



June 6, 2024

Community Advisory Panel Vegetation Management Program



KUB | BLUEPRINT



Our Vision

KUB creates connections and enhances the quality of life in our East Tennessee communities so everyone can thrive.

Our Mission

KUB exists to serve its customers as a trusted partner and steward, providing industry-leading energy, water, and fiber optic services.

We Value

Our Customers

- Our services are safe, reliable, and affordable
- We are committed to great customer service
- Our decisions consider everyone's needs

Our Co-workers

- We put safety first and take care of each other
- We take pride in our hard work and expertise
- We invest in our people

Our Community

- We are committed to a cleaner environment
- We are personally invested in our community
- We help our region grow

Our Culture

- We always do our best and strive for better every day
- We hold ourselves to high ethical standards
- We value diversity, equity, inclusion, and belonging for all

Vegetation Management



Vegetation Management Program

Tree Line USA

- Recognized as a Tree Line USA Utility for 22 consecutive years by the Arbor Day Foundation and the Tennessee Urban Forestry Council.
- Five Core Standards
 - Quality Tree Care
 - Annual Worker Training
 - Tree Planting and Public Education
 - Tree-Based Energy Conservation
 - Arbor Day Celebration



Vegetation Management Program Community Partnership

Project partner in the development and implementation of the Knoxville Urban Forest Master Plan



Vegetation Management Program

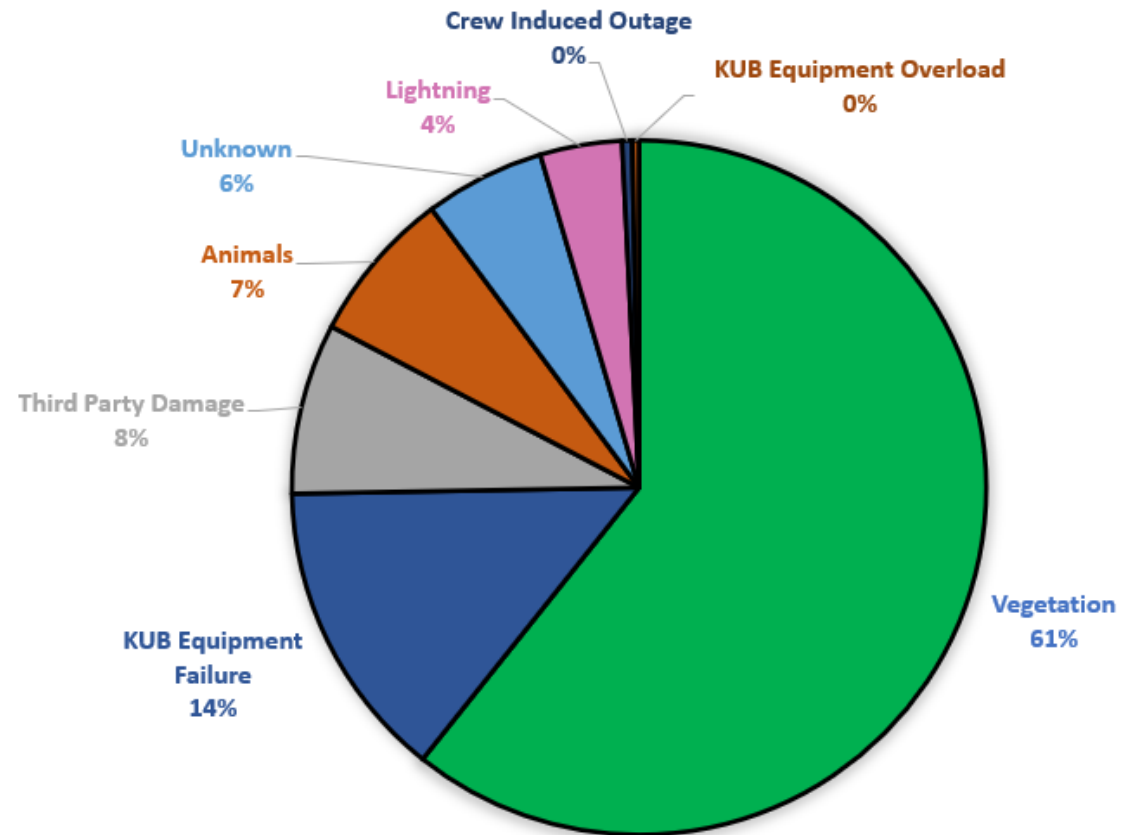
Right Tree Right Place

- Educates customers about not planting trees in the utility maintenance zone
- Provides information on native species and maturity size
- Educates on prioritizing tree plantings to maximize shade and lower cooling costs
- Provides tree planting tips and tree care
- Call before your dig to locate underground utilities



Why Vegetation Management

CMI CAUSED BY VEGETATION FY23 (IEEE EVENTS EXCLUDED)



Vegetation Management Electric Maintenance Program

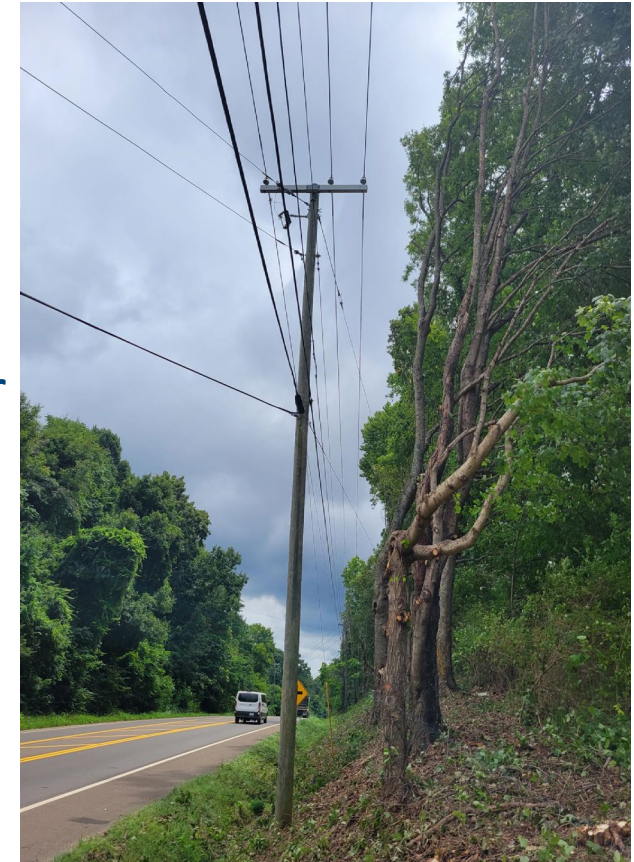
Subtransmission

- 265 miles
- 5-year cycle
- Approximately 50 miles per year



Distribution

- ~ 4,000 miles
- 3–5-year cycle
- Approximately 950 miles per year



Integrated Vegetation Management Methods

- Implementation of strategies to minimize the establishment of incompatible species in the utility maintenance zone
 - Tree pruning
 - Brush removal with power saws and equipment
 - Judicious use of herbicides
 - Hazard tree identification and removal

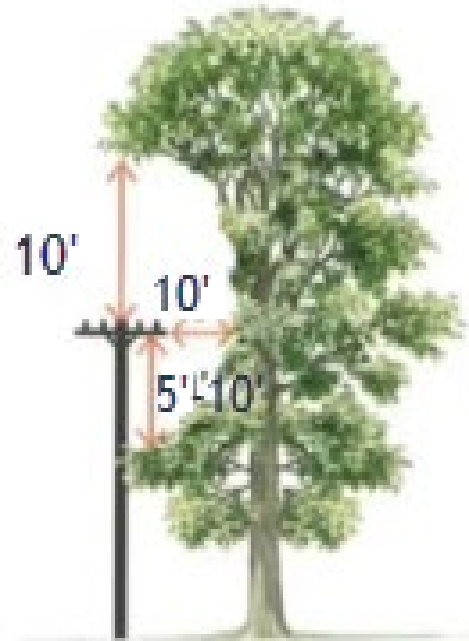


How We Prune – Lateral Pruning

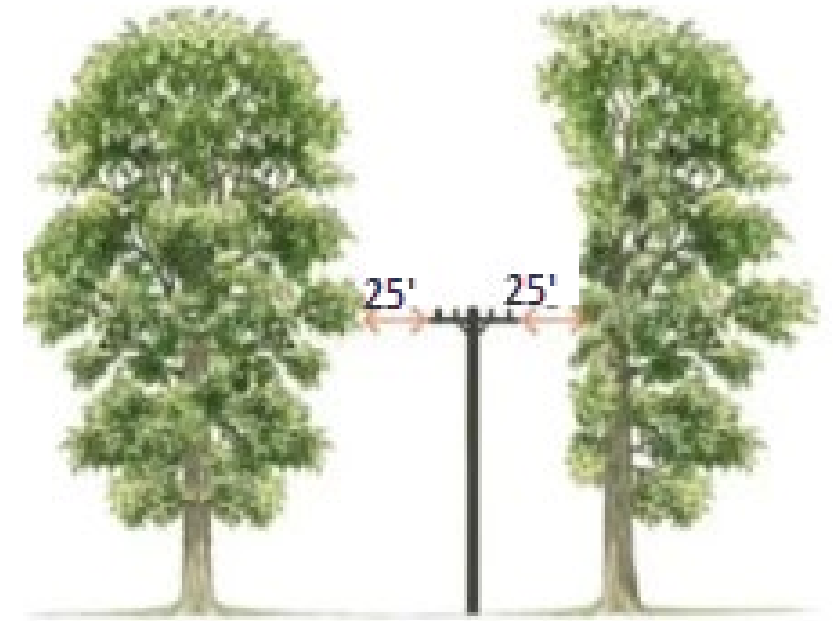
Lateral Pruning

- Cutting to the parent limb
- Reduces impact to tree health
- Trains the tree to grow away from electric wires
- Recommended by the Arbor Day Foundation and the American National Standards Institute
- KUB does not “top” or “round” trees

Distribution



Subtransmission



Vegetation Management Programs

Herbicide Application

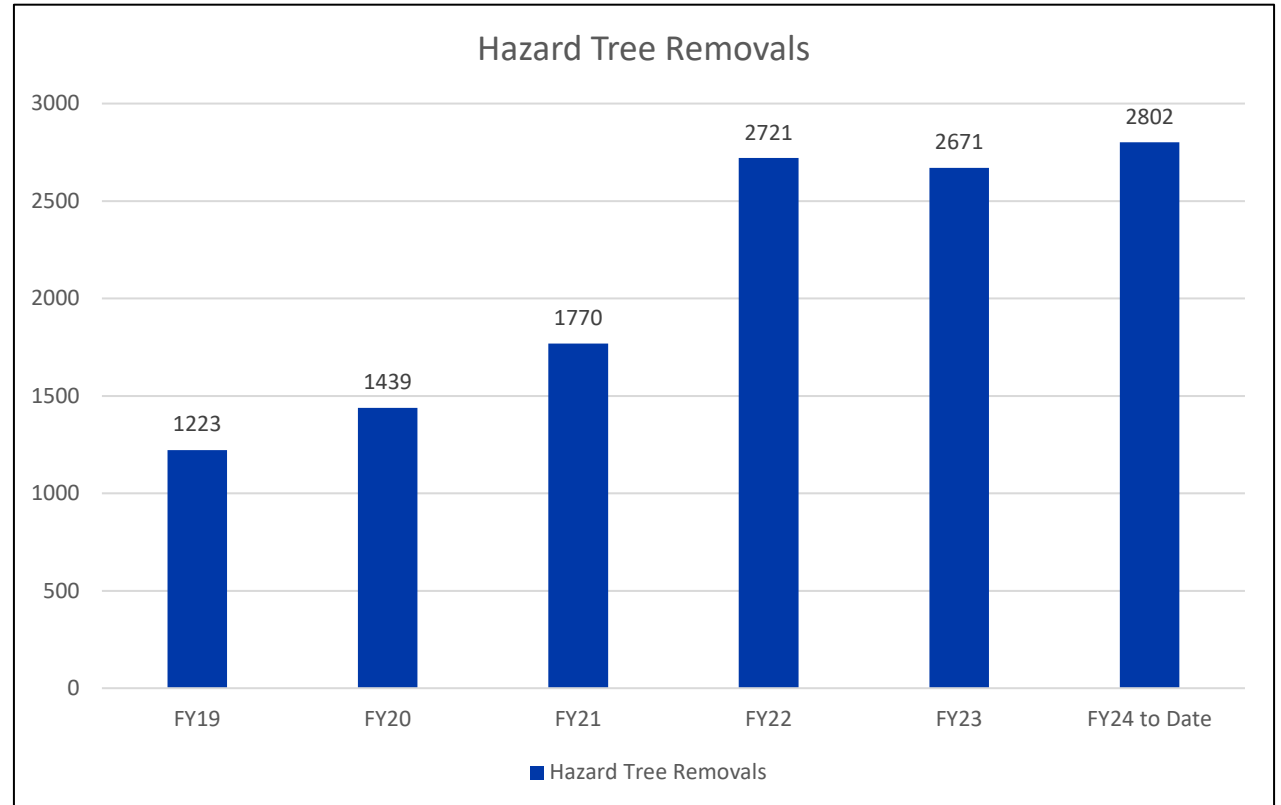
- Cut stumps
- Rights of way
- Vines on utility poles
- Bare ground facility application



Vegetation Management Programs

Hazard Tree Removals

- Focus on tree removals in rights-of-way that are dead, diseased or possess other failure risk factors
- Identify during circuit trimming and capital construction jobs
- Post storm follow-up program to inspect the most impacted circuits and remove high risk trees



Vegetation Management Staffing

- Nineteen KUB staff employees
 - 1 Supervisor
 - 2 Team Leads
 - 12 Foresters
 - 4 Support Staff
 - 1 KUB Tree Crew
- Twelve prequalified contractors to perform vegetation maintenance activities
 - 30 – 50 crews
- Support five utilities



Tree Trim Policy Review Panel

- February 2010 – KUB established the Tree Trim Policy Review Panel
- November 2010 – Panel presented KUB with their report
 - 75 panel recommendations
 - 150 action items
 - All but four were indorsed by KUB Board of Commissioners
- 2011 – 2012 – Phased implementation of recommendations
- January 2012 – Year-end progress report submitted
- November 2012 – Final progress report submitted to Board implementing actions endorsed in Resolution 1234

Aesthetics, Implementation, & Preventative Actions In-House Staffed Foresters

- Panel recommended in-house foresters
 - KUB disagreed at the time due to additional costs
- Current Process
 - No longer utilize contract foresters
 - Ten staff foresters added in 2022
 - Professionals with four-year forestry or natural resource degrees
 - ISA Certified Arborist
 - Oversees circuit trimming and removal operations, and auditing contractor's work for compliance to KUB's specifications
 - Improved communication with customers



Aesthetics, Implantation, & Preventive Actions

Tree Replacement Program

- Enhanced program by offering a wider variety of low-growing species
- Offering additional replacement trees to customers in tree equity outreach areas
- Developing an educational mailing after each planting to include tree care, Call 811, and Right Tree Right place



Planted 466 Replacement Trees in FY24

Aesthetics, Implementation, & Preventative Actions

Coordinate Scheduling of Circuits

- Panel requested pruning of 13kV and 69kV within the same neighborhoods be completed at the same time.
- KUB adjusted the schedule and modified contract for distribution and subtransmission lines to prune at the same time.

Current Process

- 69kV Maintenance Program was implemented to ensure all sub-transmission lines are completed on a five-year cycle.

Dispute Resolution Vegetation Management Customer Advocate

- Vegetation Management Customer Advocate
 - Created to resolve elevated customer tree pruning concerns
- Recommendation
 - Dissolve advocate role and process issues through Customer Support



Aesthetics, Implantation, & Preventive Actions Overhang Removal

Adopted Panel recommendation

- Remove established overhang above the 10-foot clearance zone only if it is dead, diseased, weak, or possesses other failure risk characteristics.

Recommendation

- *Remove established overhang to improve safety, reliability and repair costs.*



Discussion

KUUB

KNOXVILLE
UTILITIES BOARD