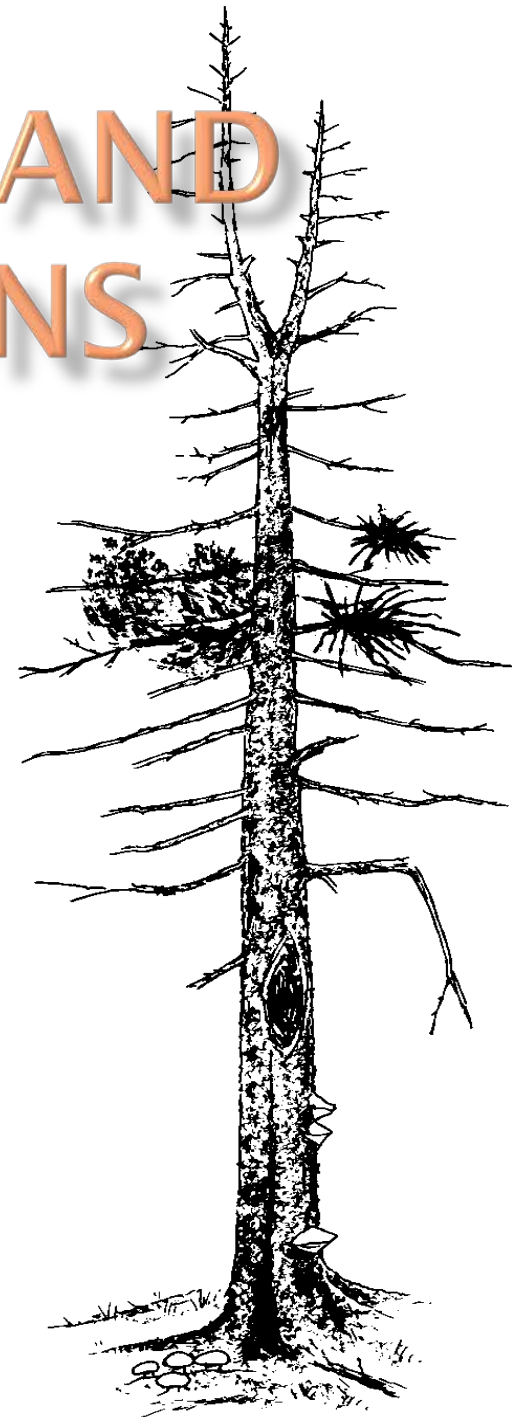


DANGEROUS TREES AND QUALIFIED PERSONS



*Presented by Dean McGeough, RPF
Wildlife Tree Committee of BC*



Agenda – 8:00am to 12:00pm

1. Introduction to Wildlife Trees – 1/4 hour
 - What is a wildlife tree
 - Tree Classification
 - Importance of Wildlife Trees
2. Danger Tree Assessment overview – 1 1/4 hours
 - What is a Dangerous Tree
 - Relevant regulations
 - 4 steps to Tree Assessments
3. Field Training Session – 2 hours
 - Site Assessment Overview and Stratification
 - Wildlife/Dangerous tree identification
 - No Work Zones and Safety Plans

Training

OHS Regulation 26.3(1): Every worker in a forestry operation must receive the training necessary to safely perform the worker's duties.

- ✓ Training must be relevant to safe performance of duties
- ✓ Records must be kept
- ✓ Records made available to the worker

Uncertainty about DT Management

What's a Dangerous Tree?

When are DT assessments done?

Who can be a DT Assessor?

What's a Qualified Person?

What is LOD?

What's a Wildlife Tree?

What about WIND?

What is a Site Assessment Overview?

Aren't SNAGS always Dangerous?!

Are LIVE trees Dangerous?

GOALS

Field-based training for candidates wanting to be a QP:

- Develop basic site and tree assessment skills
- Competently create site safety plans for LOD-1 activities

Provide **field-based** learning that will promote:

- Identification of wildlife trees and dangerous trees;
- Retention of valuable wildlife tree habitat; and
- Maintenance of a safe worker and visitor environment



A Qualified Person

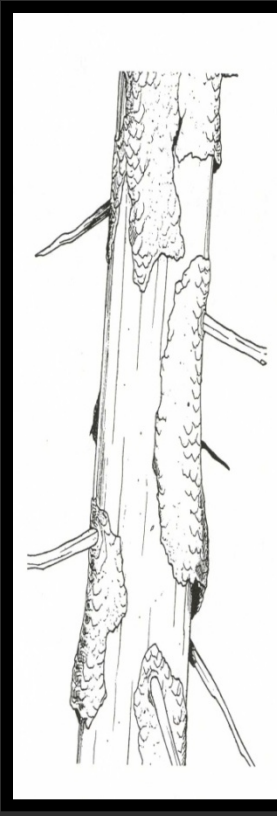
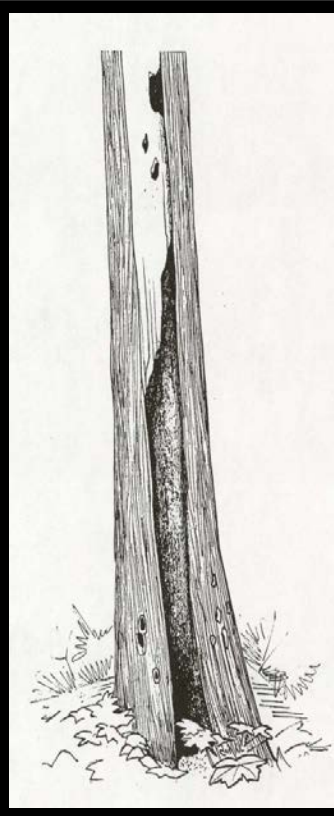
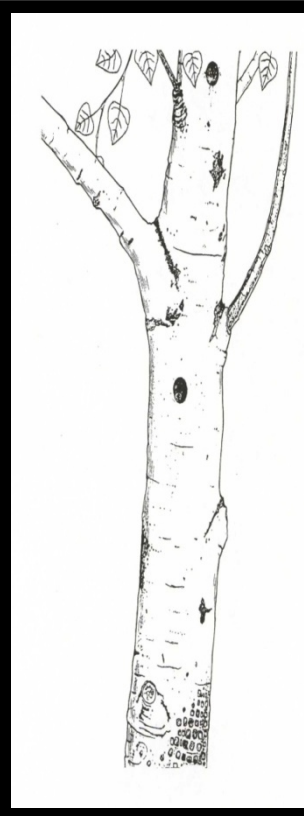
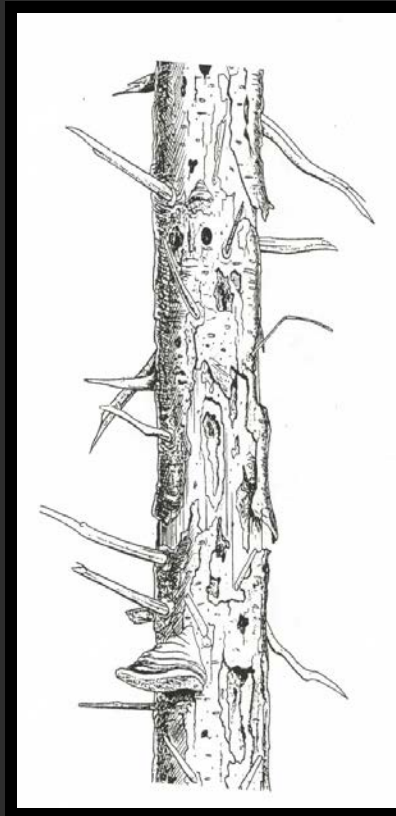
- **EXPERIENCED** in the specified work activity
- **TRAINED** and/or **EXPERIENCED** in recognizing and evaluating tree hazards
- **COMPETENTLY** able to **IMPLEMENT** safe work procedures that will eliminate or minimize risks of exposure to dangerous trees

A Wildlife Tree.....


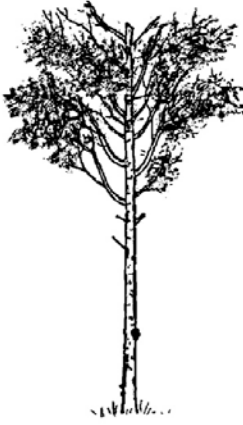
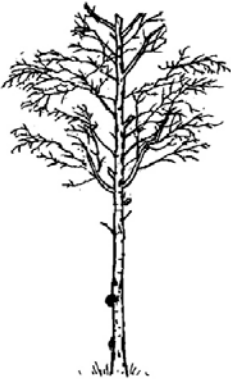
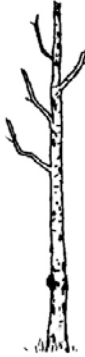


... is any standing dead or live tree with **SPECIAL CHARACTERISTICS** that provide habitat for wildlife



Special Characteristics



WT Classification

Tree class	LIVE		DEAD			DEAD FALLEN
	1	2	3	spongy 4	soft 5	6
					approx. 1/2 original height 	

WILDLIFE TREE CHARACTERISTICS

- ▣ > 15 m in height
- ▣ > 30 cm DBH (interior), > 70 cm DBH (coastal)
- ▣ Decay class 2 - 6
- ▣ Broken top
- ▣ Some large branches
- ▣ Some intact bark with loose spaces
- ▣ Nest cavities, feeding excavations
- ▣ Some evidence of decay (conks, cankers)
- ▣ Windfirm, sound roots

Wildlife Trees are Valuable

- ▣ Over 80 forest vertebrate species in BC depend on wildlife trees.
- ▣ We recognize 5 groups:
 - Primary cavity excavators (Woodpeckers)
 - Secondary cavity users (e.g., owls, swallows, ducks)
 - Open nesters (e.g., eagles, heron, osprey)
 - Mammals (e.g., bears, martin, squirrels)
 - Amphibians (e.g., salamanders)

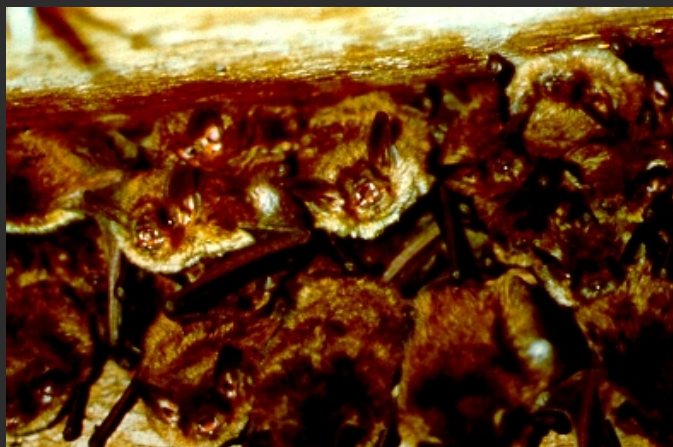


photo by Warren Greene

SECTION 34 WILDLIFE ACT

“A person who, except as provided by regulation, possesses, takes, injures, molests or destroys

- (a) a bird or its egg,
- (b) the nest of an eagle, peregrine falcon, gyrfalcon, osprey, heron or burrowing owl, OR
- (c) the nest of a bird not referred to in (b) when the nest is occupied by a bird or its egg

commits an offence.”

A Dangerous Tree ...

OHS Regulation 26.1

... means a tree that is a hazard to a worker due to:

- ✓ its location or lean,
- ✓ its physical damage,
- ✓ overhead conditions,
- ✓ deterioration of its limbs, stem or root system, or
- ✓ any combination of the conditions [above]

UNSAFE is UNACCEPTABLE !

- Era of opportunities to move forward
- Not enough to simply say, “keep your head up and have a safe day !”

Terms of Reference

Worker's Compensation Act – general duties

- ❑ Section 115 – Employers
- ❑ Section 116 – Workers
- ❑ Section 117 – Supervisors
- ❑ Section 119 – Owners
- ❑ Section 118 – Multiple Employer worksites

OHS Regulation Part 26 – Forestry Operations and Similar Activities (Effective May 1, 2008)

- Responsibilities: identify & mitigate hazards,
provide worksite orientation and training

RISK ASSESSMENT PLANNING

OHS Regulation 26.2 Planning and Conducting a Forestry Operation

- Activities must be PLANNED and CONDUCTED consistent with safe work practices
- Identify site hazards BEFORE work commences
- Documented as part of PLANNING

Points of Control for Worksite Safety

POC Matrix – A Framework for a Safety Management System

- Establish Clear Objectives
- Coordinated Hazard Planning
- Linked Participant Groups
- Established Controls & Feedback

Managing Dangerous Trees – 4 steps

1. Conduct a Site Assessment Overview and Confirm the Level of Disturbance (LOD)
2. Conduct tree inspections
3. Make appropriate safety decisions
4. Provide documentation to communicate safety plans for the work site

SITE HAZARD ASSESSMENT

- ▣ Stand History & Condition
 - ▣ Past failures, age, species, evidence of disease, etc.
- ▣ Common Environmental Conditions
 - ▣ Snow, wind, fog, flooding, etc.
- ▣ Windthrow Potential
 - ▣ Prevailing winds, exposure, rooting, history, etc.
- ▣ Signs of Stress
 - ▣ Cone crop, thinning, etc.
- ▣ Tree Lean - Recent
- ▣ Location & Exposure to Workers

Stratify your worksite

Retention Patches

Block Edges

Wind throw risk



LOD-1 Activities

- ▣ tree planting
- ▣ brushing
- ▣ tree pruning (stems <20 cm dbh)
- ▣ use of light-duty machinery (e.g., weed whips, brush saws)
- ▣ road travel with heavy vehicles (>5500 kg GVWR) on ballasted and compacted roads
- ▣ fire control with hand tools and/or water hoses
- Only applies if WINDSPEEDS <40km/hour

DANGEROUS TREE RISK

$$\text{Risk} = \text{Hazard} \times \text{Exposure}$$

One without the other = low risk

- Trees that are at imminent risk of failure are **DANGEROUS** for LOD-1

Significant Tree Hazards: Advanced Decay



Significant Tree Hazards: Stem Damage



Significant Tree Hazards: Hang-ups



Significant Tree Hazards: Lean + Poor roots



Manage Exposure to Hazards

OHS Reg. 26.11(1) and (2)

If it is known or reasonably foreseeable that work will expose a worker

- Dangerous Trees are Removed, or
- Risk Assessment process is performed by a trained person, and
- Implement a Mitigation plan

... BEFORE work starts.

DT Mitigation

- ▣ Cut down the tree
- ▣ Remove the Hazardous part
- ▣ Install a No Work Zone (NWZ)

Documentation

- ▣ Site Hazard Risk Assessment
- ▣ Danger Tree Tracking
- ▣ Documented Pre-work Meeting

SITE ASSESSMENT OVERVIEW SUMMARY

Site Assessment
Data Card

Location:		Date (mm/dd/yy):	
Tenure Holder:		Tenure:	
Stratum Identification:		Operation:	
Assessor's Name:			
Forestry activity and LOD:		Planned start-up and end dates:	
Stratum conditions (Describe leave trees - species, sizes, condition, ages and density distribution):			
WT management objectives (Describe constraints to NWZ, WT retention):			
Stand Density and Site History		Site Hazards	
Common Tree Pathogens/Cause of Failure (List factors and severity/frequency)			
Disturbance year		Bluffs/cliffs/sink holes	
Disturbance type		Gorges/streams/gullies	
Recent tree failure(s)		Rock talus/scree	
Past tree failure(s)		Steep/unstable terrain	
Fire intensity (L,M,H)		Recent edge/tree exposures	
Tree retention pattern - even clumps irregular		Snow/ice/fog	
		Windthrow risk	
Retention tree density (L, M, H)		Shallow/saturated soils	
Tree species mix		Stand decadence	
Tree age (dom/co-dom)		Other:	
Prevailing wind direction			
Wildlife tree use (L, M, H)			
Mitigation Strategies		Constraints	
Communication			
Falling/machine clearing/blasting		Wind speed criteria	
Evacuation routes			
NWZ criteria		Weather	
Tree modification		Seasonal issues	
Refuge area			
		Road use control	

Appendix 3: Dangerous Tree Field Data Collection Card Sample

Danger
Tree
Tracking

Printed Name: Peter Doneit										Date: Month – Day – Year									
SITE ASSESSMENT																			
Activity: Tree planting – spring plant																			
Location: New Forest Mills																			
CP/Block: CP: 24 Block: 1543																			
Site History: (e.g., year harvested, site preparation method and timing)																			
Winter logged last year; scattered healthy trees and deciduous wildlife trees; no site prep																			
DANGEROUS TREE FIELD DATA COLLECTION – LOD 1																			
Inspections of trees for LOD-1 activities are applicable only when silviculture activities are performed in light winds (<40 km/hr). If wind speeds exceed 40 km/hr the workers must move to a safe area.																			
Tree #	Tree Species	Tree Class	WT value (L, M, H)	Estimated Height (meters)	Estimated Diameter (cm)	Lean (L, M, H)	Significant Tree Defects (see below)			Dangerous Tree Management Strategy (i.e., Mark tree as Dangerous; Ribbon No Work Zone or Fall Tree)									
							Insecurely lodged	Unstable stem	Recent lean/poor roots										
1	Fd	2	L	20	35	+L	D			Blue paint #1; pink flagging NWZ for hanging dead limb									
2	Pl	5	M	15	30	-L		D		10m inside WTP edge; numerous conks and active cavity nest; pink NWZ									
3	At	2		20	40	-M			D	Tree's roots lifted; blue paint #3 plus blue flagging – fall tree									
4	Fd	3	M	20	30	0		S		Tree has one conk at 2m up from the base – safe and yellow flagged – No Action									
5																			
6																			
7																			
8																			
9																			
10																			
Notes:																			
Dangerous Trees are painted with BLUE number for reference. See map for locations of all D trees and the NWZs																			
NWZ are flagged in PINK																			
Suspect trees that did not meet Dangerous are flagged with YELLOW for reference (number written on the flagging)																			

Dangerous Trees & Due Diligence

IF “Unsafe is Unacceptable” ...
then **SAFETY** is about **DOING** the **RIGHT**
thing!

Consider the “If in doubt take it out!”

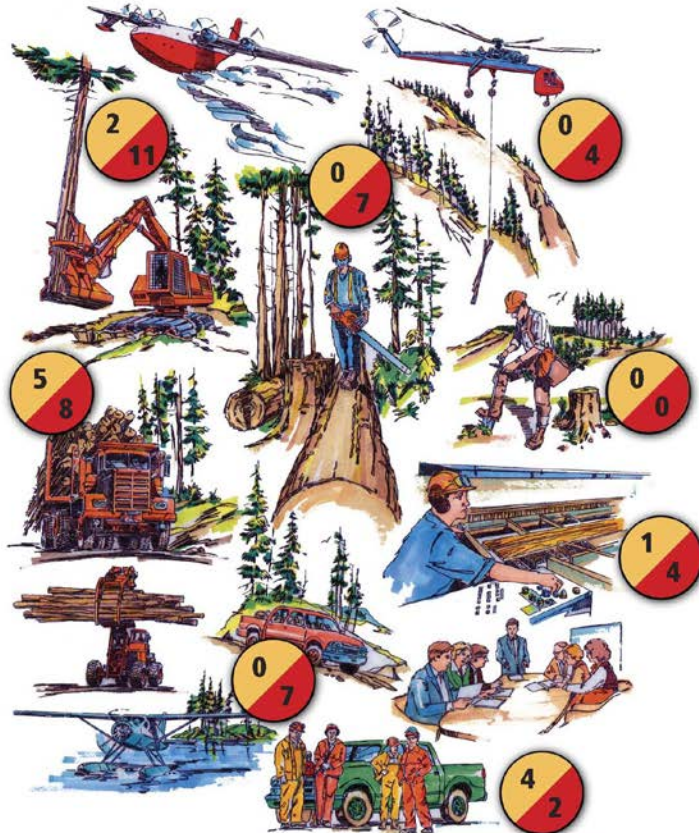
Defaulted as the EASY way to manage questionable
Dangerous Trees ... but, IS it EASY?!?!

BC FOREST INDUSTRY FATALITIES COMPARISON

12

2006 / 2005

43



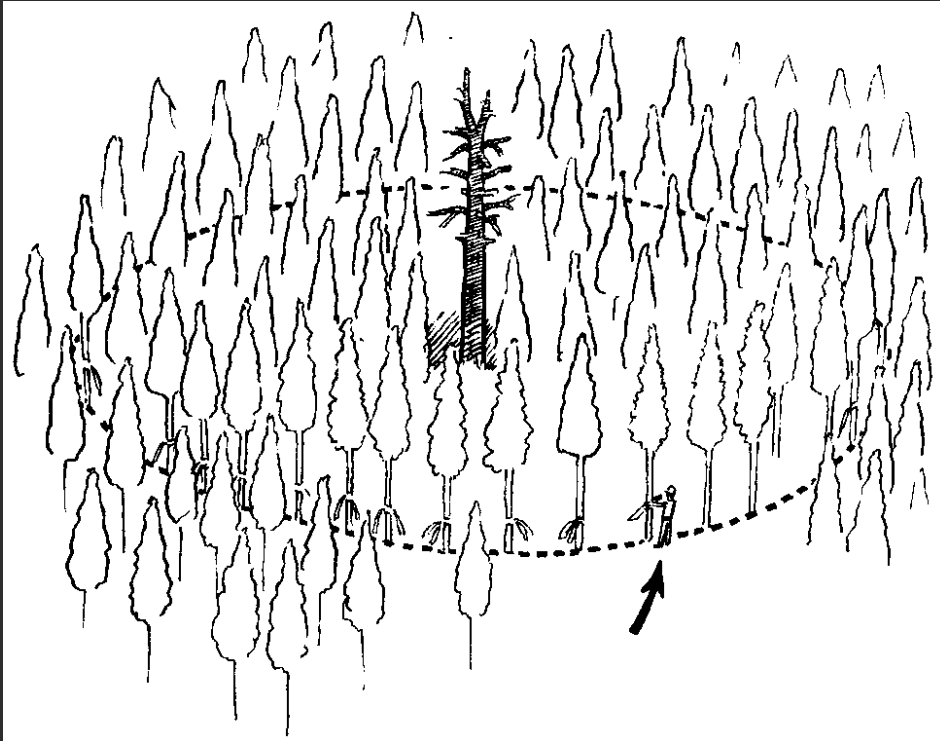
Category	Fatalities 2006	Fatalities 2005
Manual Tree Felling	0	7
Yarding/Mechanical Harvesting	7	11
Log Loading	5	8
Skidding	0	0
Helicopter Logging	0	4
Forest Fire Fighting	0	0
Swimming	1	4
Traveling to and from Work	0	7
Other	4	2
TOTAL*	12	43

These numbers represent the total number of fatalities as reported by Notices of Incident. Notices of Incident are a timely and accurate source of information for fatalities. For more information about these statistics, please visit the BC Forest Safety Council's website at www.bcforestsafe.org

The “Take it out” approach in context

- Planting is LOD-1
- Falling is LOD-3
- Risk of Flagging a NWZ – **MINIMAL**
- Risk of Falling a DT - **HIGH**

No Work Zones



Hazard Areas are generally 1.5 times the defect length

➤ NWZ must encircle the hazard area to protect workers

Limitations

- ▣ QP can only assess sites with LOD-1 activities and wind speeds <40km/hour
- ▣ If uncertain about a tree's defect, the QP must either consult with a CERTIFIED DTA or conclude the tree is Dangerous
- ▣ QP are NOT qualified to perform initial site assessments on HIGH STEM DENSITY SITES (e.g., MPB or Fire killed sites)

For Info on Wildlife/Dangerous Trees:

Wildlife Tree Committee's Website is a source of info and contacts.

www.for.gov.bc.ca/hfp/values/wildlife/WLT/index.htm