



FEMA

Electric Utility & the Community Partnerships Reduce Damage From Trees

New England Region - Since 1990, New England has experienced more than 30 storms including one hurricane, four nor'easters, one downburst and three major winter storms. The total cost of these storms to electric utilities in the region is estimated to be more than \$100 million.

Nationwide, trees are the leading cause of electrical outages. Tree damage from storms has a devastating effect on electric utility infrastructure and is a mutual hazard to public roadways. Public safety is threatened when critical facilities, such as those for fire and police, hospitals and nursing homes; as well as water pumping stations and sewerage treatment facilities, have extended power outages.

In 1995, 32 communities in Massachusetts and Rhode Island formed Tree Stewardship partnerships with Eastern Utilities to reduce tree damage from storms. A risk assessment was conducted to determine the characteristics of trees that pose an above average threat to arterial power lines and roadways. In addition, analysis was conducted to evaluate system performance of the electric utility infrastructure.

The tree population assessment revealed less than 20 percent of trees caused more than 70 percent of damage in storms. These trees have characteristics that indicate structural weakness. The system performance analysis indicated 25 percent of the electrical circuits were causing 65 percent of outages in storms.

Since the Tree Stewardship partnerships began, damage from trees to arterial power lines was reduced by 35 percent per storm. Storm costs were reduced by 30 percent per storm, and these results were achieved with no incremental increase in budgets. Over \$1 million in storm costs have been avoided.



State-wide,
Massachusetts



Quick Facts

Sector:

Public

Cost:

\$0.00 (Estimated)

Primary Activity/Project:

Land Use/Planning

Primary Funding:

Local Sources