

Location: _____ Page: _____ of _____

Date: _____ Inspected by: _____

(Each column represents one tree)

Unit number (e.g. campsite #)						
Tree number						
Tree species						
DBH (in)						
Height (ft)						
Tar-gets	2	People, Permanent Structures, Vehicles				
	1	Major Trails and Roads				
Defects	3	Wounds/cankers > 50% of circumference				
		Height to diameter ratio over 80:1 (see back of form ⁴)				
		Unnatural lean				
		Root disease				
		Severe stem decay signs (see back of form ⁵)				
		Exposed roots with decay, > 50% of roots				
		Crack severe or associated with fork				
		Dead tree				
		Sound shell < 33% radius*				
		Dead Top/Branch > 6" in diameter				
	2	Wounds/cankers 33-50% of circumference				
		Height to diameter ratio 60:1 to 80:1				
		Exposed roots with decay, < 50% of roots				
		Cavities in branch, bole, base				
		Codominant stems with included bark				
		Dead Top/Branch 3-6" in diameter				
		Sound shell 33-60% radius*				
		Moderate stem decay signs (see back of form ⁶)				
	1	Wounds/cankers 10-33% of circumference				
		Lightning scar, small crack				
Large broom, dead top/branch < 3" diameter						
Codominant stems with no included bark						
Exposed or severed roots, no decay						
Natural lean						
0	No visible defect; minor wounds, pitch/flux					
		Risk Rating (Target x Worst Defect)				
		*Drilling (if done) – inches of sound wood				
		GPS Coordinates				
		Remove				
		Prune				
		Monitor				
		Date Accomplished				
		Notes				

Use of the Tree Risk Assessment Form

Defective trees are potential hazards to people and property in recreation areas. Indicators of defects are used to identify trees that may fail. Systematic, annual, documented inspections of trees in recreation sites and corrective action are recommended to reduce hazards to the public. (D.W. Johnson. 1981. Tree hazards, Recognition and Reduction in Recreation Sites. Technical Report R2-1. USDA Forest Service, Forest Pest Management Denver, CO.)

The Tree Risk Assessment Form is more than a rating record of potential tree hazards for a particular site. It is a record of the overall structural condition of a tree that can be used to determine progression of defects over time and to document the frequency of certain defects. All defects observed should be checked even though only the highest values are used in the risk rating.

Forms cannot take all situations into account. Trained and experienced evaluation crews may need to exercise judgment in some cases. However, if you need to regularly override the form, need training, or have any questions about the process or a rating a particular tree defect, please contact Forest Health Protection staff:

Arizona Zone Office: (928) 556-2075

New Mexico Zone Office: (505) 842-3288

1. Maps of the campgrounds are helpful in planning and performing tree risk assessments. All recreation structures should be drawn on the maps. Maps used or created during the survey should be included with the Tree Risk Assessment Forms to indicate which specific recreation sites were surveyed.
2. Tree locations should be accurately described on the Tree Risk Assessment Form using GPS coordinates.
3. Risk rating of a tree is determined by Target and Defect:

	Definition	Values
Target	Target rating is a combination of the likelihood that a potential target will be hit (assuming the tree fails) and the value of the target.	Potential targets are assigned values of 1 or 2.
Defect	A defect rating is an estimation of the likelihood that a tree will fail based on available indicators.	Defects are assigned values of 0 – 3.

4. Height to diameter ratio is the ratio of the tree height to the trunk diameter at breast height (DBH). The same units should be used for both measurements, so DBH is typically converted from inches to feet.
5. Severe stem decay signs include any fruiting bodies or conks of Indian paint fungus (*Echinodontium tinctorium*), red belt fungus (*Fomitopsis schrenkii*), pouch fungus (*Cryptoporus volvatus*), or any stem decay fungus on white fir or cottonwood; more than one false tinder conk (*Phellinus tremulae*) on aspen or one false tinder conk in association with cracking, cavities, or other major structural defect; or more than two conks of red ring rot (*Porodaedalea pini*). See Tree Risk Assessment and Hazard Tree Mitigation in the Southwest Region for a detailed description of these stem decay fungi.
6. Moderate stem decay signs include one or two conks of red ring rot (*Porodaedalea pini*), one false tinder conk (*Phellinus tremulae*) unassociated with other defects, and conks of any other species not previously mentioned here or in the description of severe stem decay signs above. See Tree Risk Assessment and Hazard Tree Mitigation in the Southwest Region for a detailed description of these stem decay fungi.
7. More than one type of potential target or defect may be identified and checked for any tree. If identified, these defects will inform the land manager of the risk rating following mitigation of highest defect.
8. Calculate risk rating by multiplying target value and hazard value of the worst defect. Removal of highest rated trees for each target category or other mitigation action is recommended.

Possible Risk Ratings (Target × Worst Defect = Risk Rating):

Higher occupancy targets (e.g., picnic tables): 6 = highest, 4, 2 = lowest

Lower occupancy targets (e.g., roadways): 3 = highest, 2, 1 = lowest