

Trees provide important environmental services including carbon sequestration, pollution mitigation, cooling, and aesthetic and psychological value. This project inventoried trees at the 46-acre University of Washington Tacoma campus to inform management and planning. Campus leaders are planning for growth, which will necessitate land development. As the campus is further developed, existing trees will be at risk, so it will be helpful for leaders to know the value of these trees when making decisions. From 2024–2025, the species, location, and growth characteristics of trees were documented. The collected data were submitted to the forestry software i-Tree Eco to quantify the environmental services provided and the attendant dollar values. The 400 trees assessed store an estimated 146.45 metric tons of carbon and sequester approximately 3.5 tons annually, with a total replacement value of \$677,717. Combined, they provide an estimated \$1,403 per year in stormwater mitigation and air pollution removal, although trees near residential buildings increase net energy costs. Trees on the Tacoma campus have a lower value of services provided per tree than the trees on the Seattle campus, likely due to the more advanced maturity of the Seattle population. An interactive digital map was created with ArcGIS to make the inventory data accessible to stakeholders and future researchers. This work provides a baseline urban forest inventory for the UW Tacoma campus, provides ecological and economic information to guide sustainable decision-making as the campus building footprint expands, and provides a foundation for future study.