



# SOCIETY OF PUBLIC INSURANCE ADMINISTRATORS OF ONTARIO

## SPIO NEWSLETTER - SEPTEMBER 2005

### Abuse by Volunteers Impossible to Eliminate?

Recent news that a former London Big Brothers volunteer is facing sexual assault charges is a stark reminder that volunteer organizations cannot guarantee the safety of vulnerable clients.

At a time when it is standard practice to check references and run police record checks on volunteers London's Big Brothers Association has to cope with queries about their involvement with a former volunteer Big Brother.

Criminal records checks are a commonly accepted prudent practice and one often demanded by the agency's insurer. These checks are just one of several screening and volunteer management tools practiced by volunteer-based organizations.

"While it's necessary to obtain criminal record checks on new volunteers a clear record is no guarantee that anyone has not, or will not, sexually abuse a vulnerable person," says Joy Jackson, author of *Volunteers: Asset or Liability?* "A clean record can only tell you that a person has not been caught, charged, tried and convicted. Some Police departments will say that they have information of concern it's then up to the organization to decide if it is reasonable to turn away a potential volunteer on incomplete information. And if they do turn someone away, it can be the basis for an accusation of discrimination."

There are a lot of benefits to using risk management techniques in public and non-profit management. Initial volunteer screening is just one valuable tool. Organizations who avoid problems in delivering client-focused services enhance service delivery and increase credibility among client families, donors and sponsors.

Joy Jackson, owner of Cunnart Associates, focuses on helping public and non-profit organizations achieve their goals through the use of risk management techniques.

**Joy Jackson, 519-451-7603 or visit [www.cunnart.com](http://www.cunnart.com)**

### SPIO News



#### Just a thought from the President

I would like to thank all those who attended the extended workshop at the beautiful Briars on Lake Simcoe. Everyone who attended appeared to enjoy themselves and overall accommodations were very comfortable. That is, except for the other executive members who all had a bigger room than me... "What's up with that????"

Please mark your calendar for September 16th Workshop once again held at Lionshead. Registration information was sent out in August. Please contact Bo Angevaare for registration information. ([bangevaare@cogeco.ca](mailto:bangevaare@cogeco.ca))

On a personal note, I hope everyone's summer is safe and uneventful. Isn't it nice our little ones are back at school?

Dave

# TREE RISK MANAGEMENT & HAZARD ASSESSMENT - AN OVERVIEW

by Dr. Kim D. Coder, University of Georgia

Management of the urban forest includes maintenance, protection and prevention of problems. Management denotes resource expertise at the organism level, and familiarity and working knowledge of our social systems. In addition, cost-effectiveness over the long-run binds objectives, symptom recognition, treatments, and expected results into a core of resource management decision making that demands up-to-date and conscientious managers. The manager must know the tools and expected results of urban forest maintenance. The manager must also understand how to technically assess the condition of the resource. Hazard assessments are critical components of urban forest inventories. They should be systematically completed by trained professionals. There are several means and methods for assessing hazard conditions and appraising potential risks in the urban forest. Community foresters are risk managers. Most large corporations and public institutions have people assigned to risk management with the stated goal of reducing liability exposure. The community forest has many risks associated with its functions and the values it produces. At the very least, trees are tall, large, and dense structures that can lose parts or catastrophically fail. The assessment of tree associated risk requires specific training and familiarity of both the legal system and trees and their sites.

## Appreciating Risk

One of the most glaring word uses in risk assessment is the word "hazard." The word hazard, for both lay-people and professionals denote that some threshold of risk has been surpassed. Hazard also conveys the immediacy of structural failure as determined by a tree professional. Within community forestry, it is critical that the word "hazard" be used only in association with situations where an actual hazard has been identified. The hazard concept demands a completed evaluation and assessment of risk which reaches a management threshold where the situation cannot be allowed to continue. Beware of the misuse or overuse of the word "hazard." Every landscape and tree situation has risk involved. Nothing is risk free. All trees carry a given amount of risk. That level of risk under some management regimes would be hazardous while under other management objectives would be acceptable risk. Some situations allow more

risk to be accepted and managed, while other situations would call for immediate removal and risk reduction. Because all trees have risk associated with them, discussion of the structural integrity of a tree should assess the level of risk present. It is the amount of risk present, the perceptions of the risk manager, and the willingness to accept or not accept a given level of risk that determines hazard. Any tree is not necessarily hazardous, but all carry some level of assessable risk that professionals can estimate.

## Tree Values and Liabilities

One of the fundamental concepts in community forest management is that trees have value, provide benefits, and are desired by humans. People find great psychological, monetary, aesthetic, and utilitarian values in trees. The benefits of trees which people enjoy include aesthetic, recreation, psychological, shade, heat dissipation, blockage of glare, blockage of noise, production of white noise, reduction of pollutants, production of oxygen, reduction of erosion, wildlife habitat, increase property values, and increase economic stability. Many more values and functions could be added. Trees have great benefits but also have great costs. Tree costs include capital infrastructure investments, foregone alternative investments, installation, maintenance, management, and removal. One of these costs is liability risk. Liabilities include ecological, biological, aesthetic, social, economic, and safety risks. You cannot eliminate liability risk from trees unless the entire above and below ground structure is removed from the site. With the trees removed, the site still does not remain risk free. A manager can reduce liability risks and keep them below the management objective threshold, in most cases. People want trees but they also need to be safe from threats to property and physical injury. Part of management is being aware of the potential risks associated with trees, identifying risks, and then minimizing risks within the constraints of your management objectives. This process depends upon professional judgements and decisions (or lack of decisions). Every professional decision must be made for one or all the following reasons: asset protection, asset appreciation, minimization of liability risks (future), public safety (present), and/or to reach management objectives. Understanding the structure of trees, symptoms of impending structural failure, treatments available to minimize the chance of structural failure, and how trees finally fail are essential knowledge to a community forestry manager. Understanding the risks of structural failure is as important as any other component of a manager's job.

# TREE RISK MANAGEMENT & HAZARD ASSESSMENT - AN OVERVIEW

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## Definitions

There are three classes of trees in the landscape related to levels of risk. The first is a "hazard tree." The attributes of a hazard tree are it has a major structural fault that could lead to catastrophic loss and it has an identifiable target (people or property). The second class of tree is a "tree at risk" of catastrophic failure or with a significant target profile potentially leading to great injury and harm. A "tree at risk" has potential for becoming a hazard tree. The third class is all the rest of the trees present with known risk assessments, or as yet undetermined associated risks. The amount of acceptable risk is dependent upon the management objectives of the site and the owner's / manager's perceptions and expectations of tree performance.

## Structural Faults

Because a hazard condition has two components (a major structural fault and a target), let us examine structural faults and tree defects. Structural defects are dependent upon fault length, width, and depth, tree species, tree vigor, and associated compounding structural problems. Hazard assessment is only about structure, not about aesthetics or biology. Structural defects can include large vertical (longitudinal) cracks, large decayed areas, included bark zones, narrow crotches or forks, dead wood and branches, large cavities, large leans, major root damage, horizontal (tangential) cracks, poorly connected living branches, pest damaged or modified areas, and mis-proportioned crown / root ratio and stem strength for the given wind and gravity loading conditions. There are many unique forms of tree failures.

## Specific Cases of Structural Faults

There are several structural failures that reap much attention. One structural fault of interest is branch drop caused by longitudinal cracks. These cracks can form along compartment lines of old pruning cuts or injuries; from structural failures along cell walls due to loading stress and strain (bending, tensioning, compression, and twist); and, from negative transpirational pressures. There are many other specific causes. Cracking leads to wound colonization by wood weakening organisms, decreases moisture content which facilitates more injury, and pest attacks which weaken the structural and defensive components of the branch

or tree. The final result is the sometimes sudden loss of living branches. Another structural failure for consideration is in the root plate or root pedestal area at the base of the stem. As trees sway in the wind and are loaded by wind and gravity, the basal roots and lower stem undergo alternating periods of compression and tension. Tree structure is two to three times weaker in compression than in tension. Where structural areas are loaded beyond their compressive limits, fault lines develop that will expand as more compressive load is added over time and will fail under compression or tension. For example, many trees damaged in storms show compressive failures which fail under tension. Root pulling and shearing across their cross-section are the result. Root collar problems are receiving much more (well deserved) attention from a structural standpoint. Bark and cambial damage, especially if repeated over many years can lead to many types of structural problems in the very place in the tree where stress and strain is concentrated. Injury at the stem base and in the root collar area can be hidden by soil and landscape features. Root collar excavations are becoming more common as a part of risk assessments. One structural component fault that is sometimes overlooked is girdling roots. Girdling roots are hard to diagnosis and can lead to strength losses. The effect of poor root geometry development can lead to significant risks of tree failure after 10-20 years. Generally, root structural problems of any kind are difficult to ascertain, requiring additional care in assessments. Leaning trees have plagued people since the first lean-to was erected. The perceptions and expectations of nonprofessionals when observing a leaning tree is highly variable and govern the amount of risk accepted. Leaning trees could stand for millennium or fall tomorrow. Professional judgement about the structural integrity of leaning trees many times takes a backseat to manager / owner anxiety about impending failure. Trees with progressive leans are clear candidates for removal. Trees that have not changed stem positions relative to the ground and surrounding obstacles for decades probably carry little additional risks other than in specific directional targeting. It is difficult to defend having left a tree with a significant lean (15-20°) when it fails.

Article continued in the December newsletter.

