# The Value of a Tree Survey

**High-quality trees are an asset to a golf course, but trees in advanced stages of decline can be a liability. A comprehensive tree survey can help separate the prime wood from the firewood.**

BY ROBERT VAVREK

Sage advice from Green Section agronomists is to avoid planting additional trees on a course until the trees already on the property are properly maintained. However, it is impossible to determine a suitable budget for annual tree care when the facility has no clue regarding the number of trees, species of trees, or the health of the trees scattered throughout the course. A professional tree survey provides the solid foundation needed to develop a sound tree management program.

The most valuable tree surveys are far more than a simple list of what kind and how many trees are growing on a course. A useful tree survey would be a document that includes:

- A map of the facility and the GPS location of each tree.
- Identification by species and permanent tags placed on trees that are cross referenced to location.
- A maintenance schedule for general tree care and detailed recommendations for trees with special needs.
- Classifying trees according to factors such as life expectancy, health, safety concerns, value, and special maintenance requirements. An example of a 9-point classification (1-5 scale) system for tree surveys developed by horticultural consultant Kris Bachtell can be found in the appendix.
- A list of tree species recommended for use on golf courses, taking into consideration factors such as the soil type, drainage, plant hardiness zones, maintenance requirements, and the mature height of the trees.

## EMERGING PEST PROBLEMS

Information regarding how many trees of a particular species exist on a particular golf facility is especially

*Golf facility leadership tends to shift obvious tree care issues to the back burner, even if neglected maintenance adversely affects the appearance of the course.*

*Most courses have key specimen trees that are a considerable asset to the property. A comprehensive tree survey can help identify key trees and provide maintenance schedules that prevent premature decline.*





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*Far too many golf courses have overplanted the property with only a few, inexpensive, rapidly growing species of trees in the hope of quickly transforming a cornfield into a forest. The folly of this practice becomes apparent when a new pest, such as the emerald ash borer, becomes established in a site that was overpopulated with susceptible trees.*

valuable when a new insect pest or disease is discovered. For example, a course with 50 ash trees can probably address the eventual decline of the trees caused by emerald ash borer using the equipment and labor of the maintenance staff. In contrast, a course with 500 ash trees will need to significantly increase the tree care budget to hire an arborist or tree care service to address the loss of so many trees within a short period of time.

## DIVERSITY

Unfortunately, many old, classic courses were overplanted with marginal-quality, rapidly growing trees as a knee-jerk reaction to the loss of American elms to Dutch elm disease. The abundance of shallow-rooted, weak-wooded silver maples found on most Midwestern courses that have been in play longer than 30 to 40 years confirms this mistake. Similarly, new courses built during the golf boom of the 1990s were often overplanted with inexpensive, poor-quality trees in an ill-advised attempt to rapidly transform a farm field into a forest.

A tree survey can document the imbalance of tree species on a golf course and provide a clear road map to achieve a more diverse population of trees. Diversity is the insurance that protects the course from the next emerald ash borer or Dutch elm disease disaster.

## PROTECTING YOUR ASSETS

No doubt, some species of trees have a longer life expectancy and age more gracefully than others. However, the decision makers at most golf facilities tend to be in a state of denial when it comes to removing old, decaying trees that are long past their prime and more so when trees affect the playability of a hole. Nonetheless, trees that frequently come into play are those most likely to endanger golfers or employees when they reach advanced stages of decline.

Felling large, hazardous trees is expensive. The necessary information needed to prioritize tree removal can be found in a tree survey. Don't overlook the added value of using an objective survey to support controversial tree management decisions. Every tree that even remotely comes into play is likely some golfer's favorite tree, and the survey can help take the emotion out of the decision-making process.


*Trees should be identified by species, tagged, and mapped. The best surveys also include classifying the trees into groups according to factors that can include life expectancy, safety, value, and special needs.*

## SHIFTING PRIORITIES

Plenty of marginal-quality trees have been planted on golf courses as memorials that often achieve an iconic status to the point where the perceived value of the tree far exceeds the real value of the adjacent playing surfaces. As a result, turf on greens and tees suffers needlessly.

A comprehensive tree survey will identify many important specimens that might benefit from removing adjacent trees, crown thinning, lightning protection, cabling/bracing, and other restorative procedures. Wouldn't a far better legacy be achieved by donating the resources to maintain a key tree that has already become well established on the course? Why not adopt a tree instead of planting a tree? Should an adopted tree need to be removed, the resources, as well as the memorial plaque, can be shifted to the next important tree that needs a helping hand. Few memorial trees ever live long enough to achieve star status, so why not achieve instant gratification?

As mentioned above, take care of the trees you have and only then add trees to the course as needed. Use the survey to choose trees appropriate to a site. Avoid the shotgun method of planting a dozen trees in an area, hoping two or three will survive. This mentality tends to produce dense thickets of overcrowded, misshapen trees on golf courses that adversely affect the health of the turf and the flow of traffic.

## WHAT IT IS AND WHAT IT ISN´T

You wouldn't let a dentist perform your open heart surgery, though both may be skilled medical professionals. Likewise, don't expect a tree survey to take the place of an architectural master plan for improvements to a golf course. The survey's reasons for removing a tree will likely have little to do with how the course is intended to be played. Use an experienced golf course architect to determine where to add and remove trees with respect to course strategy, and use the survey recommendations to determine the appropriate species for the site.

## WHERE TO LOOK

Contact local universities, especially those with highly regarded forestry departments, for professionals capable of producing a tree survey for your course. The staff at a local arboretum or the more experienced staff at large tree-care companies are also excellent sources of expertise for a survey.

Many courses have found the value far exceeds the modest cost of a comprehensive tree survey and that this document provides sound advice and direction for many years.

## APPENDIX — CONDITION CLASS

This provides vital information about tree size, health, and expected longevity.

**CLASS 1.0:** Recently planted tree; not established yet, expected to live a long time.

**CLASS 1.5:** Recently planted tree; not established yet but has a severe limiting factor such that treatment(s) may be necessary to prevent premature death.

**CLASS 2.0:** Established tree; not mature yet and expected to live a long time.

*Many tree management decisions are driven by emotion versus common sense. Once a key to how the hole is played, this tree lost its value long ago.*

**CLASS 2.5:** Established tree; not mature yet, but has a severe limiting factor such that treatment(s) may be necessary to prevent premature death.

**CLASS 3.0:** Mature tree; healthy; expected to live more than 20 years.

**CLASS 3.5:** Mature tree with some limiting factor that may warrant treatment(s) to prevent premature death. Any key tree that rates a 3.5 should strongly be considered for fertilizing, special irrigation, pruning, cabling, mulching, or other arboricultural treatment.

**CLASS 4.0:** Mature tree with such a severe limiting factor that tree death is likely within 20 years regardless of any treatments. Under certain circumstances, treatment is warranted to attempt to prolong life.

**CLASS 4.5:** Removal is recommended. Reasons for this recommendation include: the specimen is in such poor condition that recuperative treatment is not recommended, the tree has a serious structural defect, and the tree is considered an undesirable species (e.g., Siberian elm, mulberry, buckthorn). Immediate removal is not usually necessary for safety reasons, unless noted as such.

**CLASS 5.0:** Dead tree; removal is recommended or tree removed since inventory conducted.

*A comprehensive tree survey can provide valuable information on the proper way to brace and cable key trees as they age and which trees are good candidates for aggressive preventative maintenance procedures. Haphazard attempts to prolong the life of severely damaged trees likely do more harm than good.*

BOB VAVREK *surveys turf quality and playing conditions for golf courses in Nebraska, Iowa, Minnesota, Wisconsin, Illinois, and Michigan.*