

Chevy Chase Village

Report on PEPCO Vegetation Management Program in The Village

Tolbert V. Feather
Town Arborist

Line Clearance Pruning

1. The Authorities that allow PEPCO to prune tree for line clearance include: The Maryland Public Service Commission and The Maryland Department of Natural Resources Forests and Parks.
2. PEPCO prunes trees for line clearance on a 2 to 4 year cycle. The extent of branch removal is determined by the frequency of the pruning cycle and the type of tree. Usually a zone of 10 feet is cleared around the wires.
3. PEPCO is under regulation to prune trees properly according to national standards.
4. The type of wires and number of overhead wires influences the type and extent of clearance pruning.
5. The Village does not have direct control over clearance pruning by PEPCO. However, the Village does meet with PEPCO to discuss the type of clearance pruning to be done and try to minimize the extent of pruning. The Village also monitors to make sure that the crews are pruning trees according to standards.

Pruning Authority for Line Clearance

Maryland Public Service Commission

http://webapp.psc.state.md.us/Intranet/info/Inthedark_new.cfm

PREVENTIVE MEASURES

Code of Maryland Regulations 20.50.02.01 requires utilities to provide safe, reliable, and adequate service. The regulation specifically requires that “the electric plant of the utility shall be constructed, installed, maintained and operated in accordance with accepted good engineering practice in the electric industry to assure, as far as reasonably possible, continuity of service, uniformity in the quality of service furnished, and the safety of persons and property.”

It is impossible to prevent outages entirely. However, **utilities use preventive measures**, such as those listed below, to improve reliability of service:

Lightning arrestors

Grounded shield wire

Tree-trimming

Tree wire and fully insulated aerial cable or partially insulated cable in heavily treed areas.

Wildlife protection (squirrel guards)

Regular inspections using ground and aerial patrols

TREE TRIMMING

While there are no Public Service Commission guidelines or regulations specifically concerning a utility’s tree trimming practices, tree trimming is one of the accepted methods used by a utility to maintain its equipment. In past years, tree trimming was primarily done only when utilities received reports of trees causing outages or safety hazards. **However, in the last few years, most utilities have begun “Vegetation Maintenance Programs,” which involve trimming back growth near the utility’s lines according to a regular maintenance schedule. Tree trimming is also performed as needed to correct existing tree interference or safety hazards.**

Pruning Authority for Line Clearance

Maryland Department of Natural Resources Forest and Parks

<http://www.dnr.state.md.us/forests/programapps/newrtlaw.asp>

Title 08 DEPARTMENT OF NATURAL RESOURCES

Subtitle 07 FORESTS AND PARKS

Chapter 02 Roadside Tree Care

Authority: Natural Resources Article, §§5-209 and 5-406, Annotated Code of Maryland

B. Tree Clearance for Overhead Facilities.

- (1) In addition to the requirements of §A of this regulation, a person who trims a tree to provide clearance for utility wires, cables, or other facilities shall:
 - (a) Allow sufficient clearance for 2 years growth normally expected after trimming, unless otherwise directed by the Forest Service;
 - (b) Take into account the health of the tree; and
 - (c) Make proper cuts that direct growth away from overhead wires and facilities in compliance with safety standards and government regulations.
- (2) If a trimmed tree dies within 1 year or is in poor condition of growth as a result of that trimming, the permittee shall, if required by the Forest Service, remove the tree and plant replacement trees.
- (3) Replacement trees shall be:
 - (a) Furnished by the permittee;
 - (b) In good condition;
 - (c) Of a recommended size and species; and
 - (d) Properly planted at locations to be determined by the Forest Service.

PEPCO Statement on Line Clearance Pruning

PEPCO

<http://www.pepco.com/home/emergency/veg/faq/>

Vegetation Management Frequently Asked Questions

Trees add to the beauty of our community, but trees growing too close to power lines can be dangerous. Tree limbs coming into contact with power lines are major causes of power outages. By pruning trees before outages happen, we can help maintain reliable electric service.

Q | How often do you prune trees?

A | **Pepco's scheduled tree maintenance is based on a two-to-four year cycle**, such that half the public-space trees in our District of Columbia and Maryland service area are maintained each year. The types of trees in our area generally need pruning every two to five years. Each tree's size, shape and growth rate are taken into consideration. Maintenance may include pruning or removing branches that are too close to power lines, or in some cases, removal of entire trees.

Q | How much will you prune from the trees?

A | The amount of pruning varies based on tree type, growth habits, tree health and relative location to the power lines.

Q | What standards do you follow?

A | **Pepco's tree pruning is performed following the standards and practices as outlined by the American National Standards Institute (ANSI) publication A300.** This standard for line clearance is followed by nearly all electric utilities in the United States. Pepco also works with the D.C. Department of Transportation/Urban Forestry Administration to comply with its tree-pruning practices, and with the Maryland Department of Natural Resources.

ANSI A300 (Part 1)-2001 Pruning Revision of ANSI A300-1995

for Tree Care Operations — Tree, Shrub, and Other Woody Plant
Maintenance — Standard Practices (Pruning)

PEPCO must follow these
standards for pruning.

5.3 Pruning cuts

5.3.1 Pruning tools used in making pruning cuts shall be sharp.

5.3.2 A pruning cut that removes a branch at its point of origin shall be made close to the trunk or parent limb, without cutting into the branch bark ridge or collar, or leaving a stub (see Figure 5.3.2).

5.3.3 A pruning cut that reduces the length of a branch or parent stem should bisect the angle between its branch bark ridge and an imaginary line perpendicular to the branch or stem (see Figure 5.3.3).

5.3.4 The final cut shall result in a flat surface with adjacent bark firmly attached.

5.3.5 When removing a dead branch, the final cut shall be made just outside the collar of living tissue.

5.3.6 Tree branches shall be removed in such a manner so as not to cause damage to other parts of the tree or to other plants or property. Branches too large to support with one hand shall be precut to avoid splitting of the wood or tearing of the bark (see Figure 5.3.2). Where necessary, ropes or other equipment shall be used to lower large branches or portions of branches to the ground.

5.3.7 A final cut that removes a branch with a narrow angle of attachment should be made from the outside of the branch to prevent damage to the parent limb (see Figure 5.3.7).

5.3.8 Severed limbs shall be removed from the crown upon completion of the pruning, at times when the tree would be left unattended, or at the end of the workday.

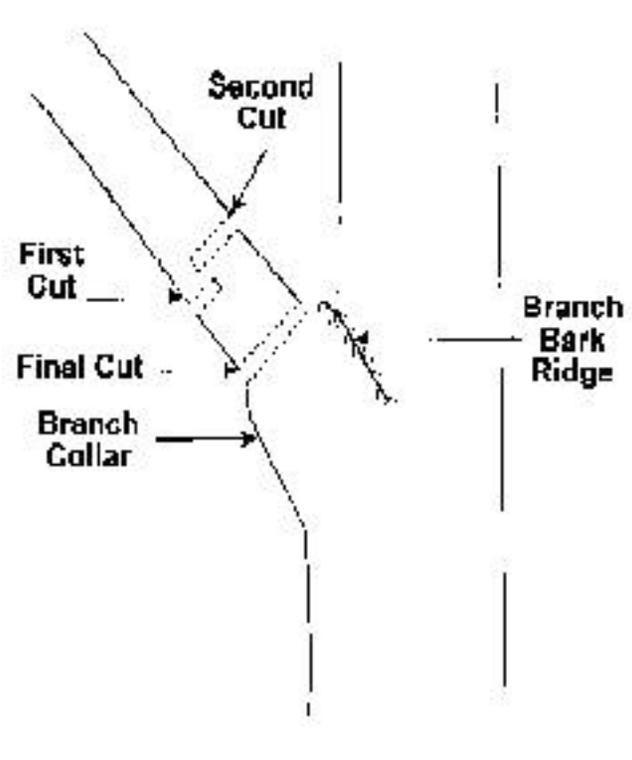


Figure 5.3.2. – A pruning cut that removes a branch at its point of origin shall be made close to the trunk or parent limb, without cutting into the branch bark ridge or collar, or leaving a stub. Branches too large to support with one hand shall be precut to avoid splitting of the wood or tearing of the bark.

Overhead Wire Organization

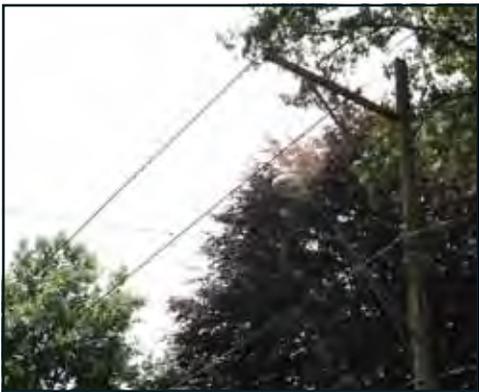


Primary High Voltage Wire Configuration

Single



Double



Triple



Line Clearance Pruning

Triple Primary Wire Configuration requires the most clearance pruning

Red Oak Conn. Ave.



Line Clearance Pruning

Londonplane have an open structure so the clearance pruning will be less noticeable.



Littleleaf Linden have dense structure and clearance pruning will be obvious.



Line Clearance Pruning

This red maple on Cedar Parkway has been pruned for line clearance before.



This is evident by examining the scaffold of the tree. The previous clearance cuts are indicated by arrows.



Types of Line Clearance Pruning

V-Shape



Types of Line Clearance Pruning

L-Shape

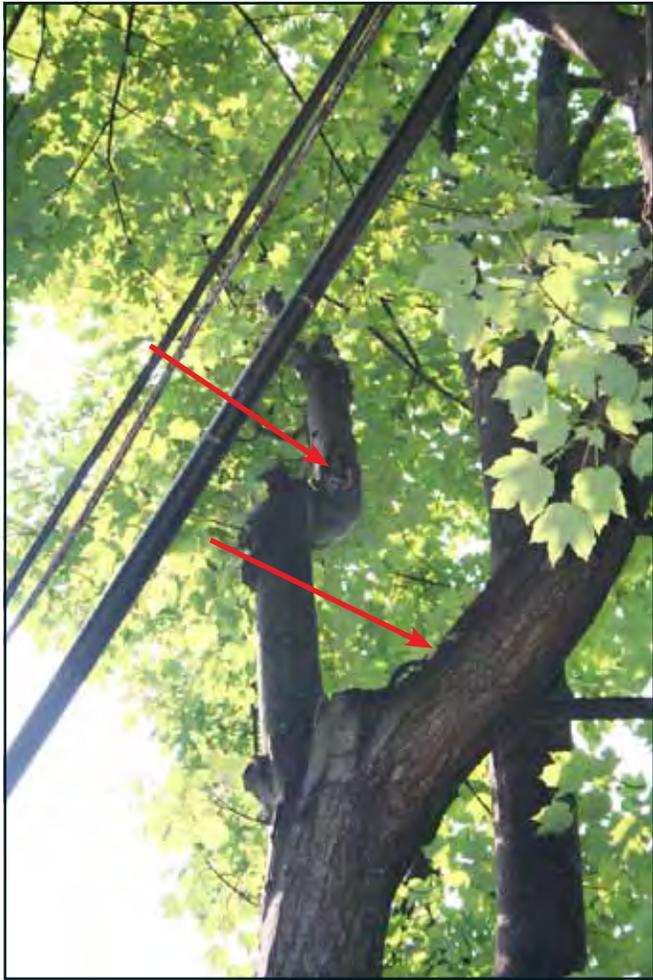


Line Clearance Pruning Removing Hazardous Branches

Red Maple at 35 W Lenox St.



The center main branch shall be removed because the 2 lateral branches are damaged and dying.

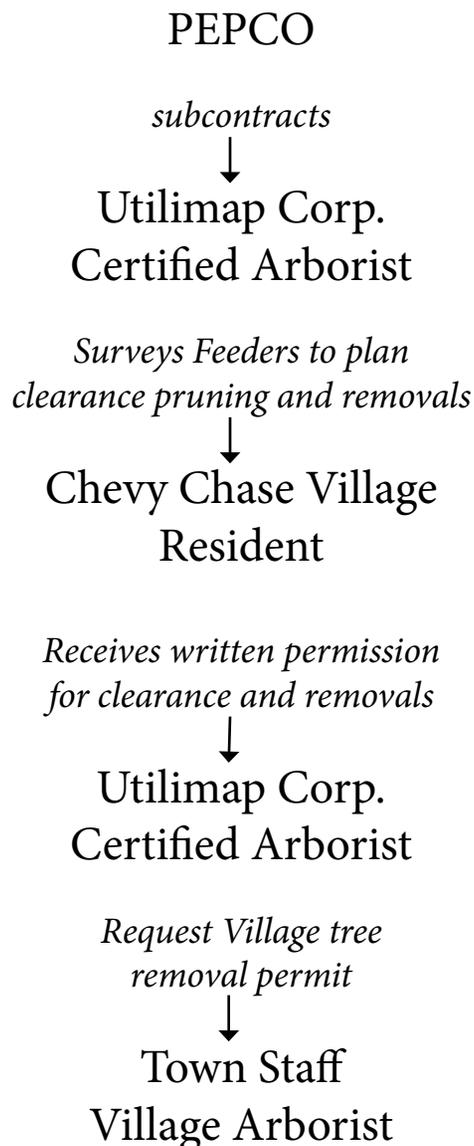


TREE REMOVALS

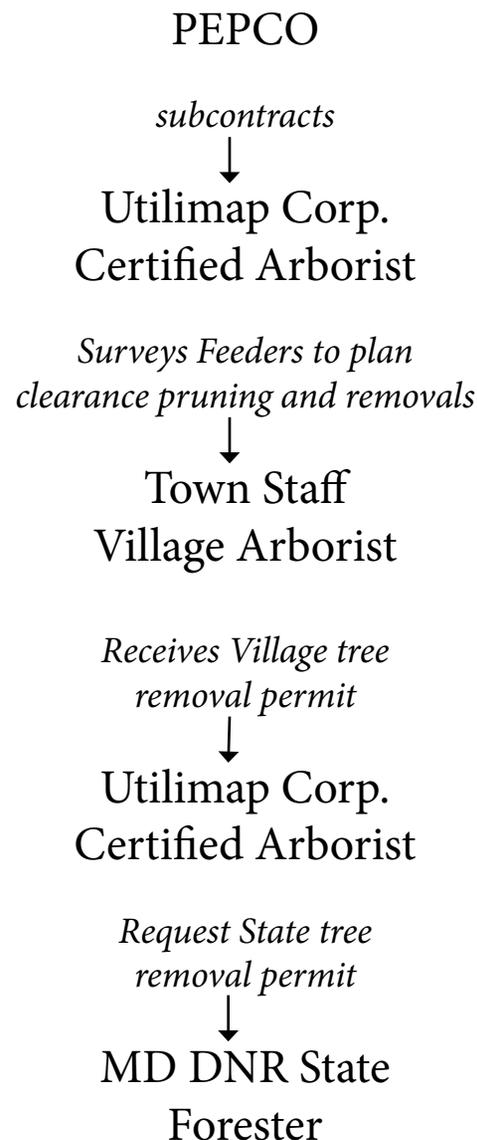
1. During the past year, PEPCO has planned and funded a comprehensive vegetation management plan that includes removal of hazardous trees located near feeder lines.
2. PEPCO has contracted Utilimap, a subcontractor, to inspect and plan tree removals and clearance pruning. Utilimap field staff are certified arborists.
3. The Utilimap arborist contacts each homeowner in order to acquire written permission to remove any trees on private property.
4. The Utilimap arborist submits a list of both private and public trees recommended for removal to the Village for approval or denial.
5. This is the first time PEPCO has seriously done the field work necessary to evaluate all trees near the feeder lines. That is why there was a large quantity of trees on the removal lists.
6. The Village code section 17-3 was followed in all approvals for removed trees.

Chain of Selection and Permitting for Tree Removals

Trees on Private Property



Trees on Public Property



Note: Items 2, 3 and 4 were reasons for approving the tree removals.

Section 17-3 of the Village Code:

- (1) The tree is diseased beyond restoration, insect infested beyond restoration, or injured beyond restoration;
- (2) The tree is dead or dying, or is in danger of falling;
- (3) The tree constitutes a hazard to the safety of persons;
- (4) The tree constitutes a hazard and threatens injury to property;
- (5) The tree constitutes a hazard and threatens injury to, or would have a negative effect on the health of other trees;
- (6) The tree is injurious to or creates a condition injurious to the health of a person, certified to by a qualified medical practitioner.

Hazardous trees are a public safety issue



Tree Architecture

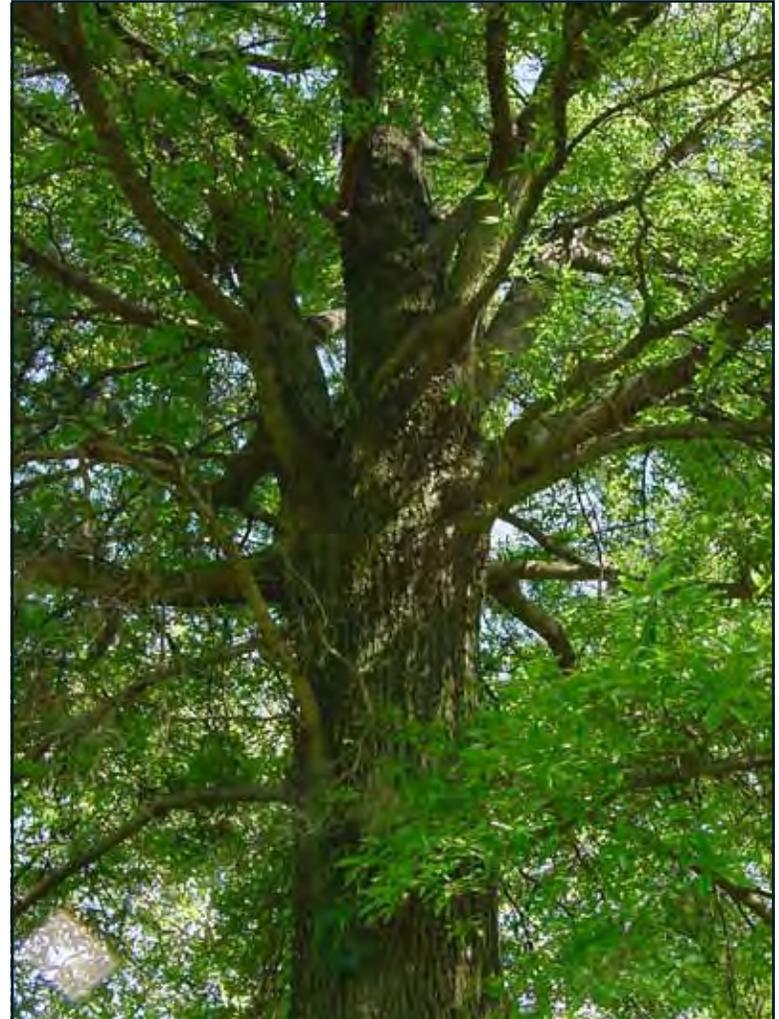
Individual trees in the Eastern Hardwood Forest have evolved to grow upright and close together. Eastern Hardwood trees include Oaks, Beech, Tulip Tree, Red and Sugar Maple, Blackgum, Ash



Chevy Chase Village
Feather and Associates
July 7, 2011

Tree Architecture

When Eastern Hardwood trees are grown in the open they can adapt by sprouting side branches to take advantage of the space and light. This side branching is what makes trees more vulnerable to injury



Tree Damage and Hazardous Conditions

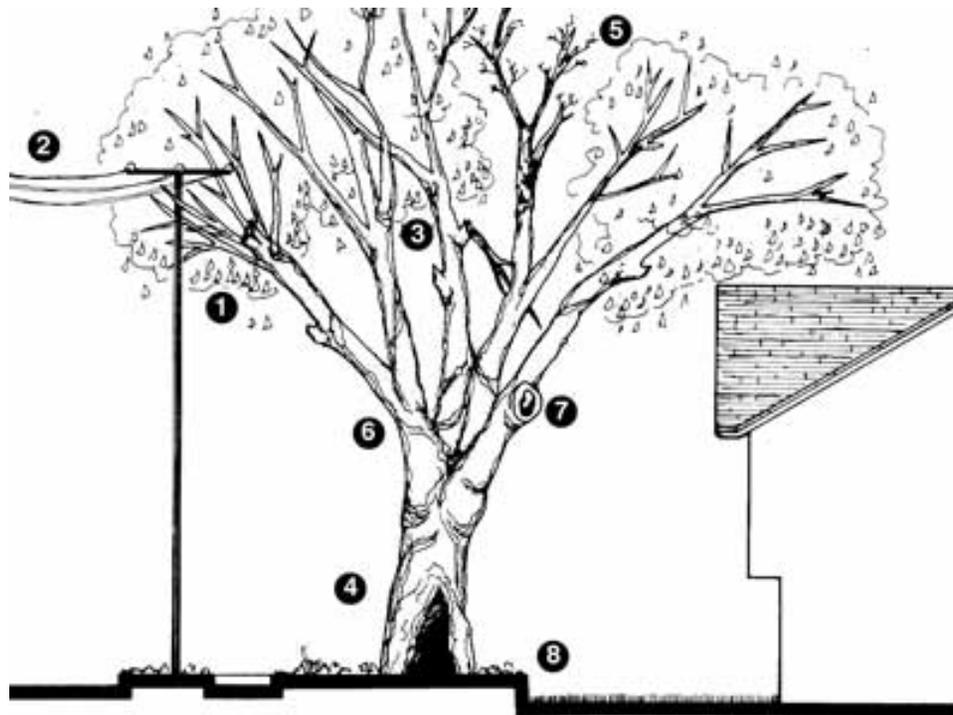
We grow trees out of their natural environment in urban sites.

This makes them less able to defend themselves and more prone to injury.

These injuries can result in hazardous conditions of parts of trees or the entire tree.

The arborist's responsibility is to recognize the hazardous conditions and mitigate or eliminate the hazards.

This is a public safety issue in the urban environment.



1. Regrowth from topping, line clearance, or other pruning
2. Electrical line adjacent to tree
3. Broken or partially attached branch
4. Open cavity in trunk or branch
5. Dead or dying branches
6. Branches arising from a single point on the trunk
7. Decay and rot present in old wounds
8. Recent change in grade or soil level, or other construction

