UNRI SCIENTISTS AT WORK

UFORE
Urban Forest Effects Model

UFORE is an acronym for "Urban Forest Effects" and refers to a computer model that calculates the structure, environmental effects and values of urban forests. The UFORE model was developed by UNRI researchers at the United States Department of Agriculture (USDA) Forest Service, Northeastern Research Station in Syracuse, NY.

The UFORE computer model was developed to help managers and researchers quantify urban forest structure and its functions. UFORE is designed to use standardized field data from randomly located plots, and local hourly air pollution and meteorological data to quantify urban forest structure and numerous urban forest effects for cities across the world. The model calculates numerous attributes about the urban forest, including:

- Species composition
- Diameter distribution
- Tree health
- Species diversity
- Exotic vs. Native species distribution

"A common use of UFORE results is to educate managers and the public on the type, value and extent of the economic benefits of the urban forest."

The UFORE computer model calculates the structure, environmental effects and values of urban forests.

The model also calculated various forest functions and values related to tree effects on:

- Air pollution
- Greenhouse gases and global warming
- Pollen
- Building energy use

FUTURE DEVELOPMENT

Other forest functions, modules, and improvements are currently being developed and will be released over the next several years. These include:

- Improved growth formulas for all regions of the country
- Future population projector
- Pollution removal
- Biogenic emissions
- Potential pest effects of new insects and diseases
- Species selector module that will select suitable trees based on desired forest functions
- A GIS module that will integrate standard Landsat (30 meter) urban tree cover maps

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