

**OPERATIONAL PROCEDURES FOR MANAGING HAZARD TREES**



**January 2006**

# **PART 1 - HAZARD TREE INSPECTION AND POLICY IMPLEMENTATION STRATEGY**

## **Introduction**

The basis of managing hazard trees is routine inspection of TRCA properties as defined in these operational procedures. This allows hazard trees to be identified, trees at risk to be assessed for increased hazard potential and non-hazardous trees to be inspected for future risk potential.

Each time a property is inspected, the inspection shall be documented on a standard “Hazard Tree Inspection Form” form, with information including the date, time, assessor’s name and any other relevant information. As required, additional documentation including a “Hazard Tree Rating Form” and photographs should be attached to the “Hazard Tree Inspection Form” record and filed according to TRCA’s records retention policy. Digital photographs will be stored on the hazard tree database.

The Restoration Services division will monitor and track hazard trees in conjunction with their Managed Forest Tax Incentive Program commitments, and managed forest programs and activities, on areas other than active-use conservation areas and their associated peripheral properties. A digital hazard tree inventory, showing existing trees will be maintained by the TRCA Forester. This inventory will house all relevant tree information, including abatements and will be restricted to authorized TRCA staff under the direction of the Chief Administrative Officer.

Area Superintendents will continue to ensure the monitoring of hazard trees within the active-use parks and associated peripheral properties. The peripheral properties and associated trails will be identified through geographic information systems and responsibilities identified. Some of these responsibilities will require additional funding for increased record keeping costs. Within three business days of their completion all “Hazard Tree Inspection Forms” will be forwarded to the TRCA Forester, for inspection, prioritization and filing.

It will be the responsibility of the TRCA Forester to ensure the availability of staff for hazard tree evaluations in passive-use conservation areas, resource management tracts, residential properties and rented farm land. No trees will be removed from these areas without the consent of the TRCA Forester. When many trees have been identified for abatement, prioritizing of these works may be necessary. It will be the responsibility of the TRCA Forester and Area Superintendents to prioritize these works under applicable budget restraints. If trees cannot be removed, then the target areas must be closed to public use and staff access will be restricted until the hazards have been abated.

The TRCA Forester and Area Superintendents will organize outside quotations for tree abatement whenever necessary.

TRCA properties will be mapped and identified digitally in GIS and be identified by their respective designations. All formal trail systems will be identified on a comprehensive map using geographic positioning system methods to identify each public trail.

Three-year budget forecasts, budget estimates, and up-to-date yearly expenditure tracking will be the responsibility of the TRCA Forester.

The TRCA owns several different types of land. Each property has a different use, a different set of targets and therefore, a different perspective of tree-related liability. Therefore, each property should be inspected with a different specified frequency and thoroughness.

The types of properties within TRCA are as follows; active-use conservation areas, passive-use areas/resource management tracts, residential properties, rented farm land, contract/lease and easement land, limited-use open land, and management-agreement land.

## **INSPECTION AREAS**

### **Active-Use Conservation Areas**

Active-use conservation area is a broad term used to cover many of the lands owned by TRCA which can have low to high volumes of people engaged in various activities for recreational, educational, business or scientific purposes. For the purposes of the hazard tree program, lands included in this group include; office environs, heritage sites, education/interpretative facilities and field centres.

An active-use conservation area also refers to a gated, paid-use property designed for public recreation. These properties possess some significant features to attract patrons including water-based activities, overnight campsites, nature trails, picnic areas, sports fields and playgrounds. Some of these properties receive significantly higher use during peak periods of the season.

The fact that active-use conservation areas are subject to user fees increases the issue of liability. TRCA conservation areas are marketed as safe, enjoyable facilities. A catastrophic tree event at one of these locations could generate significant legal ramifications in the event of injury or property damage. Unlike a passive-use conservation area setting, these conservation areas may see 24-hour usage. Many campsites are situated in wooded areas, and trees are generally incorporated into campsites to improve the natural aesthetics of the site, thus the potential for tree risk is increased in these sites. However, inside active-use

conservation areas are sub-zones (high use and low use areas) which may not have the same frequency of visitation or proximity to a target for extended periods of time. These areas may be divided during assessments for prioritizing work action as outlined below.

Active-use conservation areas commonly have year-round or seasonal operations, with most conservation areas requiring a mix of full-time and seasonal staff. It will be the responsibility of area superintendents at these locations to ensure that high-use areas such as campsites, picnic sites, stopping points on trails and parking lots are inspected twice a year by a competent assessor. One inspection will be carried out during leaf on and one during leaf off season. Low-use areas within active-use conservation areas will be inspected annually. In addition to yearly inspections, competent assessors will respond to requests from park visitors regarding potential hazard trees within three business days. It is also recommended that inspections be carried out after a major weather disturbance in high-use areas to allow for identification of sudden hazards. This inspection will be determined by supervisory staff at these locations after weather information is reported by news broadcasts and/or a significant change in weather conditions is witnessed. Each time one of the above-mentioned inspections is conducted the assessor will document their findings on a "Hazard Tree Inspection Form" provided to each facility. Once leaf on and leaf off inspections are completed and documented on the log form, supervisors will submit logs to the TRCA Forester where they will be filed until year-end. At year-end, inspection logs will be sent to central filing services. Intermittent inspection logs and forms will be submitted to the Forester as they are completed.

Supervisory staff from TRCA Parks and Culture Division will ensure a response within five business days by a competent assessor to a tree assessment request from a private land owner who borders a TRCA active-use conservation area or associated peripheral property. The assessor will complete a "Hazard Tree Evaluation Form" as well as documenting the inspection on the "Hazard Tree Inspection Form". The supervisor will follow up on the recommendations of the inspection and take appropriate action as outlined in this document.

### **Passive-Use Conservation Areas/Resource Management Tracts (RMT)**

Passive-use/conservation areas/RMTs are non-gated recreation areas designed for year-round, passive, public use. There is no charge for using these areas (some may have voluntary registration and/or donations), and there is rarely a defined service provided for the user. These areas provide the public with quality open space for recreation. They usually include a mix of open space, nature trails and passive recreational uses.

Liability related to tree failure is less likely in passive-use conservation areas than in an active-use conservation area. While many of these areas see year-round usage, the potential for tree-related mishap is reduced because the patrons have no permanence on

the site. Also, public presence during periods of inclement weather is reduced, during which time tree failure frequently occurs. However, the fact that these Areas openly offer the public recreation space means that vigilance in removing tree hazards must be exercised.

Due to the casual usage of these areas and lack of designated services associated with the complete property, inspection of the entire area may not be required. Hiking is often the intended use on these properties and trails see transient use, meaning that the user passes quickly through the area and the likelihood of a tree-related mishap is substantially reduced.

If the area has a signed trail system, they will be inspected every two years and documented on a “Hazard Tree Inspection Form” provided for the area. Completed logs will be submitted to the TRCA Forester where they will be filed until year end. At year-end logs will be sent to central filing services. It is important when inspecting trails to identify gathering points or stopping points such as benches, vistas or parking areas. These areas possess a greater potential for tree-related mishap. Any unsigned trails will be inspected as required.

Emergency contact numbers will be posted at designated access points to these areas and will provide regular users and clubs with an opportunity to inform TRCA staff of hazards. Many of the passive-use/conservation areas/RMTs that TRCA owns are already associated with active-use conservation areas through the peripheral properties program. Supervisory staff from these Active-Use Parks will continue to manage these properties for the hazard tree program. Remaining properties will be managed by TRCA Restoration Services.

## **Residential Properties**

The TRCA owns residential properties and rents to tenants under contracts handled by the Conservation Lands & Property Services section. Conservation Lands & Property Services staff of TRCA will accept an initial request for a hazard tree inspection and relay information to the TRCA Forester. The Forester will ensure a response within five business days by a competent assessor to investigate the request. The assessor will complete a “Hazard Tree Evaluation Form” as well as document the inspection on a “Hazard Tree Inspection Form”. Completed forms and logs will be returned to the Forester to determine an abatement plan. The Forester will file these documents until year-end. At year-end forms and logs will be sent to central filing services. Tenants do not have the authority to implement an abatement plan for the property until inspected and approved by TRCA staff.

## **Rented Farm Land**

The TRCA owns significant amounts of rural land that is rented for agricultural purposes. This is not publicly used land but is used exclusively by the tenant. The nature of farm land

is that it is cleared of trees, so the most prevalent presence of hazard trees is at the edges, where fence rows or adjacent forests are found.

Conservation Lands & Property Services staff of the TRCA will accept an initial request for a hazard tree inspection and relay information to the TRCA Forester. The Forester will ensure a response within five business days by a competent assessor to investigate the request. The assessor will complete a “Hazard Tree Evaluation Form” as well as document inspection on a “Hazard Tree Inspection Form”. Completed forms and logs will be returned to the Forester to determine an abatement plan. The Forester will file these documents until year-end. At year end, forms and logs will be sent to central filing services. Tenants do not have the authority to implement an abatement plan for the property until inspected and approved by TRCA staff.

### **Contract/Lease and Easement Lands**

This term refers to TRCA properties that have all, or portions, of the property under contract, lease or easement agreement with an outside agency/business and excludes residential properties and farm lands. These lands will be the responsibility of the outside agency/business to manage for hazard trees according to TRCA’s minimum standards policy. Agreement holders do not have the authority to implement an abatement plan for the property until approved by TRCA staff.

Located on TRCA properties are several large trail networks that provide recreational opportunities to hikers, cyclists, runners, cross-country skiers, horseback riders, etc. These trails are under “Trail Agreements” with other associations such as the Bruce Trail Association and the Trans Canada Trail Foundation. The association, under agreement with the TRCA, will be responsible to monitor and abate hazard trees according to our policy as a minimum standard. Persons from these associations using tools for clearing hazard trees must follow guidelines outlined in the Workplace Safety and Insurance Board, Ontario Health and Safety Act.

### **Limited-Use Open Land**

This term refers to land which is owned by the TRCA but has no identified recreational use. In many cases, this land is held because of some environmental sensitivity. Flood plain land is also included in this category.

Mostly, hazard trees on these lands are found adjacent to public or private areas. Residences, roads, parking areas and trails may border these lands, and thus tree hazards must be cleared. These properties will be inspected as deemed warranted. Emergency contact numbers will be posted at designated access points to these properties

and will provide users and neighbours with an opportunity to inform TRCA staff of sudden hazards.

The TRCA Forester will ensure a response within five business days by a competent assessor to a hazard tree inspection request. The assessor will complete a “Hazard Tree Evaluation Form” as well as a “Hazard Tree Inspection Form”. If the assessors are able to abate the hazard at the time of the inspection, this must be documented. Completed forms and logs will be returned to the Forester to determine an abatement plan. The Forester will file these documents until year-end. At year end, forms and logs will be sent to central filing services.

### **Management Agreement Lands**

The TRCA owns a significant amount of land which is under management agreement with other parties, usually municipal or regional government. In this case the TRCA owns the land and provides it for the use of the local community. The agency under management agreement with the TRCA will be responsible to monitor and abate hazard trees in compliance with their municipal policy.

### **INSPECTION PROTOCOL**

While the areas of assessment may differ, the protocol for the assessment of each individual tree remains the same. Each tree that has a target must receive a thorough inspection for hazard potential. There are six ‘zones of inspection’ for assessing each tree for failure potential. They are:

1. Zone 1 – this area is the stem and root zone 1.23m up the stem, and 1.23m out from the stem. This crucial area absorbs most of the tree weight under compression, and structural compromise in this area compromises the structure and safety of the entire tree.
2. Zone 2 – is the main stem, from the point 1.23m up the stem, up to the main branch union. Failure points are often found in this zone, but can often be corrected.
3. Zone 3 – is the primary root system extending to about half way out to the drip line.
4. Zone 4 – is the primary branches out to one third their length.
5. Zone 5 – is the remainder of the structural roots.
6. Zone 6 – is the remainder of the crown. This area is often crucial in determining the tree condition.

Each of these areas must receive a thorough inspection. When failure potential is identified

in any of these areas, the tree should be rated according to the hazard tree rating system (see below) to determine its exact hazard potential.

Careful inspection of the site is also important when inspecting a tree. Construction, or other damage to the root system of the tree, can result in tree decline and thus cause the tree to become hazardous over time.

## **PART 2 - HAZARD TREE RATING SYSTEM**

The primary objectives of the hazard tree rating system are:

- To determine whether trees which show some evidence of failure potential are actually hazardous.
- To prioritize which hazardous trees should receive attention.
- To maintain a detailed record to justify tree pruning or removal.

The hazard tree rating system has been designed to accommodate the large number of trees present on TRCA lands. A “Hazard Tree Evaluation Form” has been designed to document the assessment of trees on TRCA property and to aid an assessor in determining the potential hazard of a tree. This form will also help to standardize assessments amongst TRCA staff.

The hazard tree rating system has five sections. Each tree is rated according to the five sections then the scores are totaled. The total determines whether the tree is hazardous or not. However, if the assessor at any time feels that one factor makes the tree immediately hazardous, this factor can override the system and the tree is marked for removal. The five sections are discussed in detail below.

### **Section 1 – Species Rating**

The species rating assesses the known hazard potential of a tree species. Each species of tree has a different set of attributes that make it more or less likely to fail. Growth patterns, habitat, hardness of wood, rate of growth and root type all contribute to the failure potential of a tree species.

The hazard tree rating system rates tree species in one of three categories:

1. Low Failure Rate – this species is rarely known to fail under normal, acceptable growing conditions. The structure, hardness of wood and branch scaffold of this species is traditionally good.
2. Medium Failure Rate – this species has attributes that make it prone to failure under certain conditions, but under normal conditions failure is rare. The structure, hardness of wood and branch scaffold of this tree is average. The tree



- may be prone to pathogens that reduce its structural integrity.
3. High Failure Rate – this species is known to fail frequently under normal conditions. The structure, hardness of wood and branch scaffold of this species is poor, and it is usually prone to one or more pathogens that reduce its structural integrity.

The following trees are regularly found on TRCA lands; the failure potential of each is indicated.

**High Failure Rate**

Black Locust  
 Manitoba Maple  
 Norway Maple  
 Poplar Family  
 Silver Maple  
 Tree of Heaven  
 Willow Family

**Medium Failure Rate**

Ash Family  
 Basswood  
 Birch Family  
 Walnut Family  
 Elm  
 Fir Family  
 Hemlock  
 Honey Locust  
 Horsechestnut  
 Larch  
 Pine Family  
 Red Maple  
 Tamarack  
 Tuliptree  
 Spruce Family

**Low Failure Rate**

American Beech  
 Cherry Family  
 Crabapple/Apple  
 Hawthorne  
 Oak Family  
 Sugar Maple  
 Sycamore  
 White Cedar  
 Ironwood

**Section 2 – Size Rating**

The size of the hazard plays an important role in prioritizing which hazards must be abated first. Size rating can be assessed in one of two ways; the size of the defective part (ie: dead branch, weak branch union) can be rated, or the entire tree can be rated. The size of the part plays a significant role in how much potential damage tree failure can cause.

It must be noted that smaller-sized hazards have the ability to cause extensive damage or injury. Thus, smaller hazards should not be overlooked. Common sense dictates that the larger hazards must be given priority.

The hazard tree rating system rates size hazard in one of four categories:

1. Small Hazard – the tree or hazardous part is of a small size, 15cm or less in diameter.
2. Medium Hazard – the tree or hazardous part is of a large size, 15-40cm in diameter.

3. Large Hazard – the tree or hazardous part is of a very large size, over 40cm or more in diameter.
4. Whole Tree.

For the purposes of the TRCA hazard tree program, trees greater than 15cm in diameter at a height of 1.23m up the stem will be the focus for assessment.

### **Section 3 – Target Rating**

In order for a tree to be hazardous it must have a target. A tree in an out-of-the-way place, far from any public activity, is not hazardous despite the fact that it might have failure potential.

Targets are judged according to usage. Some areas receive high usage, while others see only occasional use. The hazard tree rating system rates hazard tree targets according to one of the four following criteria:

1. Occasional Use – areas which are infrequently used. These areas include open fields, trails and wooded areas.
2. Moderate Use – areas which receive active but not constant/regular use. These areas include walkways, picnic areas, passive-use recreation areas, and infrequently used driveways.
3. Frequent Use – areas which receive regular use. These areas include driveways, park roads, sheds, outhouses, picnic shelters, parking areas, tent or seasonal campsites and concessions. They also include phone lines, cable lines or secondary utility lines.
4. Constant Use – areas which are extensively used. These areas include residential structures(houses, garages), municipal roads, community structures, permanent campsites, etc. They also include primary utility conductors and distribution conductors.

Identifying the target is important in identifying a hazard tree. The target often dictates the urgency with which a hazard tree is dealt. Careful inspection of a site is necessary to determine the exact target potential of a hazard tree. For example, if a tree has a structural defect and is close to a trail (target) but has an extensive lean away from the trail, then its target potential is low and it is not necessarily a hazard. Trees like this can be assessed to be beneficial as a habitat tree or for interpretive value.

### **Section 4 – Tree Condition Rating**

Tree condition is an important consideration when assessing a tree for hazard potential. A tree in decline may not be immediately hazardous but it will become hazardous in the future if it continues to decline. Rating the condition of the tree is especially important in

flagging future hazards. This also assists in predicting future tree work needs.

The hazard tree rating system rates condition in one of three categories:

1. Good Condition – the tree shows good, healthy growth and little or no evidence of stress or decline.
2. Average Condition – the tree is in average condition; it may show some evidence of stress or decline, but not in a manner which threatens its survival.
3. Poor Condition – the tree is in decline; it shows small leaf size, reduced vigor, crown dieback and/or other features indicating stress or decline.

The condition of the tree should be carefully noted when rating a hazard tree. This permits the inspector to compare the tree condition from year to year and thus map decline.

### **Section 5 – Tree Structure Rating**

Structure is perhaps the most important aspect of assessing the potential of a tree to fail. Trees are massive, complex organisms, and any compromise in the structural integrity of the tree can result in catastrophic failure. The list of possible structural defects that a tree can possess is large but some of the more common defects have been listed below.

Weak Branch Unions	These are places where branches are not strongly attached to the tree. Trees with a tendency to produce upright branches, such as Elm and Silver Maple, often have weak branch unions.
Wood Decay	Wood decay, usually the result of some parasitic pathogen, creates cavities which make the tree inherently unstable by weakening its support structure.
Cankers	A canker is a localized area on the stem or branch of the tree, where the bark is sunken or missing. Cankers are caused by some external pathogen, and there is always a likelihood of branch failure at or near the canker.
Growth Pattern	Poor tree growth, such as a lean, branches which are larger than the trunk, and crown deformity, can result in trees which are unsafe.

In many cases one structural defect will not make the tree a hazard, but combinations of these and other defects will give the tree the potential to fail. In some cases, one defect may make the tree hazardous. For example, a perfectly healthy Red Oak with a major basal cavity (cavity near the base of the trunk) is a hazard, despite its many other positive

characteristics.

The hazard tree rating system rates tree structure in the following four categories:

1. Good Structure – the tree is structurally sound according to the accepted standards of its species. There are no evident structural compromises.
2. Average Structure – the tree has acceptable structure. While there may be some minor structural problems, they do not warrant immediate concern.
3. Poor Structure – the tree has one or more structural defects that warrant concern. Failure at one of these defects is possible.
4. Severe Structure – the tree has at least one major structural defect. This defect has immediate failure potential. This one point may override all other factors and result in immediate removal of the hazard.

Assessing the tree for structural defect is often the most difficult part of the inspection protocol. To properly inspect a tree, a careful ground level inspection should be done. In some cases, the assessor may request to have the crown inspected by a qualified tree climber. Also, some limited root excavation may be required to thoroughly assess root condition and defects. The ground level inspection is sufficient in most cases, but further inspection may be required if the ground level inspection raises additional concerns.

### **Rating Summary**

The preceding 5 rating categories are designed to provide a standardized system for assessing trees for hazard potential. In review, they are as follows:

Species Rating	1-Low Failure Rate; 2-Medium Failure Rate; 3-High Failure Rate.
Size Rating	1-Small Hazard; 2-Medium Hazard; 3-Large Hazard.
Target Rating	1-Occasional Use; 2-Moderate Use; 3-Frequent Use; 4-Constant Use.
Condition Rating	1-Good Condition; 2-Moderate Condition; 3-Poor Condition.
Structure Rating	1-Good Structure; 2-Average Structure; 3-Poor Structure; 4-Severe Structure.

After rating each category, the categories are totaled and the total is the Hazard Tree Rating. The rating is as follows:

16-17	Tree is an extreme hazard and requires urgent abatement;
14-15	Tree is hazardous and should be abated in a timely manner;
10-13	A tree at risk; it should be monitored regularly for change;
<9	Tree is not hazardous.

As mentioned, if the assessor feels that one factor overrides all others, he/she can give the tree a hazard rating of 'OV' (override), indicating it must be removed at the earliest possible opportunity. Also, a dead tree should be given a rating of 'DEAD', and should be prioritized accordingly.

### **PART 3 – ABATEMENT STRATEGY**

A large part of this document has dealt with inspection and assessment, however, eliminating the actual hazards is perhaps the most crucial part of hazard tree management. The hazard tree rating system is designed to help prioritize work, so that tree hazards are removed in the most efficient manner possible.

Hazards are prioritized according to the rating they receive under the hazard tree rating system.

#### **Abatement Methods**

During the inspection procedure, the assessor must make a decision on the best way to abate the hazard. There are three primary methods of abating a tree hazard:

1. Tree Removal – removal of the entire tree is a drastic step, but is often necessary when a tree has serious structural defects. Dead trees also must be removed if associated with a target.
2. Pruning / Selective Branch Removal – Branch removal is often all that is required to abate a hazardous tree part.
3. Correction – there are several techniques which can be used to correct defects in trees. Steel braces and/or cables are commonly installed to strengthen weak branch unions. However, correction does not remove the hazard. Correction activities can be undertaken to extend the safe life of a tree, but should be used only when the tree has significant historic or landscape value. Installation of correction devices should be followed by routine inspections to insure that the devices are functioning correctly.

## **Preventative Hazard Management**

An important part of a successful tree hazard abatement strategy is preventative hazard management. In this case, small trees that show hazardous potential are removed before they become large. This allows for easier, cost-effective hazard management. One of the problems with this strategy is the negative public perception of removing small, healthy trees. It is difficult to justify removing a young, vigorously growing tree for the sake of future cost savings.

Preventative hazard tree management is a more feasible strategy for such areas as active- and passive-use conservation areas, where public concern is less likely. The long-term cost savings of this strategy are considerable.

Displaying signs at trail heads or access points to TRCA properties outlining the risks associated with being in areas that contain trees is a way to prepare visitors for the event of a potential tree failure under any circumstance. As well, signs offer a contact number for visitors to call if they see a potential hazard. Staff will then be able to respond to a situation before there is injury or damage to property.

Planting native trees in the appropriate site-classification will help limit future hazards.

## **Marking Trees**

When a tree has been assessed as a hazard, it must be marked for future abatement procedures in accordance to policy standards. Because of the high-use nature of TRCA lands, permanently marking a tree in a highly distinguishable manner can often cause contention with the public. It is advisable that the tree not be marked until immediately before it is scheduled for removal. In some cases, using non-permanent methods such as flagging tape is preferable to permanent methods such as paint. This allows the mark to be removed if other measures such as moving the target can be implemented. Once a tree has been identified as a serious hazard, the target area will remain closed until the hazard has been abated.

## **PART 4 – DUTIES AND RESPONSIBILITIES**

The TRCA Forester will be required to assure compliance with these policies and procedures, including:

1. The implementation of a standardized database to track all trees assessed within this policy, and the maintenance of these records.
2. To assess the competency of assessors, and to ensure they meet required standards of knowledge to carry out tree assessments for TRCA.
3. To arrange for tree abatement, in cooperation with Area Superintendents, either internally or by outside contractors.
4. To help arrange for quotations from outside contractors when deemed necessary.
5. To ensure that all contractors are working within safe working practices as set out by the Workplace Safety and Insurance Board and Occupational Health and Safety Act.
6. To establish and manage the budgets necessary to comply with this policy, and operational procedures.
7. To monitor all business units within the TRCA to ensure compliance with this policy.
8. To monitor compliance of this policy with agencies that are leasing, renting or managing TRCA property, that do not have a management agreement.
9. To make available services, to clients, as required to comply with this policy.

## DEFINITIONS

Hazard Tree	A hazard tree has a structural defect that may cause the tree or portion of the tree to fail. A defective tree in the middle of the woods or an open field, away from paths or public use areas does not necessarily have to be considered a hazard.
Target	The object, structure or person that potentially may be hit or impacted by a falling tree or tree part.
Invitee	The traditional visitor, employee, occupier or neighbour associated with TRCA property.
Weather Disturbance	A significant or rapid change to the normal seasonal weather pattern such as strong winds or ice storm that could negatively impact tree structure.
Infrastructure	The basic physical and organizational structures (e.g. buildings, roads, utilities) owned or managed by TRCA.
Supervisory Staff	A broad term meaning a person who has charge of a workplace or authority over a worker.
Competent Assessor	A designated person who has been deemed qualified by the TRCA Forester about hazard tree inspection and determined capable to complete tree assessments according to TRCA policies and procedures for managing hazard trees.
Removal	To cut down.



**HAZARD TREE INSPECTION FORM**

TRCA Property: \_\_\_\_\_ Assessor: \_\_\_\_\_

Zone:  Active Use C.A.     Passive Use/Res. Mgmt. Tract     Trail     Residential  
 Rented Farm     Limited Use Open Land     Man. Agreement Land

Sub Zone: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Inspection Initiated by: \_\_\_\_\_

TRCA     External

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone: \_\_\_\_\_

Reason: \_\_\_\_\_

**Action/Comments:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Supervisor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Copies to:     Forester     Manager

## HAZARD TREE RATING FORM

TRCA Property: _____	Assessor: _____		
Zone: <input type="checkbox"/> Active Use C.A.	<input type="checkbox"/> Passive Use/Res. Mgmt. Tract	<input type="checkbox"/> Trail	<input type="checkbox"/> Residential
<input type="checkbox"/> Rented Farm	<input type="checkbox"/> Limited Use Open Land	<input type="checkbox"/> Man. Agreement Land	
Sub Zone: _____			
Date: _____		Time: _____	

### **Species Rating**

Species: \_\_\_\_\_

1- Low Failure Risk  
3- High Failure Risk

2 - Medium Failure Risk  
(Refer to species chart)

### **Size Rating**

(Size of defective part)

1 - Small (< 6")      2 - Medium (6"-16")      3 - Large (>16")      4 - Whole Tree (Over ride to action)

### **Target Rating**

Use under tree:     pedestrian     structures     recreation     parking     utility

1 - Occasional Use    2- Moderate Use    3 - Frequent Use    4 - Constant Use

Can Target be Moved?      Y      N

### **Condition Rating**

1 - Good Condition: Tree shows good, healthy growth

2 - Average Condition: Tree may show some signs of stress or decline

3 - Poor Condition: Tree is in decline

### **Structure Rating**

1 - Good Structure: No evident structural compromises

2 - Average Structure: Tree has acceptable structure (some minor)

3 - Poor Structure: Has one or more structural defects

4 - Sever Structure: Has at least one major structural defect

## **Hazard Rating**

**Species Rating + Size Rating + Target Rating + Condition Rating + Structure Rating = \_\_\_\_\_**

**16 - 17**      Tree is an extreme hazard and requires urgent abatement of hazard

**14 - 15**      Tree is hazardous and should be abated in a timely manner

**10 - 13**      A tree at risk; it should be monitored regularly for change

**9 or less**      Tree is not hazardous

## **Abatement Strategy**

1.      Tree Removal
2.      Pruning/Selective Branch removal
3.      Correction (Steel Bracing/Cables)

Map of location:

## **Action Taken:**

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**Date Completed:** \_\_\_\_\_

**Supervisor's Signature:** \_\_\_\_\_

**Copies to:**     Forester             Manager

