



# PLANT TREES

## to Conserve Energy and Save Money

by Wendy Nadherny Fachon

Properly planted trees placed close to the homes and other buildings can provide significant environmental and financial benefits.

### Trees Reduce Energy Costs

While providing shade during hot summer months, deciduous trees shed their leaves in the fall to allow the sun's energy to help warm homes in winter. A few shade trees, carefully chosen and strategically placed around a single-family home, can reduce air conditioning costs by up to 30 percent and can save 20 to 50 percent in heating costs, according to the *USDA Forest Service*. Meanwhile, Dr. E. Greg McPherson, *Center for Urban Forest Research*, claims if one plants a tree today on the west side of a home, in five years the energy bills should be 3 percent less. In 15 years the savings will be nearly 12 percent.

### Trees Reduce Water Bills

Shade slows water evaporation from thirsty lawns and reduces the need for watering. Most newly planted trees need only 15 gallons of water per week. In addition, trees transpire and add moisture to dry air to help create dew and rain.

### Trees Increase Real Estate Values

Landscaping with trees can increase the value of a home up to as much as 15 percent. Trees provide shady cool spaces to play and relax, and they make a property more attractive.

### Trees Improve Water and Air Quality

Trees help to mitigate storm water flooding and runoff that carries pollutants to the ocean. They collect rainfall and guide the water down the trunk into the earth. Trees surrounded by mulch act like a sponge to absorb and filter this water naturally, helping to recharge the groundwater supply. Trees also reduce air pollution and carbon gas, while producing oxygen. Trees not only improve the quality of the

environment, but they help reduce health costs, too.

### Choose Fast Growing Shade Trees

To derive the benefits of tree plantings as soon as possible, select fast growing species. Here are four varieties that grow quickly in New England:

- **Red Oak** is the fastest growing variety of oak, providing a leafy canopy and a steady supply of acorns for squirrels, deer, turkeys and other wildlife.
- **Red Maple** adds a burst of color in the fall and can be tapped for syrup. Compared to the Sugar Maple, Red Maple is more resistant to ozone and acid rain, and is less susceptible to insect defoliation. Forest tent caterpillars avoid it altogether. Red Maple will grow to about 40 feet tall.
- **American Sycamore** is an intriguing hardwood with broad leaves and camouflage-patterned bark that sheds each summer. It may grow as much as six feet per year and reach heights of 70 feet or more.
- **Northern Catalpa** offers a great canopy of large leaves and large, showy, pleasantly-scented flowers that attract and nourish bees.

### Place Trees in Most Advantageous Location

Research forester Geoffrey Donovan and economist David Butry co-authored a report in 2009 titled *The Value of Shade: Estimating the Effect of Urban Trees on Summertime Electricity Use*. Some of the key findings were:

- The placement of a tree is the key to energy savings. The amount of the savings depends on the location of the tree.
- Trees planted within 40 feet of the south side or within 60 feet of the west side of the house generate about the same amount of energy savings. This is because of the way shadows fall at different times of the day.
- Tree cover on the east side of a house has no effect on electricity use.

### Provide Saplings With Proper Care

Local nurseries and online resources offer a wealth of information for choosing and planting saplings. By giving young trees care and attention, a little discipline, and consistent structure in the first five years, damage due to wind, draught and parasites can be prevented.

Early fall is an ideal time to plant trees, because of the cooler temperatures and higher levels of rainfall. Fall is also a good time for individuals to survey their properties and consider planting trees to enhance the neighborhood and contribute to economic and environmental sustainability of the greater community.

*For additional resources and information on a Tree Stewards Education course, visit the Rhode Island Tree Council at [RITree.org](http://RITree.org).*

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