PowerTrees Collaborative

Assuring Reliable Power and Healthy Trees

The Challenge

Prolonged power outages resulting from natural disasters—Hurricane Hugo in 1989, the 1998 North American ice storm, and more recently, Hurricane Isabel in 2003 —left millions without power for days. Investigations revealed that trees were involved in a high percentage of the outages. High winds, saturated soils, and poor species selection collectively contributed to tree failures. Many of the failures could have been prevented if proper tree selections were made when the trees were planted.

The Solution

A coalition called the *PowerTrees Collaborative* was organized to support long-term efforts to breed tree species that are more adaptable to urban utility sites. The term PowerTrees was coined to reflect the commitment to developing trees that can successfully grow near powerlines. Coalition partners include the USDA Forest Service and Agricultural Research Service National Arboretum; Maryland Department of Natural Resources; utility companies within the Washington, DC and Maryland metropolitan area; Washington, DC Urban Forestry Administration; University of Maryland; Maryland Electric Reliability Tree Trimming Council; and the Utility Arborist Association. The coalition is also working with green industries to grow and market better-adapted tree species and reduce costs associated with cyclic pruning.

The National Arboretum has grown 244 trees in a new pot-in-pot nursery. They have analyzed tree growth data to identify tree species best adapted for use at urban utility sites. The collaborative has partnered with Greenbelt, MD, and Blair Montgomery High School to develop demonstration planting sites. A total of 119 trees have been outplanted in Hyattsville, Lanham, Landover Hills, and Glenn Dale, MD; and in Washington, DC to monitor the growth, health, and adaptability of the new species.

Partnerships are making the PowerTrees Collaborative successful by increasing awareness of the impact that trees have on reliable power transmission, breeding better-adapted trees, and promoting proper tree selections.

Conflicts between large trees and utility lines have a great impact on reliable power transmission and long-term tree health.

Resulting Benefits

The innovation of the PowerTrees Collaborative lies in its partnerships and approaching the "right tree in the right place" concept from a much broader perspective that supports tree breeding, research, growing, and planting. PowerTrees efforts will increase awareness that each person has a responsibility to assure the safe and reliable transmission of power through proper tree selection near powerlines. This effort, in turn, will assure healthier trees and increase the benefits received from those trees.

Sharing Success

Future plans include a daylong compendium to target new partners, educational signs at planting sites, press events during Arbor Day, and outreach to growers and other arboreta. This work represents a new way to think about how to gauge the value of new tree species introductions. In time, these efforts may serve as a foundation for many new opportunities for urban forestry, the National Arboretum, utility partners, and communities across the region.

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