

Trees provide big savings for every dollar invested by increasing property values, saving energy

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Trees beautify a neighborhood, increasing property values and creating a more sociable environment. Credit: USDA Forest Service, Center for Urban Forest Research

Trees can provide beauty and shade in urban areas, but they also can improve air quality, conserve energy, reduce carbon emissions, and filter storm water. A new publication released by the Pacific Southwest (PSW) Research Station/USDA Forest Service can help residents along the northern California coast to calculate these benefits.

The "Northern California Coast Community Tree Guide: Benefits, Costs, and Strategic Planting," is the latest in a series of Forest Service publications that help people to quantify the tangible and intangible

benefits of urban forests. It is a joint product of the station's Center for Urban Forest Research and the University of California, Davis.

"The northern California coast, which includes the area between Brookings, Ore., and San Luis Obispo, Calif., accounts for the largest proportion of total benefits to residents, businesses, and communities," explains Greg McPherson, lead author and station research forester. "We used measurements gathered through in-depth research of urban trees in Berkeley to model the annual benefits produced by [tree species](#) of certain sizes and we compared maintenance costs, like planting and irrigation, to benefits."



Compared with small trees, large trees can store more carbon, filter more air pollutants, intercept more rainfall, and provide greater energy savings. Credit: USDA Forest Service, Center for Urban Forest Research

McPherson and his colleagues' results show that the quantity of the

average annual net benefits increases with tree size—large-stature trees, for example, produce the highest benefit-to-cost ratio. His research team also found that, over a 40-year period, 100 large street trees provided \$516,800 in benefits, far outweighing their \$113,400 maintenance costs. The net benefit was \$403,400; or for every dollar spent on tree management, residents receive \$4.56 in benefits.

"This tree guide can easily be adopted for use by people in communities in this [climate zone](#) to calculate future benefits from proposed and existing tree planting projects," says McPherson. "It also gives advice on strategic selection and location of [trees](#) to maximize benefits."

More information: The research information and findings are integrated in "i-Tree Streets," a free software program, which is now used by more than 5,700 people worldwide. The software combines tree inventory, benefit, and cost data to report on the structure, function, and value of municipal forests. To download i-Tree, visit www.itreetools.org

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Provided by USDA Forest Service

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