

“Big Sycamore” Inspection Report

Date Inspected: September 27, 2007

Inspected by: Bob Hannah, Urban Forestry Coordinator, WV DOF
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Location: Back Fork of Elk River approximately 4.5 miles east of Webster Springs, Webster County, West Virginia.

Property Owner: Pardee and Curtin Lumber Co.
70 Curtin Loop
Webster Springs, WV 26288

Summary

The state record sycamore (*Platanus occidentalis*) was damaged by fire over the 2007 Labor Day weekend. We were asked to evaluate the tree and make recommendations. The tree was measured and photographed on September 27, 2007. There are numerous signs located within the Town of Addison (Webster Springs) for “The Big Sycamore” directing people to visit the tree (Appendix 1 - photo # 1). Caution tape was placed on the swinging bridge across the Back Fork of the Elk and around the tree (Appendix 1 - photo # 2). It has been torn down from the bridge (Appendix 1 - photo # 3). “Posted” and “No Trespassing” signs have been placed on the “Welcome to Sycamore Park” sign (Appendix 1 - photo # 4) and on the trail leading to the tree (Appendix 1 - photo # 5). There is a large sign at base of tree detailing size, age, etc. (Appendix 1 - photo # 6). The fire does not appear to have added significantly to the severe structural weakness of the tree. Due to the tree’s size, age, and severity of defects, structural mitigation is neither feasible nor recommended. This tree should be considered an extreme hazard and the public excluded from its striking zone through fencing and signage.

Findings

Various measurements were made of the tree to allow us to formulate a tree risk assessment value as developed by the International Society of Arboriculture and the USDA Forest Service. The following is a summary of measurements and findings from the evaluation:

- Minimum safe shell thickness requirements are:
 - 1 inch of sound wood per 6 inches diameter if shell is complete
 - 2 inches of sound wood per 6 inches diameter if shell is open 30% or less
- DBH is 101 inches; openings measured 27%, yielding a minimum sound shell thickness requirement of 33.7 inches (Appendix 1 – photo # 7).
- The thinnest part of shell measured was 3 inches. A portion of this area of the shell was dead and not considered sound. Therefore, the actual measurement is less than 3 inches. This shell measurement of < 3 inches is critically below the 33.7 inch requirement to support a tree of this size (Appendix 1 – photo # 8).
- 89 inches of the shell circumference is open and a significant portion of the residual shell is dead providing no structural support (Appendix 1 – photo # 9).
- Approximately 1/3 of the circumference of the lower trunk/root collar area shows no evidence of new wood production, callus formation, etc. Severe decay and peeling bark are evident.

- The tree exhibits a 20% lean with severe decay within the plain of the lean. This is a significant compounding factor (Appendix 1 – photo # 10).
- Loss of the terminal leader has resulted in unsound architecture and major asymmetry (Appendix 1 – photo # 11).
- The hazard rating for this tree is 10 out of the highest possible hazard rating of 12. The only reason this tree does not score a full 12 is due to intermittent human visitation to the site.
(Failure Potential) 4 + (Size of Part) 4 + (Target Rating) 2 = (Hazard Rating) 10

Conclusion

This tree poses a severe risk of failure primarily due to an extremely thin shell thickness and other compounding defects. The fire does not appear to have contributed significantly to these considerable structural defects. However, the fire may have caused additional cambium mortality which could become evident within the next year. The tree has long ago passed any reasonable threshold for safety. The structural defects are so severe that it is quite remarkable that the tree is still standing. Consequently, there is no reliable way to mechanically support the tree and make it safe for close public visitation (Appendix 1 – photo # 12). Additionally, the tree will not pass a pre-climb inspection necessary to allow an arborist to safely work in the tree. Given this, the liable parties should either close the site or remove the tree. The WV Division of Forestry recommends closing the site within the tree's striking zone.

Signs directing the public to visit the tree imply safety and greatly increase liability for Pardee and Curtin Lumber Co., Webster Springs Main Street, and the Town of Addison (Webster Springs). The "Welcome to Big Sycamore Park" sign and adjacent picnic shelter are further invitations for the public to gather within the strike zone of this tree. The site currently receives regular visits from the public as evidenced by the three individuals entering the area during our 1 hour inspection of the tree. The caution tape and "No Trespassing" signs are not effective physical barriers and do not adequately inform the public of the severe danger in order to keep visitors at a safe distance.

Recommendations

- First and foremost, defect mitigation is not possible and should not be attempted. Any attempt to mechanically support a severely defective tree will only increase the liability for those involved.
- Given the significance and great size of this tree the public should be allowed to view it but only from a safe distance. The informational sign should be moved to allow easy viewing from the perimeter fence.
- The area within 1 ½ the tree's height or approximately 210 feet in all directions from the base needs to be closed to the public. A physical barrier/fence needs to be erected to prevent anyone from entering this zone.
- The picnic shelter should immediately be closed and signs placed to warn visitors of the danger. The perimeter fence should be posted with signs restricting entry beyond the fence and warning "Hazardous/Killer Tree".
- From a legal perspective, this tree should be considered a 'hazardous nuisance'. All reasonable measures must be taken to warn visitors and keep them at a safe distance.