Using iTree Model in Clark County, Nevada

Angela Hammond and Nita Tallent-Halsell, Ph.D.

Ecosystem services are the services and benefits that human populations obtain from nature. Whether surrounded by a forested, coastal, or urban area, ecosystems provide recreation, food, shelter, cleaner air and water. As the climate and environment change due to human activity, an understanding of the existing natural resources becomes paramount. By utilizing local budget information, public tree inventory data and iTree software, the ecosystem services provided by the urban forests of Clark County, Nevada are becoming quantified and tangible. iTree is a free, peer-reviewed software suite developed by the USDA forest service that can provide information on species distribution and the monetary benefits of an urban forest in the categories of energy, storm water, air quality, carbon dioxide, carbon stored, and aesthetic value.

Results for Wards 1, 3, and 5 of the Clark County area suggest an annual net monetary gain from maintaining the current urban forest, though the most prevalent species in the sampled area is the Mexican Fan Palm. Future studies will focus on utilizing the different iTree modules for a more detailed understanding of the entire Clark County, Nevada urban forest. In the future, the Ecosystem Services Research Program, ESRP, will be able to utilize urban forest data to develop tools for resource managers to assess, maintain, and develop their local urban forest and provide the public with educational resources to make informed decisions regarding their urban environment.

Keywords: tree, inventory, ecosystem services.