



Ministry of Forests



MEMO

DATE: May 10, 2023

TO: Wildlife Dangerous Tree Assessors
FROM: Wildlife Dangerous Tree Committee of BC

TOPIC: Updates to the Tree Assessor's Course for Parks (March 2023)

The following is a summary of the updates and edits compiled for the March 2023 version of the Parks module. Fundamentally, the intent of the course is to provide instruction about the hazard tree assessment practices used to assess and protect workers, and with the added necessity by BC Parks and Recreation Sites and Trails BC to assess trees for public safety. This version of the Wildlife/Dangerous Tree Assessor's Course (WDTAC) is the module that BC Parks and Recreation Sites and Trails BC requires its staff and contractors to use when assessing trees in parks, recreation sites and trails in BC. The module is referred to as a Wildlife/Hazardous Tree Assessors course, and the manual titled "Tree Assessor's Course for Parks, Recreation Sites and Trails" to support this expectation by both organizations.

The course workbook has 3 sections (Introduction to Significant Trees, Tree Assessment, and Habitat Modification). Section 3 was essentially left unchanged, other than expanding the bird nesting window for consistency with the Bird Nesting Calendar for BC.

Section 1: Introduction to Significant Trees

Introduction to Significant Trees (formerly, Intro to Wildlife Trees) was modified to expand the topic beyond wildlife trees. It is increasingly important for land managers to consider additional values such as Indigenous values (culturally modified trees) and feature trees (e.g., special tree protection regulation) when making tree management decisions.

- The table used by assessors to rate the tree's wildlife habitat values has been modified to be a significance valuation.
- Of significant note, in July 2022, the Migratory Birds Regulations afforded federal protection to pileated woodpeckers nest trees for 3 years beyond the date a notice of abandonment had been filed. Information about this requirement has been added to the course manual.
- Other regulatory guidance has been simplified and links added for further reading. Other elements of section 1 remain substantively unchanged.

Section 2: Wildlife/Hazardous Tree Assessment

The Wildlife/Hazardous Tree Assessment (formerly, Wildlife/Dangerous Tree Assessment) section was updated and revised to clarify the concept that if suspect trees have defects (hazards) and if the hazard has deteriorated beyond the established criteria thresholds (tables 3, 4, 4A, 5), then it is called Dangerous when the defect can reach a target. The concept of 'target' was clarified to be workers and the developed areas where the public are invited to recreate, and to include buildings. The risk management concepts of protecting targets from damage by failing dangerous tree (hazardous tree) has been retained.

Table 1 is fundamental to the tree assessment process – selecting the worker levels of disturbance, to which the definition of a dangerous tree (OHS Regulation 26.1) is applied using the concept that disturbance to, or near, a tree might dislodge a hazardous part to workers exposed to the tree. The WDTAC modules (Forest Activity, Wildland Fire, and Parks) all use the principle that with increasing disturbance, there is an increased probability of a tree failure and consequently a diminishing acceptance to the extent of tree deterioration. The tree hazard tables (3, 4, 4a and 5) were thus created to establish dangerous thresholds for common defects during the 4 levels of disturbance.

The fundamental tree assessment process requires the assessor to complete 5-steps. The following outlines the content modifications:

Step 1 (using Table 1) – determine the level of disturbance (LOD) is now called “level of disturbance and exposure” (LODE)

- Strengthen the expectation that although Very Low Risk activities are of very low disturbance and very low exposure times, there is still a need to have workers advised to avoid exposure to tree hazards without the formal need to an assessment. For example, don’t touch suspect trees, avoid walking/working under leaners and overhead hazards, consider wind.
- The worker descriptors were modified to reflect the common work activities undertaken in a park, recreation site and trail setting during routine maintenance/repair, but also retain the original examples of activities which can be associated with construction, maintenance, and rehabilitation projects.
- The emphasis of the wind-speed equivalency is strengthened to a concept for protecting workers.
- Parallel risk categories for public targets were modified from the previous version of this table and appended.
- Site stratification was added to highlight the importance of planning for, and anticipating, differing risk factors throughout the assessment area.
- Inclusion of the worksite perimeter process, as used in the Forest Activity module, but using a case study to reflect the possibility of short-term work projects with a potentially different LODE than might have been traditionally used at a park, recreation site or trail.

Step 2 (using table 2) – conduct a site assessment overview

This section of the course manual was expanded to provide a series of concepts and scenarios to guides the assessor. This content expansion promotes the need for the assessor to take a longer term perspective than what is taken when assessing trees in a conventional forest activity worksite. The key areas of elaboration are:

- Stand history and condition
- Weather patterns
- Tree Failure History

Step 3 (using table 3, 4, 4A and 5) – conduct tree assessments

This section of the course was minimally altered and retained fundamental hazard criteria thresholds to remain consistent with the FA module. However, there was a need to clarify points of confusion raised by students. Common tree hazard indicator naming conventions were altered:

- Defective Tops (DT) instead of hazard top (the former tended to suggest the top was already dangerous)
- Defective Limbs (DL) instead of dead limbs, because there is a need to recognize size is important, and that a live defective limb can also be a hazard
- Stem damage (SD) was expanded to highlight the concept of scars (catface) beyond the idea of a gouge out of a tree
- Discussions about tree lean and sweep were expanded to support the concept that LIVE trees can adapt, but once dead, these adaptations stop, and deterioration must now be evaluated more carefully.
- Detailed stem testing can also be performed using specialized equipment (e.g., resistograph technology), so a reference to this technology was included (but there is no intent to require students to get this device).
- The stem testing criteria was qualified to allow for RST/AST comparisons as per normal tree deformation. Additionally, "*Trees with >50% circumference as an open wound and AST <30% of the tree radius have a high failure potential and should be rated as Hazardous*" was added to the detailed stem testing discussions.
- The concept of a Critical Rooting Zone was added to the course to ensure caution is exercised to evaluating this zone if construction activities compromise the tree's roots.
- References to a Qualified Person performing assessments requires this to be under the supervision/mentoring of a certified assessor.
- The SD hazard criteria always inferred decay to be an element of damage, and thus "decay" was added as an element of damage within tables 4 and 4A.
- Structural weakness appears as a term in tables 4, 4A and 5 but the descriptors for signs of structural weakness were not consistently included in the footnotes for each table. This was remedied.
- Assessing temporary worksites was added to this section to help strengthen the necessity for managing worker safety. Assessments for hazards must always be performed prior to the start of work.

Step 4 – make the appropriate safety recommendations.

The role of the tree assessor is essentially to determine whether a suspect tree is a Safe or Dangerous tree; managing the tree is not the role of the assessor in many Parks, Recreation Sites and Trails. However, the assessor recommends what could be done to their supervisor or to the designated land manager. This recommendation includes the concept that high value trees be afforded greater consideration for retention than low value trees.

A tree determined to be a dangerous tree has a respective Hazard Area (the area that the part failing could land). The topic of No Work Zones was blended in this manual to include examples of how and when a NWZ would be established. Additionally, there are situations when additional measures are likely required to manage the public (e.g., gates, barricades, closures, signs).

Step 5 – Provide documentation

The existing field assessment form was revised to reflect the added necessity to consider more than wildlife habitat. The title of the card was changed to Hazard Tree Assessment Field Data. The tree comment descriptors were modified as follows:

- Wildlife Tree Value changed to Tree Significant Value
- Wildlife Uses codes expanded to include Roosting (R)
- Recreational Attraction expanded in concept descriptors
- Heritage Feature changed to Cultural Feature (to promote focus on CMT's)

Documentation was expanded to recommend that assessors include a statement of limitations. This is a chance for the assessor to reflect on the reality that assessing trees is not a guarantee a tree will not fail, and to provide some realistic statements to be conveyed to the persons requesting the assessment.

The section strengthens the need for assessors to communicate when a reassessment is required. For example, there have been site altering events, the LODE has changed, too much time has elapsed, etc. The frequency of assessments for public safety was modified for information purposes but clarified that this is not an assessor's duty to determine. However, this section maintains the messaging that relative to workers, an assessment is mandatory prior to work start-up, and the assessment to be done as close as possible to the start of work but to also allow time for implementing mitigations prior to start-up.

Appended supporting information

The references, glossary and appendices have been refreshed.

Appendix 1 – added Hypoxylon stem canker and Sterile conk (chaga) and other minor fixes.

Appendix 2 – added conservation status to the wildlife tree user listing (status as of 2022).

Appendix 3 provides several links to regulations and acts and other information a diligent assessor can reference after taking the course.

Appendix 4 now has the focus on managing public safety, with discussion on the frequency of assessments, the equivalent LODE table 1.

Appendix 5 illustrates a revised format for the field data card and a sample of how to fill out the data card.

Appendix 6 provides guidance to tree assessment field techniques, references to tree species names and how to use and care for the increment borer.

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