

DRAFT

9/04

27.1

FPR PROCEDURE
HAZARD TREE SURVEYS AND STATE LANDS

PURPOSE:

This procedure is intended to provide a uniform method of surveying for, identifying and correcting trees that could potentially pose a hazard to humans and/or property while visiting/using certain Vermont state lands.

APPLICABILITY:

The procedure applies to all areas of State Forests, Parks and Recreation lands having facilities developed to allow for public access and use (e.g. camping areas, picnic areas, high use parking lots and roads, etc.). It does not cover areas open to the public which have limited facilities, improvements or use (e.g., forests, undeveloped parks, trails, shorelines outside of developed recreation areas, etc.).

PROCEDURE:

All surveys shall be coordinated with both the Regional Parks Manager and District Forestry Manager.

Where this procedure is applicable, areas shall be divided in two categories, with different surveying schedules:

- High Risk Areas – where people and/or property are frequently present for any length of time other than just passing through, so that there is a stronger likelihood that a falling tree or limb may cause damage to persons or property. These include camping areas, day use areas, developed recreation sites and designated parking lots. High risk areas shall be surveyed once a year. Individual high risk areas may need additional surveys due to weather incidents, or at the request of the Regional Park Manager or District Forestry Manager.
- Low Risk Areas – where people and/or property are present irregularly and/or temporarily. These include designated roadside areas and facility access roads. Low risk areas shall be surveyed once every two years.

Each regional office will maintain a map of all high and low risk areas.

Forestry Division personnel who have been trained on how to identify hazard trees and complete the surveys shall conduct the surveys. When surveying areas in State Parks, the responsible Regional Park Manager or designee will accompany assigned forestry personnel. All surveys shall be conducted according to the following minimum standards:

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Defect	Description	Action
Crack	Crack goes completely through stem or branch	Remove
	Crack with cavity or decay	Remove
	Crack in contact with other defect	Remove
	Crack on branch 4" in diameter or more	Remove branch
	Crack with no decay	NA
WBU	Weak branch union with crack, canker or decay	Remove
	WBU with included bark	NA
Decay	Conks or mushrooms on main trunk below crown	Remove
	Decay with WBU or Cracks	Remove
	Conk on branch	Remove branch
Canker	Canker and decay on main trunk below crown	Remove
	Canker connected to a crack or other defect	Remove
	Canker or coalescing cankers more than $\frac{1}{2}$ circumference	Remove
	Canker at base of leaner	Remove
	Canker less than $\frac{1}{2}$ circumference	NA
Dead	Dead tree	Remove
	Dead top	Remove
	Branch dead or more than 2/3 dead	Remove branch
Root Problem	Tree leaning with soil mounding	Remove
	Inadequate root support, more than $\frac{1}{2}$ missing	Remove
	Root decay	Remove
PTA	Tree leaning more than 45*	Remove
	Leaner with other defect	Remove

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HAZARD TREE SURVEY FORM

DATE: _____ SURVEYOR(S): _____

LOCATION: _____

TREE #	LOCATION	SPECIES	DBH	DEFECTS	ACTION	TREE SERV (Y)	COMMENTS	DATE ACTION COMPLETED

FPR Procedure
Hazard Tree Surveys on State Lands

Purpose:

This procedure is intended to provide a uniform method of surveying for and removing trees that are a hazard to humans and/or property on Vermont state lands.

Procedure:

The procedure applies to all areas of state lands with facilities developed to allow public access to and use of state lands (e.g., camping areas, picnic areas, parking lots and roads, etc.). It does not cover areas open to the public which have limited facilities or improvements (e.g., forests, undeveloped parks, primitive camping areas, trails, shorelines outside of developed recreation areas, etc.). All surveys shall be coordinated with both the Regional Park and District Forestry Managers.

Where this procedure is applicable, areas are in two categories, with different surveying schedules:

- High Risk Areas - where people and/or property are frequently present for any length of time other than just passing through, so that there is a strong likelihood that a falling tree or limb may cause damage to persons or property. These include camping areas, day use areas, developed recreation sites, and designated parking lots. High risk areas shall be surveyed once a year. Individual high risk areas may need additional surveys due to weather incidents or at the request of the responsible division manager.
- Low Risk Areas - where people and/or property are present irregularly and/or temporarily. These include designated roadside areas and facility access roads. Low risk areas shall be surveyed once every two years.

The Forest Resource Protection Section trains assigned forestry personnel on how to identify hazard trees and complete the surveys. Trained forestry personnel, accompanied by the responsible division manager or designee shall conduct surveys according to the following minimum standards:

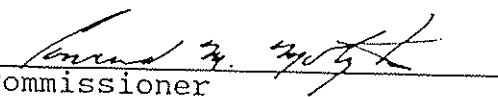
- Survey shall be done at a time acceptable to the responsible manager and in time to allow for necessary action(s) to be completed prior to a time of high use.

- All high risk trees shall be marked with highly visible tree paint other than blue. Low risk trees of concern may be marked in a manner acceptable to the responsible division manager.
- Data collected from each survey shall be recorded on the most current "Hazard Tree Survey Form". If necessary, trees will be identified on an attached map. The original shall be sent to the responsible division manager within 5 days of the survey.
- Areas where high risk trees have not been removed or maintained prior to regular seasonal opening of the area for public use shall be closed to the public.
- The responsible division manager shall record actions taken and archive the completed survey forms.

Rationale:

To provide a responsible and documented method for minimizing the potential for injury to humans and/or damage to property on Vermont state lands.

Effective Date: 8/1/93


Commissioner

HAZARD TREE SURVEY FORM

DATE: _____

SURVEYOR: _____

LOCATION: _____

AREAS SURVEYED: High risk Low risk

Tree #	Location (i.e. site #/name, on attached map)	Species	DBH (to 1")	Defects	High Risk* <input checked="" type="checkbox"/>	Action (if other than removal, i.e. pruning, etc.)	Tree Surv. <input checked="" type="checkbox"/>	Comments (i.e. hazards, concerns, etc.)	Date Action Completed	Follow-up Comments

SURVEY SUMMARY: Total # of Trees _____ Total Cords* _____ Total # of High Risk Trees _____ Total # of Tree Service Trees _____
**High Risk Formula and Wood Table on the back.*

TREE EVALUATION

To evaluate trees, check all potential targets and defects that apply. "A" is the number associated with the most important potential target checked. "B" is the number associated with the most serious defect present.

A	Potential Targets	B	Defects Present
0	Away from everything	0	No visible defect
1	Low volume road	1	Pitching or sap leaking
	Low volume trail		Small mechanical injury
	Sign, fence		
	Active roads		Large mechanical wound
2	Well used trails	2	Lightning scar or frost crack
	Powerlines		Individual stem canker(s)
	Temporary structures		Large broken branches
	High activity area		V-forked tree
3	Parking lots	3	Exposed roots - no decay
	Buildings		Leaner (natural)
	Playgrounds		Exposed roots with decay
			Mushrooms or conks
		3	Coalescing stem cankers
			Punky knots
			Branch, stem, basal cavity(ies)
			Dead top
		4	Dead Tree
			Root rot
			Butt rot
			Leaner with other defects

CORDS OF WOOD PER AVERAGE TREE

Tree Diameter at Breast Height in inches (DBH)	Cords per Average Tree	
	Hardwoods	Softwoods
2	0.007	
3	.012	
4	.022	0.013
5	.03	.023
6	.05	.036
7	.07	.054
8	.09	.08
9	.12	.10
10	.17	.12
11	.20	.15
12	.25	.20
13	.30	.23
14	.33	.27
15	.40	.33
16	.50	.40
17	.60	.50
18	.70	.55
19	.80	.6
20	.90	.7
21	1.00	.7
22	1.1	.8
23	1.2	.9
24	1.4	1.0
25	1.6	1.1
26	1.7	1.2
27	1.9	1.3
28	2.1	1.4
29	2.3	
30	2.5	
32	2.9	
34	3.4	
36	4.0	

Prepared by George W. C. Turner

Risk Rating = A X B = _____ X _____ = _____

Low Risk (0-6)

High Risk (8-12)