



USDA Forest Service PNW Research Station

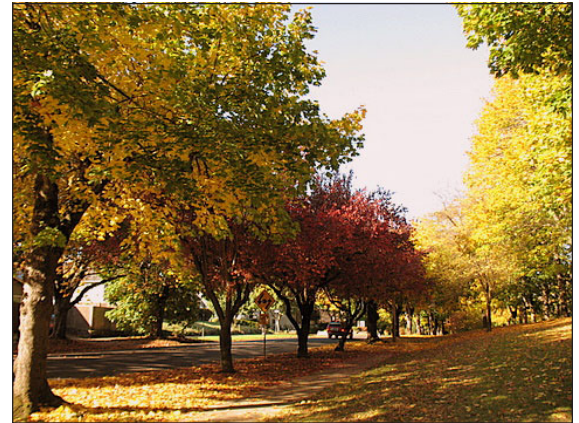
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The Value of Street Trees in Portland, Oregon

Main findings

- Benefits of street trees in Portland far outweigh their costs. Estimated benefits are \$45 million annually, compared to annual maintenance costs of \$4.6 million.
- Street trees also increase annual property tax revenues for the City of Portland by \$13 million.
- Benefits of street trees spill over to neighboring homes. Therefore, if left solely to homeowners, there will be too few trees from a community perspective.



What are the benefits and costs of urban forestry?

Urban trees have often been taken for granted in the past. However, urban sprawl and loss of open space have focused attention on the benefits of urban trees. By examining how trees affect house prices, we demonstrated that the benefits of street trees in Portland far outweigh their costs.

What are Portland's street trees worth?

Few previous studies have looked at the impact of street trees on the housing market, and those that did only examined the effect of the number of trees. In this study, we tested whether a wide range of tree attributes such as species, basal area, and height influenced sales price. We found that only crown area within 100 feet of the house, and number of trees fronting the house were significant. When combined, these two variables add an average of \$7,020 to the price of a house, which is equivalent to adding 106 finished square feet to a house. Extrapolating our results to the entire city, the total value of Portland's street trees is \$1.1 billion, which compounded into the future is equivalent to a perpetual benefit of \$45 million annually. For comparison, the City of Portland estimates that the annual maintenance of Portland's street trees costs \$4.6 million, of which \$3.3 million is borne by private landowners.

What are the property tax benefits of street trees?

Assuming street trees also increase the assessed value of houses, they increase annual property tax revenues for the City of Portland by \$13 million.

Do street trees provide benefits to neighboring houses?

The answer is yes. For example, a tree with a canopy cover of 312 square feet (the average for our study) adds \$7,593 to the house it fronts. However, it also positively influences the prices of houses within 100 feet. On average, there are 7.6 houses within 100 feet of a street tree. Therefore, a tree with 312 square feet of canopy cover adds, on average, \$9,241 to the value of neighboring houses.

What do these spillover benefits mean?

Currently Portland homeowners are responsible for the maintenance costs of the street trees outside their homes. Although these trees provide benefits to the homeowner, they also provide benefits to neighboring homes. As homeowners bear all the costs of street tree maintenance, but do not receive all the benefits, if the provision and maintenance of street trees is left to individual homeowners, there will be too few street trees in Portland from a community perspective. Therefore, the City of Portland should consider increasing its urban forestry investment by subsidizing the cost of planting more trees, or perhaps providing homeowners with a property tax break depending on the number and size of trees they maintain.

In summary, our study indicates that the benefits of street trees in Portland far outweigh their costs. An increase in urban forestry investment in Portland is likely to yield substantial benefits.