

# The Great Value of Trees

By Annie Birdsong

A former energy advisor to President Carter made an amazing discovery when he bought a house in Sacramento.

"Even though it was real hot that summer, we almost never needed air conditioning," said David Freeman. The trees in his yard were cooling his home. Research shows that fully grown, properly placed trees can cut home cooling costs by as much as 40 percent, as well as provide many other

benefits. Thus, Freeman, who at that time was the general manager of a community-

owned power company in Sacramento, led the power company to collaborate with the Sacramento Tree Foundation to plant 5 ft. tall shade trees, free of charge, in the yards of customers. Since 1990, the company has planted 450,000 shade trees in the Sacramento area.

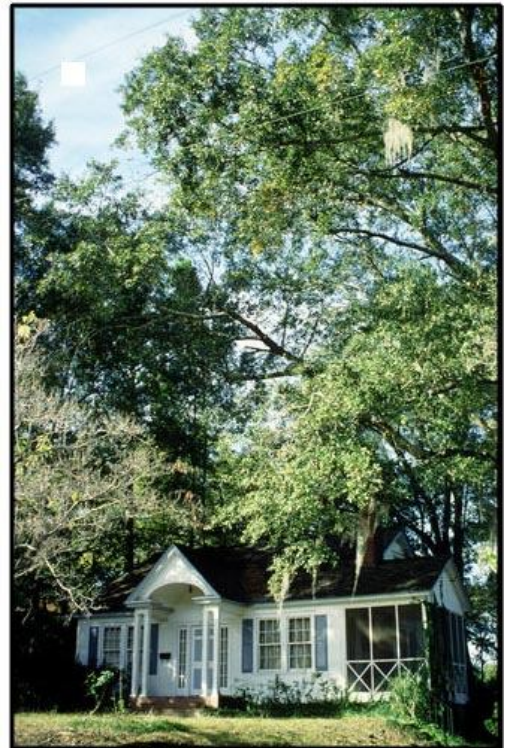


Photo John Krigger

Properly placed shade trees can reduce home heating costs by 40 percent.

Trees not only cut the cooling costs of homes:

- ❖ They are the breath of life and green lungs of the planet. In one year, the average tree exhales enough oxygen for a family of four for a year while inhaling 26 pounds of carbon dioxide, mitigating against global warming, according to the United Nations Environment Program. Trees in the tropical rainforest are especially important. UNEP says these forests contain half of all the trees on earth and generate 40 percent of the world's oxygen.



Photo courtesy of Wikimedia Commons

Redwood National Park, California

- ❖ Trees are pumps that bring up water through the roots of trees, which is then breathed back into the atmosphere from leaves to create rain clouds, affecting climate. One large tree in the Amazon rainforest may breathe 700 tons of water into the atmosphere over the course of a year, according to Dr. Michael Keller, a leading NASA scientist in the Biosphere/Atmosphere Project in the Amazon. That's almost two tons a day, which is a significant amount of moisture considering the Amazon covers an area of forest larger than the United States. Studies show that rainforests affect rainfall in far reaching areas.
- ❖ Trees are natural air filters that keep the atmosphere from degrading by absorbing many pollutants.

- ❖ Trees provide shade that keeps streams cold, enabling salmon and trout to survive.
- ❖ Trees along streams and rivers filter water that flows through them so that it is clear and clean before it enters the waterways.
- ❖ Litter from trees, such as leaves, twigs, needles and pinecones, helps slow down the speed of rainfall runoff, preventing the erosion of stream banks, and keeping fish eggs from washing away.
- ❖ Trees bind soil with dense networks of roots, root hairs and litter so that it doesn't wash away.
- ❖ Trees provide homes for song birds, dens for grizzly bears, refuges where quails can hide from hawks, and habitat for numerous species.
- ❖ Trees act as natural dams as their litter and spongy humus trap rainfall, allowing it to percolate into the earth to recharge groundwater and keep streams stable so they neither flood nor go dry. Forests hold and store 15 times more water than a grassed area and 40 times more than a cultivated field, according to Dr. Albert Todd, who is with the USDA forest Service.
- ❖ Trees are sacred, hushed cathedrals where the spirit can be renewed.