quality. One of the most important ways they do so is by reducing the amount of water that runs into gutters and into the ocean, streams and rivers during storms. The more hard surfaces we have—driveways, roofs, sidewalks, and decks—the faster the water runs off, overwhelming our water purification systems.

There are two problems with this. First, in some coastal communities, the massive amounts of water overwhelm the sewage treatment plants, and sewage overflows into the ocean. Second, the storm water runoff itself is contaminated with chemicals it picks up flowing over driveways and rooftops. Plant leaves slow the water, trapping it, and directing it into the ground. The greater the amount of hard surfaces, the greater the storm water runoff problem.

Plant root zones also protect our water resources by filtering water running through the ground, where soil microbes help break down chemicals into harmless materials.

Finally, plants reduce erosion, which left unchecked, fills our streams and rivers with silt.

## Wildlife in our Communities

The squirrels and birds that share our habitat depend on the plants that we tend. The California Golf Course Superintendents Association, together with Audubon International, is working to provide critical habitat in our nation's golf courses. With their ponds and large green areas, golf courses are important places for wildlife. But even our own backyards and urban parks provide habitat. Without the flowers, trees and shrubs of our landscapes, the birds we see and take for granted every day cannot survive.

## Quieting the City

Plants absorb the over-loud sounds of the city, most importantly the sounds of traffic. While we all intuitively know this, we tend to take for granted the quieting, calming of leafy streets against the noise of our busy lives.

## Healing

According to research at the University of Delaware, hospital patients with a window view of growing landscape reported a much more positive hospital stay, required fewer painkillers, experienced fewer postoperative complications and generally recovered faster than patients without a landscape view. It seems that our human impulse to bring plants to those that are ill is grounded in fact.

The environmental, economic and societal benefits of plants in our communities are profound. We need them to make it possible to live together in dense urban and suburban communities. As California's population continues to grow, we must increase the amount of plants making our human habitat habitable.

### **California Green Industry Council Objectives:**

- To serve as a forum for the Green Industry in matters of common interest and to strengthen the bonds of our industry by increasing and facilitating inter-association communication and interactions.
- To increase public and industry awareness of the Green Industry and its role with regards to economic, cultural, social and environmental benefits to California and its populations.
- To address industry-wide issues such as legislation, regulations, ordinances, guidelines and where feasible, arrive at a collective Green Industry position on such issues, and take appropriate measures.

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