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Tree Hazard Risk Assessment

By

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Trees are an essential part of our homes, communities, parks, campgrounds, golf courses and natural environment, and greatly contribute to environmental, social, and economic values to all of us. However, when tree or part of trees fall, they can also pose risks, especially in areas where they are in close proximity to people, buildings, and infrastructure (above and underground utilities, roads, etc). Trees are living things which are susceptible to many natural elements such as insects, diseases, and weather or man-made damages like construction, compaction, and equipment. There is no such thing as a "safe tree", but relatively only a very small number of trees cause damage.

A **tree hazard risk assessment** is a systematic process designed to evaluate the potential dangers associated with trees, ensuring the safety of people and property. Municipalities, property owners, and individuals have a "duty of care" for trees, which includes ensuring their health, safety, and longevity.

The "Duty of Care" for Trees

The "duty of care" for trees encompasses the ethical, legal, and practical responsibilities that individuals, organizations, and governments have to maintain trees in a manner that ensures their well-being and the safety of the public. It's an essential concept that acknowledges the importance of responsible tree management. Under the [Alberta Occupiers' Liability Act](#) that you as the owner is responsible under the "duty of care of visitors" to provide the safety to visitors. *The common duty of care applies in relation to: " (a) the condition of the premises, (b) activities on the premises, and (c) the conduct of third parties on the premises."*

Significance of the Duty of Care for Trees

The duty of care for trees is significant for several reasons, but most importantly:

- **Safety:** Trees that are not properly maintained can become safety hazards. Dead branches or trees with structural weaknesses can pose significant risks to people, property, and infrastructure.
- **Legal obligations:** In many jurisdictions, there are legal obligations to ensure the safety of trees. Failing to fulfill these obligations may result in legal consequences and liabilities.

Understanding Tree Risks and Hazards

Trees are subject to various internal and external factors that can make them hazardous. Internal factors include the tree's age, species, crown and root structure, and overall health, while external factors encompass environmental conditions, such as extreme weather events and human disturbances. There is a significant and important distinction between "tree risk" and "tree hazards". Under the [International Society of Arborist \(ISA\) – Tree Risk Assessment Manual](#) defines them as follows:



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Risk is the combination of the likelihood of an event and severity of the potential consequences. In the context of trees, tree risk is the likelihood of a conflict or tree failure occurring and affecting a target, and the severity of the associated consequences—personal injury, property damage, or disruption of activities.

A hazard is a likely source of harm. In relation to trees, a tree hazard is the tree part or parts identified as a likely source of harm.

Tree hazards can be broadly categorized as follows:

- *Structural hazards*- These include weak branch unions, decay, and hollow areas within the trunk, all of which can lead to branch or tree failure.
- *Biological hazards* - Pests, diseases, and invasive species can weaken trees and make them more susceptible to structural issues.
- *Environmental hazards*- Trees can be affected by factors like strong winds, heavy rain, snow, or lightning strikes, which can cause immediate damage or weaken the tree over time.
- *Human-related hazards*- Construction activities, improper pruning, and changes in the tree's surrounding environment can impact its stability and health.

The Importance of Tree Hazard Risk Assessment

A tree hazard risk assessment is a crucial tool, and it serves several essential purposes:

- *Preventing accidents*- Identifying and mitigating tree hazards can prevent accidents, injuries, and property damage caused by falling branches or trees. This is particularly vital in areas with high human activity.
- *Liability reduction*- Property owners, municipalities, and land managers can reduce their liability by demonstrating due diligence in identifying and addressing tree hazards.
- *Identify tree care and maintenance needs*- A risk assessment can help identify and address issues affecting the overall health of trees, leading to better maintenance and longevity.
- *Understand optimal tree management*- By understanding the risks associated with their trees, property owners can make informed decisions about pruning, removal, and replanting.
- *Record keeping and documentation*- A detailed record of the assessment and any actions taken is maintained. This documentation is crucial for future reference, liability purposes, and to track the effectiveness of mitigation measures.

Practical Measures to Fulfill the Duty of Care for Trees

To fulfill the duty of care for trees, individuals, property owners, and municipalities can take practical measures:

- *Perform regular tree inspections*: Trees should be regularly inspected by ISA Tree Risk Assessment Qualified (TRAQ) assessor and experts to identify potential problems. Regular inspections allow for the early detection and prevention of issues that could lead to tree decline or pose risks to the public. Inspections can help determine if a tree requires maintenance, pruning, or other treatments.



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- **Conduct risk assessment:** Risk assessments should be conducted to identify and mitigate potential dangers. This involves evaluating the structural stability of trees and their proximity to structures and high-traffic areas.
- **Perform risk mitigation:** Property owners and municipalities are obligated to assess and mitigate the risks associated with trees. This includes identifying and addressing potential hazards, like dead branches, structural weaknesses, or unstable root systems.
- **Prudent Decision-Making:** Property owners and municipalities should make informed decisions about tree management, considering factors such as the tree's age, species, and overall condition.
- **Compliance with regulations:** Adhering to local regulations and bylaws related to tree care and protection is crucial. Adhering to these rules is part of the duty of care, ensuring that trees are managed in a manner consistent with the community's needs and values. This includes obtaining permits when necessary and following guidelines for tree removal and pruning.

Conclusion

Tree hazard risk assessment is a vital component of responsible tree management, particularly in areas where trees and people coexist. The systematic evaluation of potential tree hazards, along with the implementation of appropriate mitigation measures, not only ensures the safety of individuals and property but also promotes the overall health and longevity of trees.

By understanding the risks and taking proactive steps to mitigate them, we can continue to enjoy the numerous benefits that trees provide while minimizing the potential dangers they may pose. By recognizing potential hazards, evaluating risks, and implementing appropriate mitigation measures and fulfilling the duty of care for trees, we can strike a balance between enjoying the benefits of trees and safeguarding our safety and environment.

For more information:

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