THE UNIVERSITY OF ARIZONA

Campus Arboretum
College of Agriculture and Life Sciences

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RE: AASHE STARS Innovation Credit

Dear AASHE STARS Program Staff:

This letter is being submitted in support of the University of Arizona's STARS documentation for an innovation credit for the University of Arizona's Campus Arboretum Carbon Inventory and Tree Benefits Analysis.

What is a tree worth? It's hard to put a price on the value trees add to our communities—harder still to put a price on nearly 8,000 of them. But that's precisely what University of Arizona students are doing.

The UA Campus Arboretum consists of 7,810 mature trees spread across 387 acres, the oldest continually maintained green space in Arizona. Though in some ways these trees are priceless, weaving the campus together like a green thread, in fact each of these unique trees contributes a quantifiable value to the campus and greater community.

As the growing university expands within its borders, assessing and assigning value to these trees is a crucial step in preserving their continued presence within the campus landscape. So UA students and faculty, along with the City of Tucson's Office of Conservation and Sustainable Development, have initiated a comprehensive study to quantify the value these trees contribute to the university and Tucson community.

Six UA students are involved in the project, and will traverse the campus from February to May to inventory and assess every one of those 7,810 trees. Students are collecting data using i-Tree software, which was developed by a former UA professor, Greg McPherson, who now heads the Center for Urban Forest Research at the University of California at Davis. Though the software is now used to catalogue trees around the world, it is rarely used on university campuses. In fact, only 2 individuals in southern Arizona are trained to use the software. With the completion of the arboretum inventory project, the six UA students will quadruple that number.

The i-Trees software considers both economic and environmental components, providing a comprehensive evaluation of a tree's role in the local ecosystem. Environmental benefits considered in tree valuation include atmospheric carbon reduction, air quality benefits, stormwater runoff reductions, as well as aesthetic and other benefits. Many economic considerations are direct, such as maintenance expenses, but others are indirect, such as the replacement value of large trees and energy cost savings. For example, by lowering the campus temperature and shading buildings, the nearly 8,000 trees of the Campus Arboretum save the university thousands of dollars every year in energy costs.

In addition to environmental and economic benefits, the arboretum offers unique educational opportunities. The UA arboretum contains 522 distinct species of trees, including 12 one-of-a-

kind species, found nowhere else in the world, and 4 heritage trees. Species in the collection were selected from around the world due to their adaptations to arid landscapes, which provides students and scholars the chance to study a diverse array of drought-resistance horticulture and arid lands ecosystems within a narrow space.

By quantifying the value that specific trees add to the campus landscape, the project not only provides a justification for further plantings, but also hones in on those species that offer the greatest return on investment—the greatest bang for leafy buck.

Sincerely,

Tanya Quist
Associate Professor of Practice, Plant Sciences
Director, UA Campus Arboretum