



# TREE FUND Report



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## Funding for Urban Tree Research Seriously Lacking

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Urban trees add significant and increasing value in our ever-growing society. Funding levels for urban tree research, however, may not be adequate to sustain and grow urban forests. This article takes a supply and demand approach to analyze the funds that might be available against the projected need for research dollars.

### *Demand for Funding*

In 2013, the estimated demand for urban tree research money was \$20M. This figure was derived by first estimating the number of researchers that might be conducting research on urban trees in academic programs, public gardens, governmental agencies, and private firms (522 total). The potential researcher pool was also estimated by tallying the number of urban tree papers published in scientific journals in 2013 (552 total). Both approaches suggest roughly 500 researchers are competing for funding. The cost to conduct research was estimated by informally surveying all TREE Fund grant recipients from 2004 to 2013. The mean cost per publication from the survey respondents was \$40,566. Assuming each of the 500 researchers publishes one paper per year, the cost for urban tree research in 2013 was \$20M.

### *Funding Supply*

In 2013, the supply of urban tree research money was estimated to be \$10M. 90% of this funding was derived from federal sources, mainly USDA Forest Service programs. Unfortunately, these programs represent a very small and declining fraction of the total federal research and development budget. In 2013, only 1.7% of federal research funds were distributed to the USDA and a mere 3.8% were given to the National Science Foundation (NSF). Funding for applied and basic research declined 8.9% and 14.2%, respectively. Worse yet, urban tree research is not a top priority for either agency. The trends in federal funding suggest that future researchers will need to rely more on other sources for funding. State funding generally supports tree planting and inventory projects rather than research. Private sources are varied and difficult to quantify. In 2013, the major private funders were Horticulture Research Institute (\$306,000), Sustainable Forestry Initiative (\$250,000), and the TREE Fund (\$147,000). In the end, an optimistic estimate is that \$10M (mostly federal funding) was available to research urban trees in 2013.

### *Demand > Supply*

By these calculations, the supply of urban tree research funding was about half of the demand in 2013, and there is no evidence that this deficit will change anytime soon. The gap means few projects will potentially be funded, and it leaves little room for expansion and innovation in the field of urban tree research.

### *TREE Fund*

The TREE Fund is not only an important resource in an ever-shrinking funding pool, but it also fuels urban tree research by getting projects started and cultivating innovation. Many early-career scientists rely on TREE Fund grants as seed money to build research projects and programs. In an informal survey of TREE Fund research grant recipients (those with fewer than 30 publications and less than \$1M in total career grants for research), approximately 40% of their research funding came from the TREE Fund. Many of these researchers then leverage TREE Fund grants to obtain higher levels of funding over time. Since the demand for urban tree research dollars is likely to remain greater than the funding supply for the foreseeable future, non-governmental funders like the TREE Fund are increasingly crucial. In the words of a recent TREE Fund research grant recipient, “TREE Fund dollars have been absolutely CRITICAL for me to continue to do research in urban forestry/arboriculture because these are some of the few funds that actually are targeted to exactly what I want to do.”

