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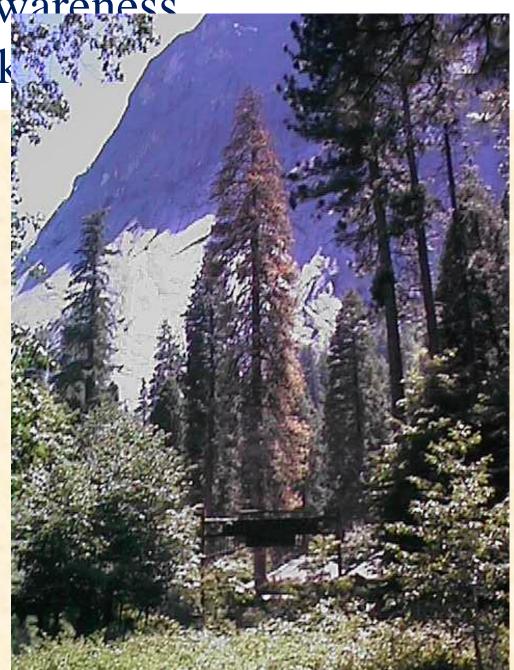
California Department of Forestry and Fire Protection Madera-Mariposa-Merced Unit







We have real trees









SO...

New Aerial Survey Identifies More Than 100 Million Dead Trees in California

CAL FIRE SINCE 1885

VALLEJO, Calif., Nov. 18, 2016 – The U.S. Department of Agriculture (USDA) announced today that the U.S. Forest Service has identified an additional 36 million dead trees across California since its last aerial survey in May 2016. This brings the total number of dead trees since 2010 to over 102 million on 7.7 million acres of California's

drought stricken forests. In 2016 alone, 62 million trees have died,

representing more than a 100 percent increase in dead trees across

the state from 2015. Millions of additional trees are weakened and

expected to die in the coming months and years.

Press Release

Release No. 0246.16

Contact:

Office of Communications (202) 720-4623

press@oc.usda.gov

With public safety as its most pressing concern, the U.S. Forest Service has committed significant resources to help impacted forests, including reprioritizing \$43 million in California in fiscal year 2016 to conduct safety-focused restoration along roads, trails and recreation sites. However, limited resources and a changing climate hamper the Forest Service's ability to address tree mortality in California. Agriculture Secretary Tom Vilsack and Forest Service officials are seriously hampered not only by short-term budgets passed by Congress, but also a broken budget for the Forest Service that sees an increasing amount of resources going to firefighting while less is invested in restoration and forest health, said Vilsack.

"These dead and dying trees continue to elevate the risk of wildfire, complicate our efforts to respond safely and effectively to fires when they do occur, and pose a host of threats to life and property across California," said Vilsack. "USDA has made restoration work and the removal of excess fuels a top priority, but until Congress passes a permanent fix to the fire budget, we can't break this cycle of diverting funds away from restoration work to fight the immediate threat of the large unpredictable fires caused by the fuel buildups themselves."

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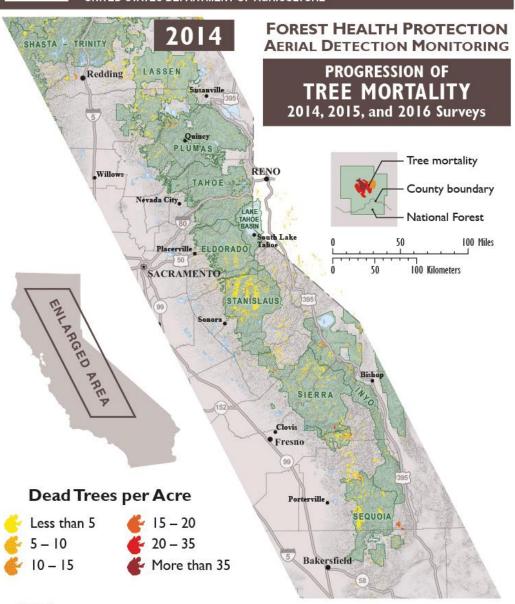
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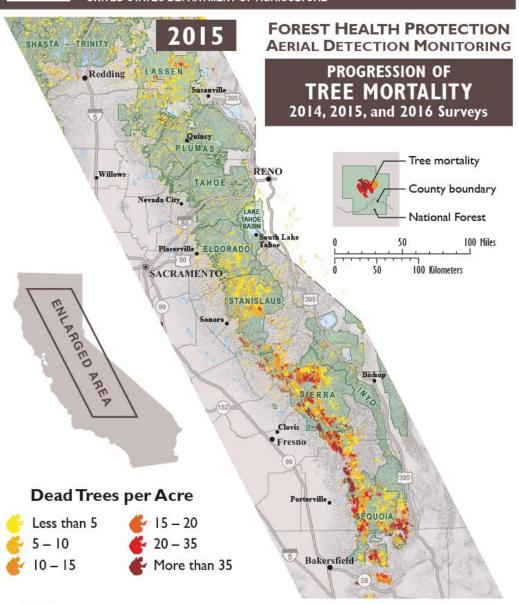
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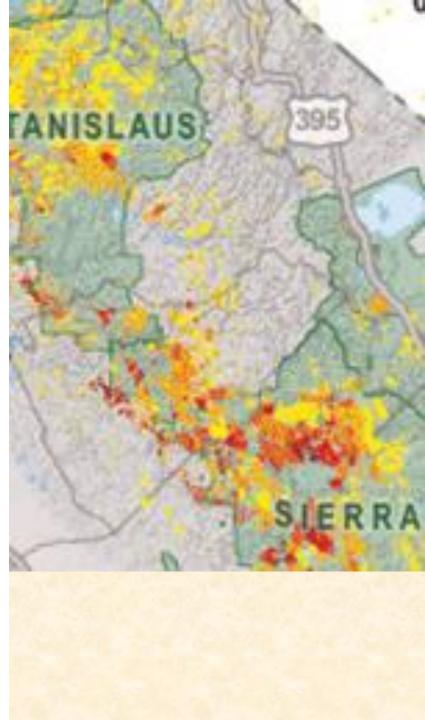
UNITED STATES DEPARTMENT OF AGRICULTURE



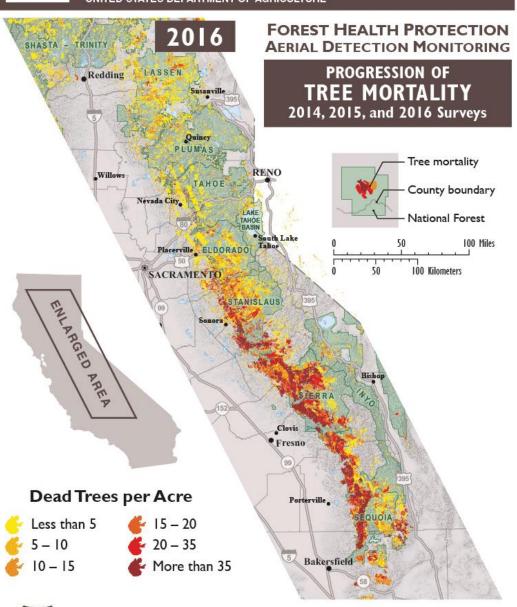


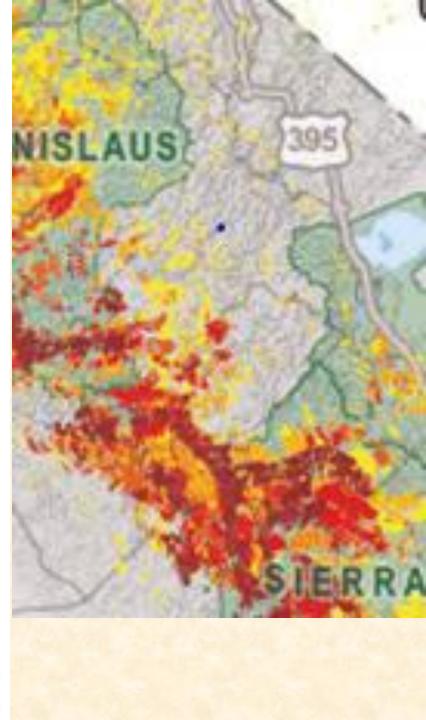
UNITED STATES DEPARTMENT OF AGRICULTURE





UNITED STATES DEPARTMENT OF AGRICULTURE











Beware of hazardous trees



BEWARE of broken limbs and damaged trees that may fall at any time.



LOOK UP while on trails, especially when it's windy.

ISE CAUTION when selecting a place to park, camp, picnic or rest.



CONTROL your campfire and make sure it is dead out when you leave. Obey any fire restrictions in place.



SS



Tree Hazard Awareness



Yosemite National Park

National Park Service
U.S. Department of the Interior



Tree Mortality Can Cause Hazardous Conditions

Upon entering Yosemite National Park, you may have noticed patches of discolored trees in otherwise green forests. These parched, brown, dead and dying trees are the result of an ongoing drought, warming temperatures, native bark beetles, and poor forest health. Millions of trees in the southern Sierra Nevada, particularly at lower elevations, have died. In Yosemite, there are an estimated 2.4 million dead trees within about 131,000 acres, especially between 3,000 and 4,500 foot elevations.

Falling branches, limbs, and trees can cause hazardous conditions, and may pose risks to life and infrastructure, especially in developed areas. While in Yosemite, please remain observant of your surroundings, particularly in campgrounds, lodging and picnic areas, roadsides, and while hiking on trails. Contact a park official if you see any potentially hazardous situations.



Yosemite National Park



Tree Mortality and What Causes It

Tree mortality simply refers to the death of trees in a forest. Tree mortality is a natural process that often benefits a healthy forest ecosystem. However, the recent tree mortality event is unprecedented, with an estimated 102 million dead trees throughout the Sierra Nevada. The immediate cause of this mortality event is a combination of bark beetles and extended drought. Once trees are weakened by the lack of water, they are much more susceptible to bark beetle attack. Simultaneously, warming temperatures and milder winters during the drought have increased native bark beetle populations. More importantly, this mortality event is really a broader symptom of poor forest health in many areas. Historically, wildfire maintained healthy forests by reducing flammable debris, such as dead twigs and needles, and also reducing the overall number of trees in the forest. After over a century of fire exclusion, many forests have extremely high tree densities that greatly increase competition for limited water supplies during drought.

A Bark Beetle's Role In Tree Mortality

Bark beetles are similar in size to a grain of rice. Rising temperatures, below-average rainfall, and increased competition for water as a result of fire suppression have interacted to weaken trees, creating ideal conditions for bark beetles to invade. When adult beetles attack a tree, they bring in fungi that can interrupt the tree's transport of water. They then lay their eggs in the thin layer of tissue between the bark and wood of a tree that transports nutrients, which the larvae feed on. When large numbers of beetles attack, the interruption they cause to water and nutrient flow can eventually kill the tree. One pair of mating beetles can produce more than 12 million beetles a year.

Tree Mortality Forecast

It is possible that tree mortality in California forests will continue for the next three to five years, due to existing trees currently infested by bark beetles or trees that are stressed, weak, and susceptible to bark beetles. Otherwise, it is unknown if high levels of tree mortality will continue in the coming years.

National Park Service Actions Regarding Tree Mortality in Yosemite

The National Park Service (NPS) has made the safety of Yosemite's visitors and employees its primary concern and has increased staff specifically for identifying and removing hazardous trees. Since 2016, NPS employees and its park partners have removed over 5,000 trees each year that posed direct risk to life or infrastructure, from developed areas such as campgrounds, lodging, picnic areas, roadsides, and housing areas. The NPS has also applied a verbenone, an anti-aggregant pheromone, to healthy sugar pines in developed areas to prevent beetle attacks this year. Outside of developed areas, most of Yosemite is designated wilderness, where NPS allows natural processes to prevail. The NPS has also formed partnerships with the US Geological Survey, US Forest Service, and other academic researchers to study the effects of drought and develop management measures concerning prescribed fires and mechanical thinning, which may lessen drought impacts.



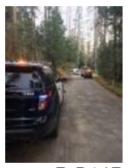
HEADLINES

- Tree Worker Killed in Tuolume County while removing a dead tree
- https://www.mymotherlode.com/news/local/293329/treeworker-in-tuolumne-county-killed-during-accident.html
- Tree Worker Killed by Tree Limb
- http://www.calaverasenterprise.com/news/article_93ddd8b6-1b00-11e7-a2dd-db5efd4c12e9.html
- Experienced arborist killed in tree accident
- http://abc30.com/news/coarsegold-family-without-a-father-after-an-on-the-job-accident-kills-experienced-arborist/1637669/



HEADLINES

 Tree Worker Killed in Tuolume County while removing a dead tree



Response To Fatal Tree Removal Accident

Enlarge

04/17/2017 10:15 am PST B.J. Hansen, MML News Director



Update at 10:15am: The Tuolumne County Sheriff's Office has identified the man who was killed in a tree removal accident in Twain Harte.

21-year-old Jorge Garcia Moctezuma from the state of Washington was working for the company Action Trees, based in Kentucky. His crew was in the area working under a tree removal contract through Trees Inc. and PG&E.

Sheriff's Office Spokesperson Sgt. Andrea Benson says, "Jorge was working on a 100 ft. Ponderosa Tree and had just cut a 20 ft. section from the top. The cut piece came down and swung back and forth causing the tree Jorge was on to break below him. The tree fell to the ground on Cedar Springs Road taking Jorge and live power lines with it. Emergency personnel arrived and sadly Jorge was deceased. The crew who witnessed this tragic event were very distraught. The Tuolumne County Sheriff's Office Chaplin was called and stayed on scene to be with the crew members."



HEADLINES

Tree Worker Killed by Tree Limb



Enterprise Photo by Jason Cowan

Emergency crews respond to reports of a man injured by a toppled tree.



The man killed Thursday off Whiskey Slide Road by a tree limb has been identified as Chris Hiser, 21, of Sonora, a press release from Phillips and Jordan confirmed Friday.

Hiser was a tree worker working on the Butte Fire Tree Removal Project employed by Leslie Heavy Hauling, a subcontractor.

Hiser was killed Thursday morning after he was struck by a tree limb. Calaveras County Coroner Kevin Raggio said he was elevated inside a bucket truck trimming vegetation when a limb from the tree he was working on or one nearby slid down the boom of the truck, struck him and killed him.



HEADLINES

Experienced arborist killed in tree accident



Friday, December 02, 2016

COARSEGOLD, Calif. (KFSN) -- At 20-years-old and the oldest of 10 children Morgan Mayer already shouldered at lot of responsibility. But nothing prepared him for the call Thursday afternoon.

"At first it was just disbelief, I said over and over again, 'no not my dad, there has to be some mistake."

Morgan's father, Nash Mayer, had been cutting trees for 16 years. He was up in Mariposa County this week when something he had done hundreds of times before went horribly wrong.

"They had everything in place, they had discussed it, they had a safety engineer on the job," said Mark Snyder, victim's father-in-law.

The Sheriff's Office said Nash was on the ground, guiding a dead tree, when a pine fell on top of him. He was only 40-years-old.



 Tree Hazard incorporates not just the condition of the tree, but also the potential target. So hazard is:

• Defect: potential for tree failure,

+

• Target: potential for serious loss should the tree fail, which includes:

- potential for hitting and damaging target
- value of target



Objectives:

- Review common tree defects that indicate failure hazard
- Consider exposure to tree hazards
 - Task, duration, and equipment
- Discuss tree hazard responses
- Consider ecological values of defective trees

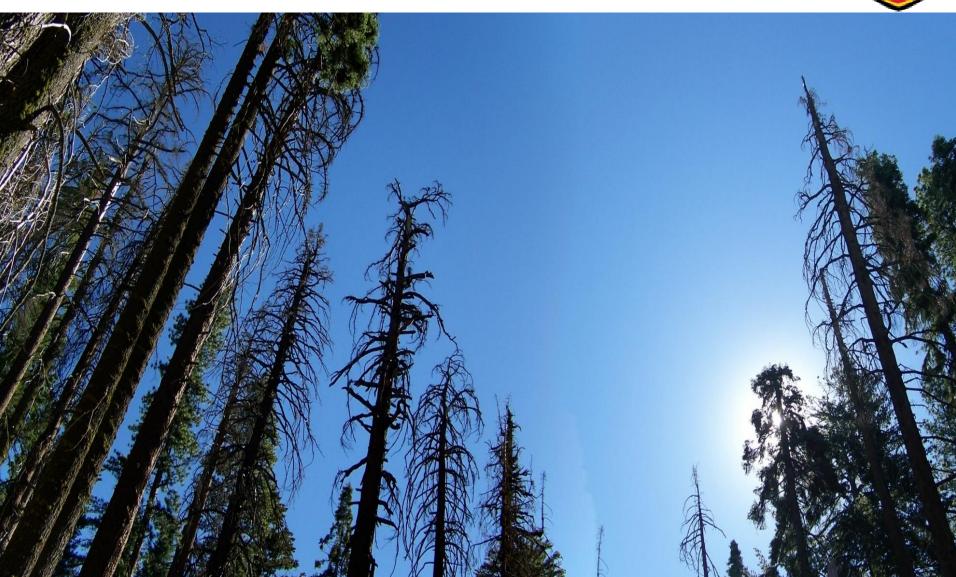


Defects:



- Defects:
- Dead Trees, Tops and Branches



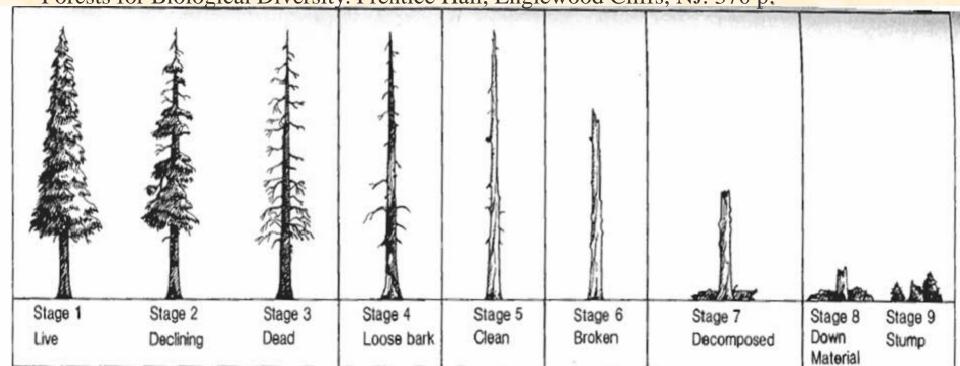




Snag Classes:

Nine Class Method: Hunter 1990

Hunter, M.L. 1990. Wildlife, Forests, and Forestry: Principles of Managing Forests for Biological Diversity. Prentice Hall, Englewood Cliffs, NJ. 370 p.



Tree Hazai for Forest

- Defects:
- Dead Trees













Defects:





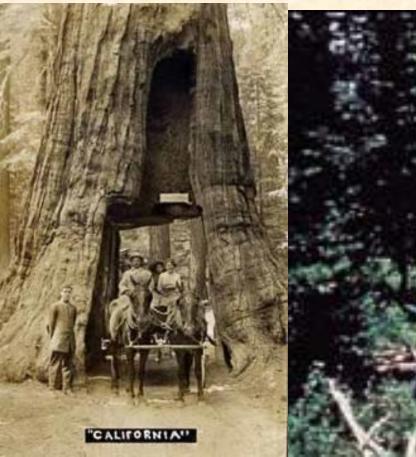
- Defects:
- Broken trees







- Defects:
- Root problems





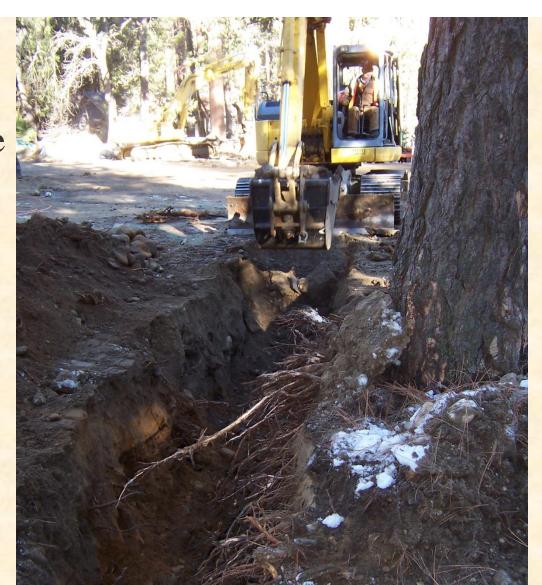


- Defects:
- Root problems



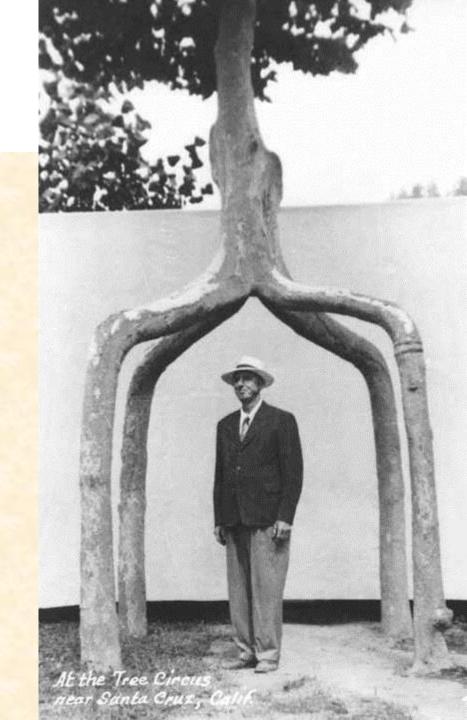


- Defects:
- Root Problems-soil disturbance



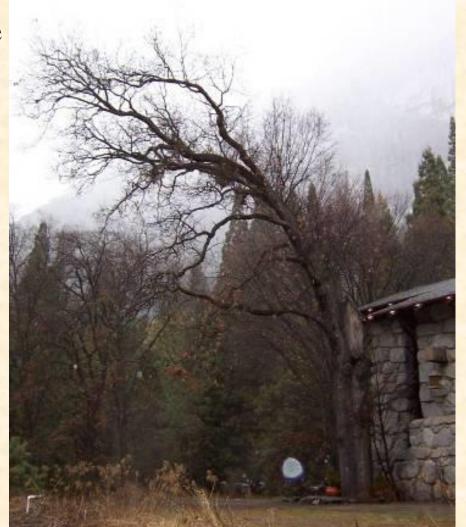


- Defects:
- Poor Crown Architecture



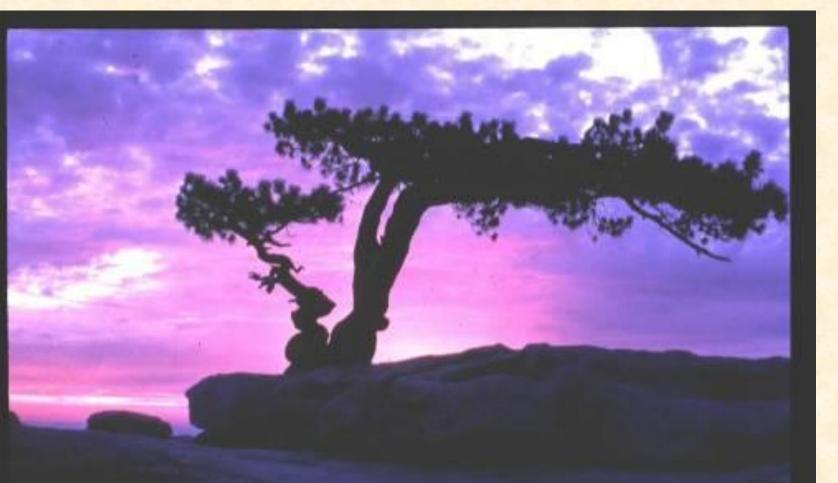
CAL FIRE SINCE 1885

- Defects:
- Poor Crown Architecture





- Defects:
- Poor Crown Architecture

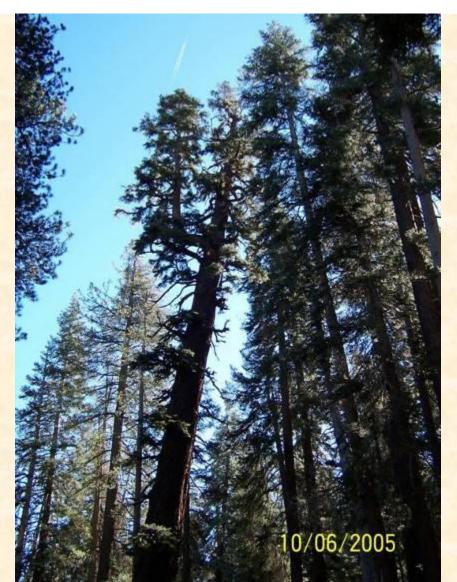






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- Defects
- Lean
- 1. "Old" lean



Tree Hazard Aw for Forest Work

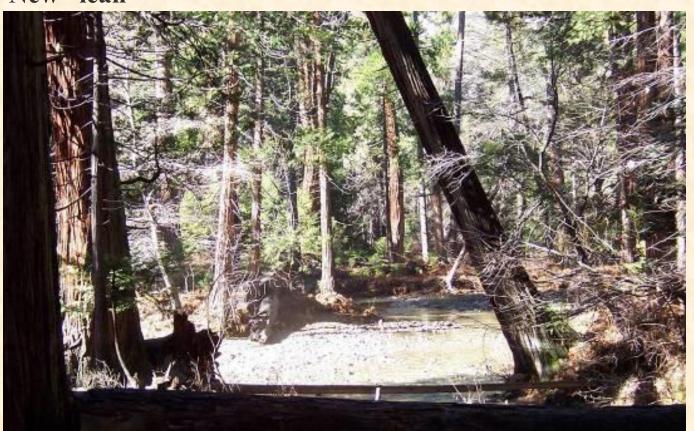
- Defects
- Lean
- 1. "New" lean







- Defects
- Lean
- 2. "New" lean





- Defects
- Lean
- 2. "New" lean





- Defects
- Lean
- 2. "New" lean





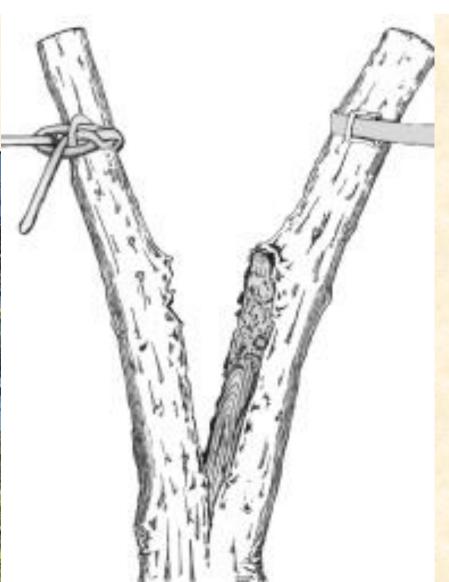
- Defects
- Forks
- Without included bark



CAL
FIRE
SINCE 1885

- Defects
- Forks
- With included bark





- Defects
- Forks
- With included bark















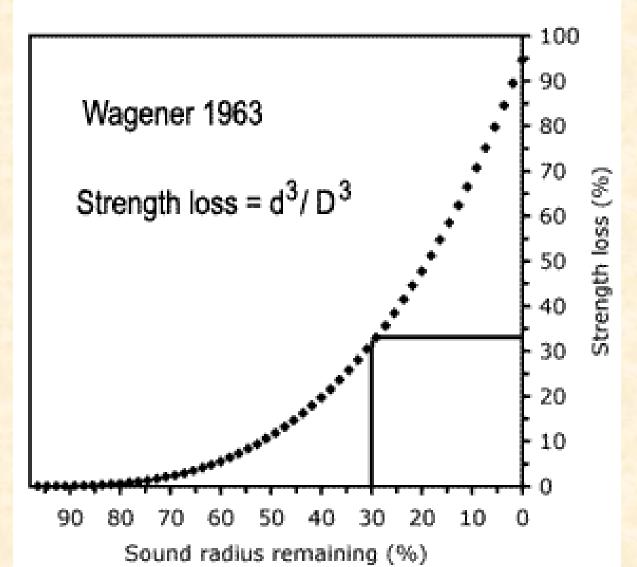


- Defects
- Decay





- Defects
- Decay





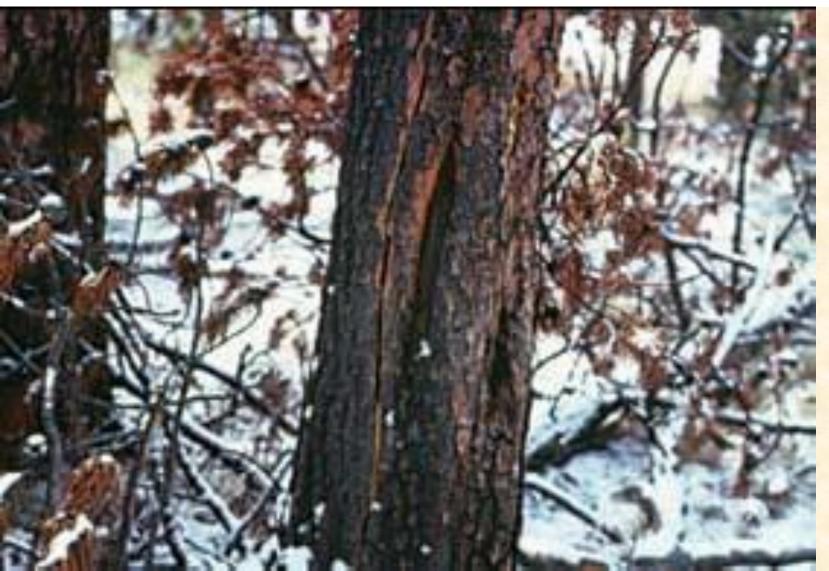
Cracks, cankers, and wounds

Tree F for Fo







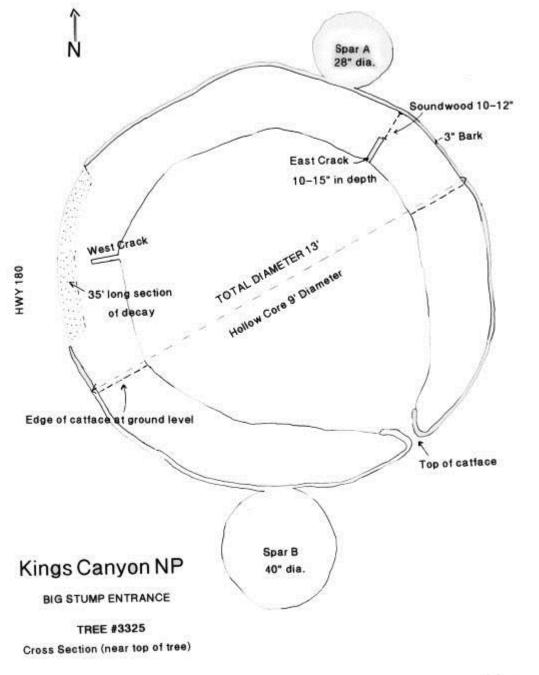








Tree Hazard for Forest W





Tree Hazard I for Forest Wo





Tree H for For





Tree Hazard for Forest W





Tree Hazard A for Forest Wo



Tree Hazard Aw for Forest Work



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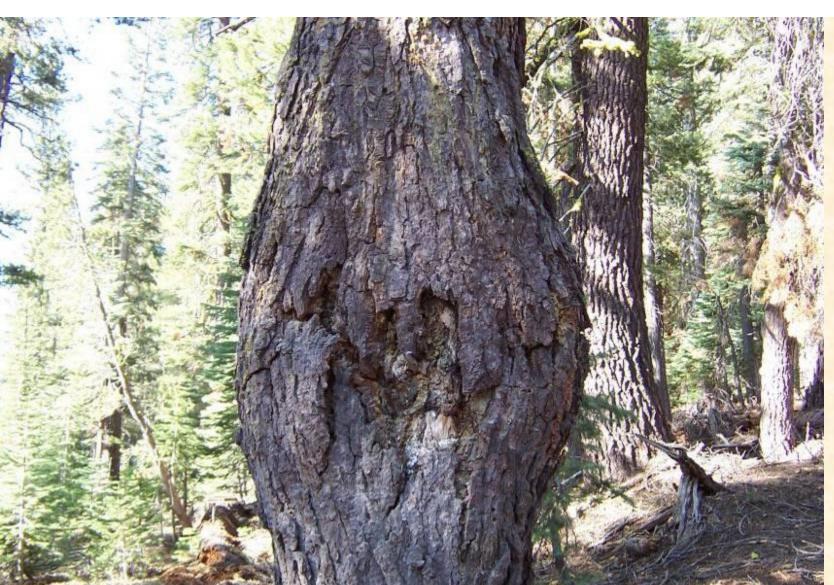


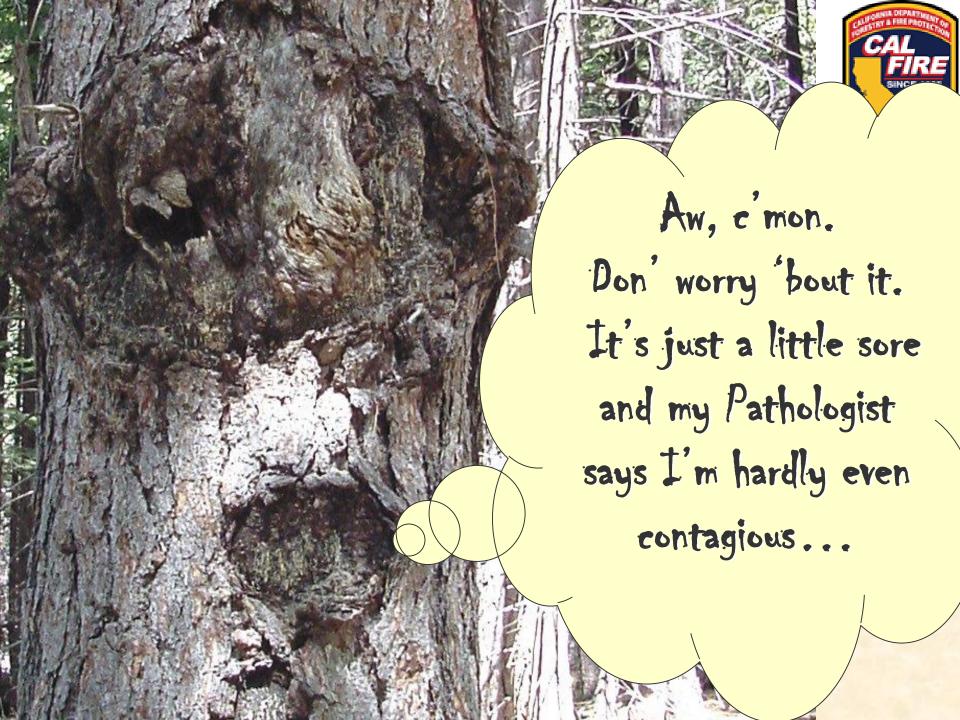












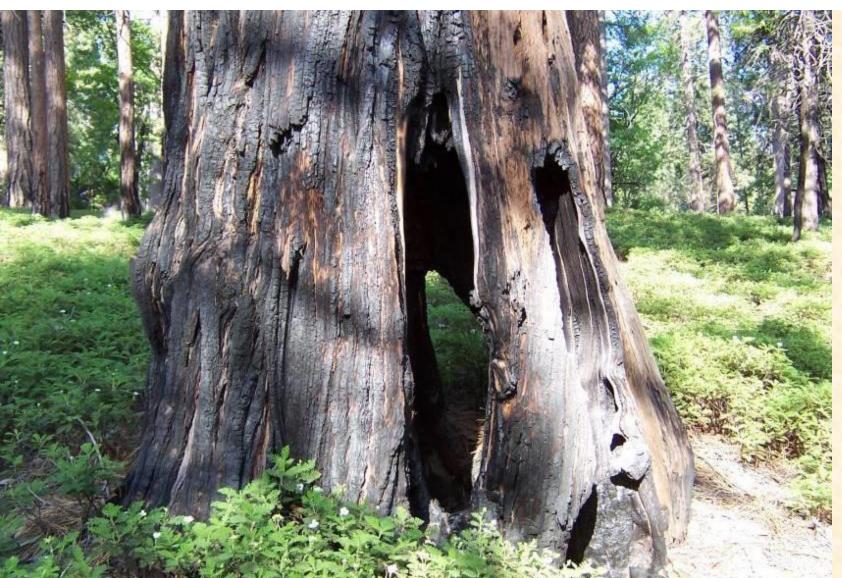














Wound Signals:



Extreme butt flare

Daylight

Check back of tree!









Dan Fischer / National Park Service Tree Hazard for Forest W











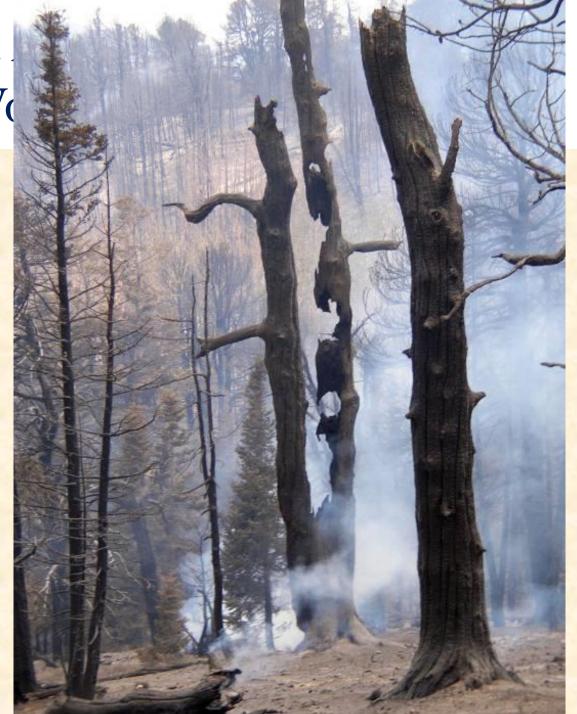




Tree Hazard for Forest W











USDA Forest Service, Forest Health Protection, Northeastern California Shared Services Area

Hazard Tree Alert

True firs that survived wildfires are failing in as little as three years

Black trees.....Be on the lookout for hazardous trees in burned forests. This kind of



During the 1999 Bucks Fire on the Plumas National Forest the crowns of many true firs were light to moderately scorched. However, these same trees suffered moderate to severe cambium injury and near Following the fire, frass and/or boring dust from wood boring and ambrosia beetles was



complete girdling in some cases. Extensive bole charring on this "live", 12" dbh red fir resulted in cambium kill and subsequent attack by ambrosia and wood boring beetles. Decay is now nearly 100% in pre-fire sapwood.



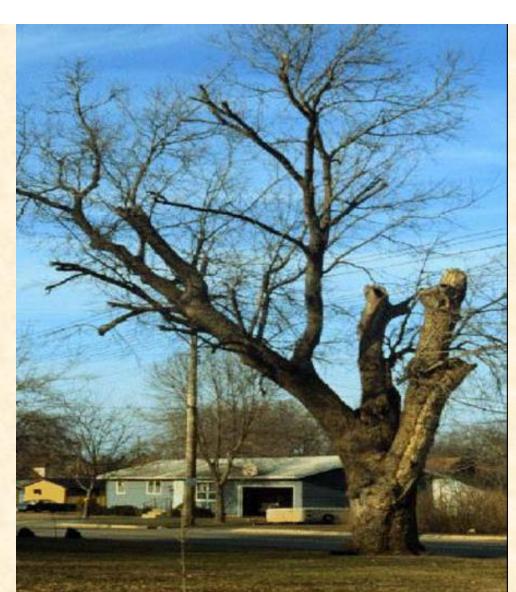
This 18" dbh red fir suffered >50% cambium kill during the 1999 Bucks Fire. It failed in the fall of 2004 with a full green crown.



This 8" dbh, fire-injured white fir was surviving with <5% of its functional xylem and phloem. The crown was still green when it failed in 2004

evident on many of the tree boles, often indicative of internal injury. Bark sloughing over the last couple of years from the damaged areas of the bole and root collar has revealed extensive decay of the sapwood, however, most of these trees have maintained green crowns. During the fourth year post-fire, a few trees within the burn that had green crowns and extensive bole decay failed. In the fall of 2004, after an early storm brought heavy snow and wind, many more trees failed with these same characteristics. This has also been observed recently in a few fir trees in the 2001 Star Fire (Tahoe National Forest) and the 2000 Storrie Fire (Lassen National Forest). Based on the number of failed green trees observed this year in the Bucks Fire, true firs in these other fire areas are likely to start coming down at a higher rate within the next couple of years. People working in these areas or any other recently burned areas that contain red or white fir with similar fire injury, i.e. moderate to severe bole scorch with light to moderate crown scorch, should consider these trees hazardous until a closer inspection of the bole is completed. Forest Health Protection is currently working on fire-injured tree evaluation criteria to facilitate the early identification of trees that may succumb to the type of decay and failure presented here. For more information, contact Sheri Smith or Danny Cluck of the Forest Health Protection staff at 530-257-2151.

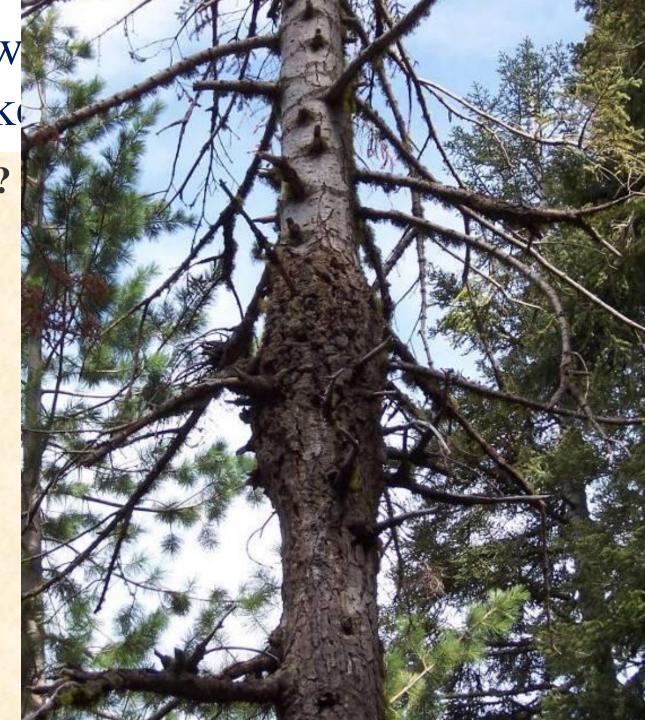
CAL FIRE SINCE 1885















Tree Hazard for Forest W





Multiple

Defects?



Tree Hazard Awareness











- The second component is the **Target** value and represents impact potential and target value (monetary or possibility of injury/death). In this example the values for this element are rated 1-3, with 3 being the highest. A target rated 3 is one with a high value (property or person) and a high likelihood of being impacted in event of failure.
 - Highest Level (3)--Overnight Exposure
 - Campgrounds
 - Lodges, hotels, dormitories
 - Residences
 - 24-hour visitor service facilities



- Targets
 - Highest Level (3)-Overnight Exposure

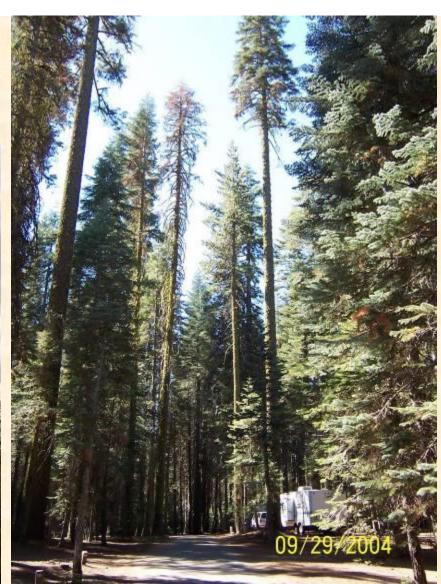




Targets

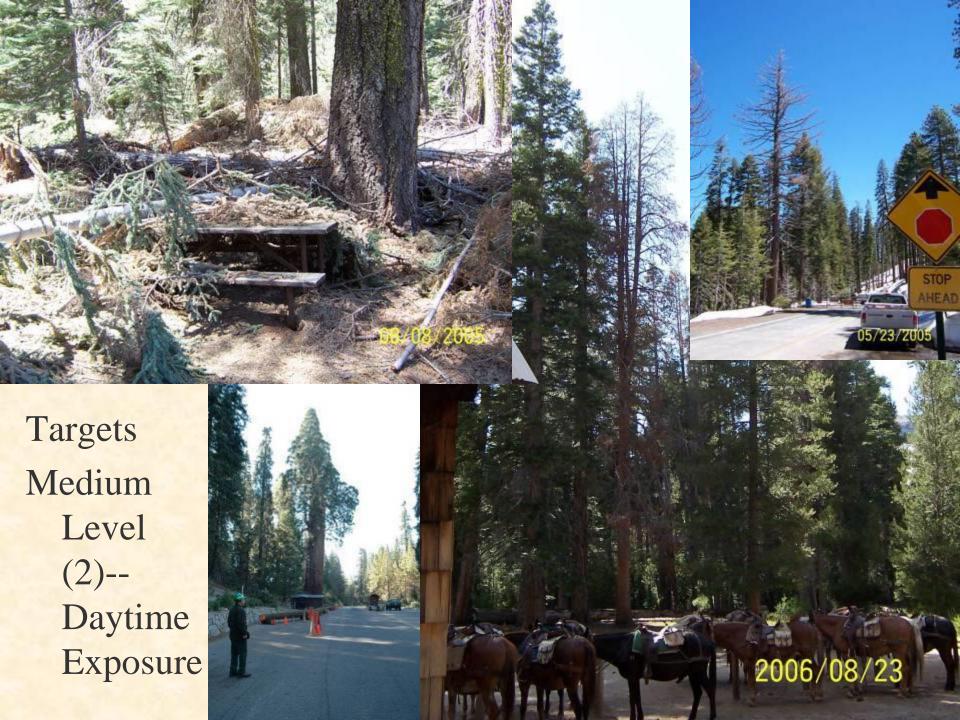
Highest Level (3)- Overnight Exposure







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 - Medium Level (2)--Daytime Exposure
 - Interpretive sites, such as amphitheaters, kiosks
 - "High use" road networks where occupancy is "constant"
 - Roadside attractions, such as vista points or historic stops
 - Information stations, fee collection portals
 - Designated day-use parking areas
 - Utilities, infrastructure
 - Picnic areas





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- Low Level (1)--Transitory exposure
 - Highway corridors
 - Turnouts
 - Bone Yards

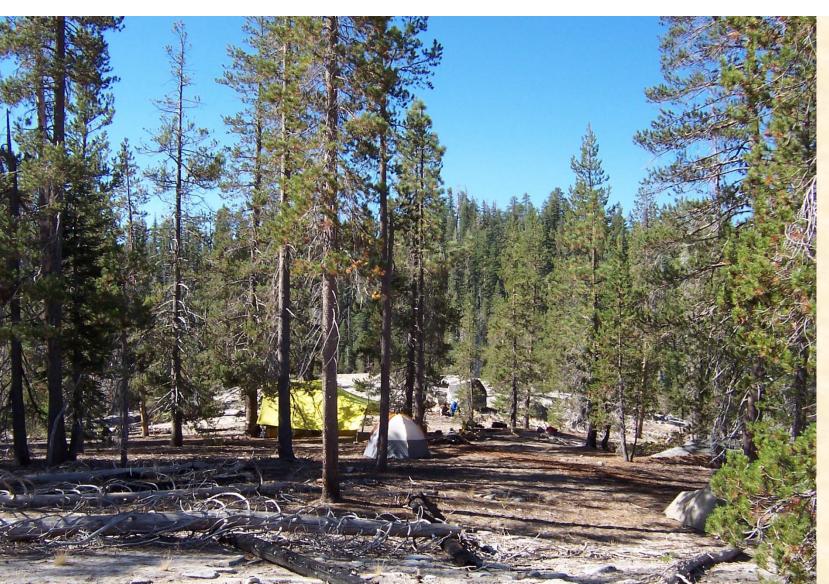
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 - Turnouts
 - Bone Yards







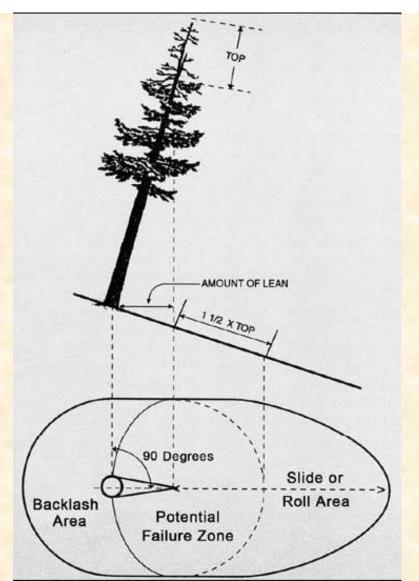






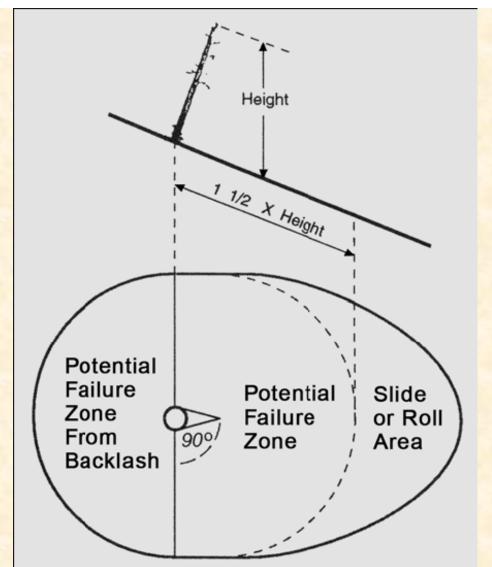
Targets

On sloped ground where the dislodged section may slide or roll downhill, the potential failure zone must be extended on the downhill side for whatever distance is necessary to protect workers.





- Targets
- The failure zone is an area at least 1 ½ times the tree height beginning at the tree base then extending towards the direction of the lean and out 90 degrees on either side of the tree from the lean direction.





Tree Hazard Response



- Tree Hazard Response
 - Hazard Abatement
 - Hazard Mitigation



Tree Hazard Response

- Hazard Abatement
 - Avoidance
 - Facility design/Placement
 - Preventing construction damage
 - Avoiding or removing old trees
 - Site closure
 - Temporary (time to plan mitigation)
 - Seasonal (storm seasons)
 - Permanent (relocate target)
 - Warnings--integral component of comprehensive strategy







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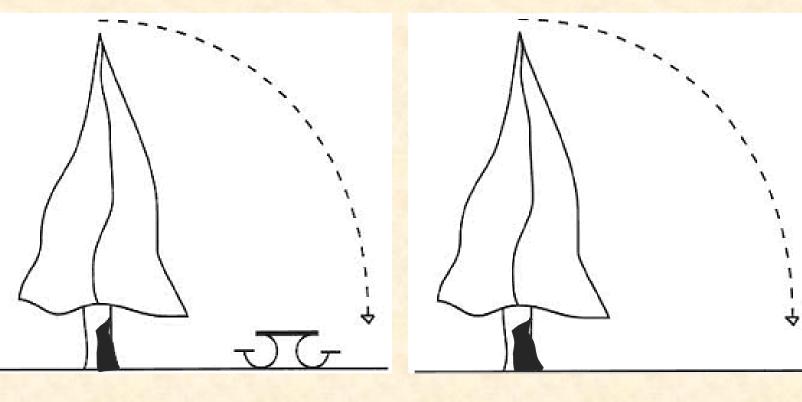


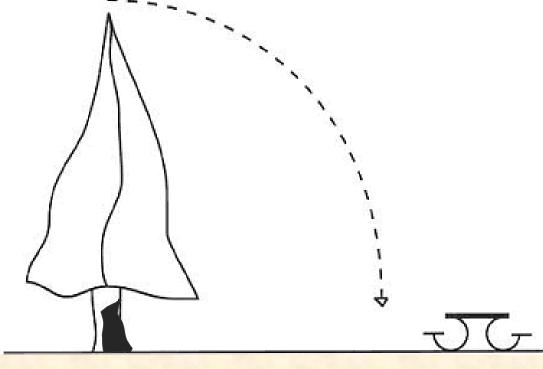










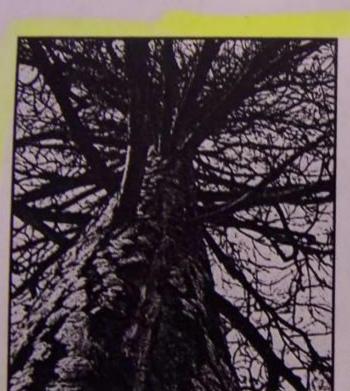




Tree Hazard Response

- Hazard Abatement
 - Avoidance
 - Facility design/Placement
 - Preventing construction damage
 - Avoiding or removing old trees
 - Site closure
 - Temporary (time to plan mitigation)
 - Seasonal (storm seasons)
 - Permanent (relocate target)
 - Warnings--integral component of comprehensive strategy

touch or closely approach any park wildlife. Instead, view wildlife through binoculars or telephoto lenses. A good rule-of-thumb: if an animal is aware of your presence, you're too close.



TREE FAILURE ADVISORY

Winter storms with strong winds or heavy wet snow always cause some tree failures, sometimes with property damage or tragic injuries. Trees adjacent to developments such as residences, campgrounds, lodging, offices, parking lots, and some roads are surveyed for defects that may make them likely to fail and injure people or damage property. Yosemite forestry crews prune or remove identified high priority tree hazards.

Some trees without any visible defects fail during storms. To avoid injury or damage to your property, be aware of your surroundings and park in open areas when storms are blowing or forecast.



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Exercise Dream arrows

Tree Hazard A for Forest Wo







- Tree Hazard Response
 - Hazard Abatement
 - Hazard Mitigation
 - Take down
 - Pruning
 - Cabling/Bracing



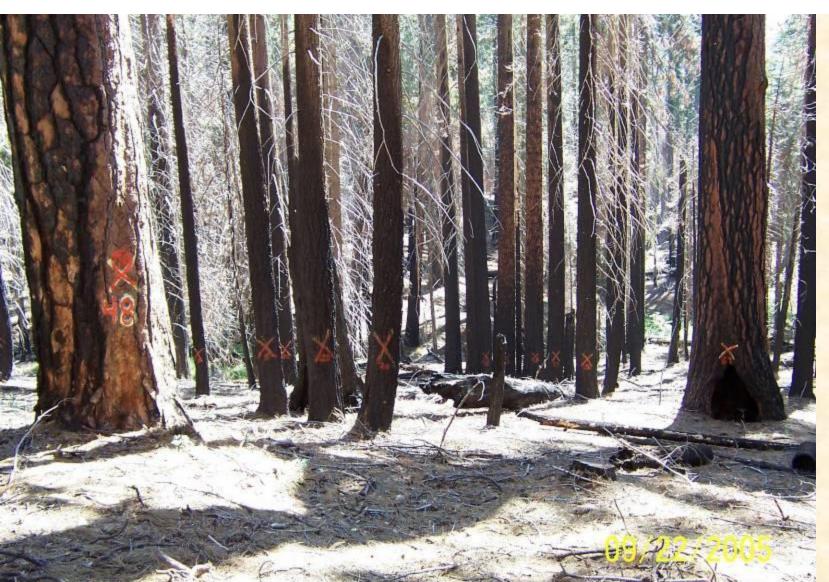














Other Legal Considerations:

California state forest and fire laws and regulations are adopted as federal law under the Assimilative Crimes Act (18 U.S.C. 13).

Including California Public Resources Code:

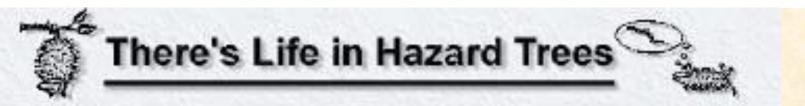
4291 Reduction of Fire Hazards Around Buildings

4292 Power Line Hazard Reduction

4293 Power Line Clearance Required







The goals of hazard tree management programs are to maximize public safety and maintain a healthy sustainable tree resource. Although hazard tree management frequently targets removal of trees or parts of trees that attract wildlife, it can take into account a diversity of tree values. With just a little extra planning, hazard tree management can be highly beneficial to wildlife while maintaining the goals of the program. The objective of this information guide is to provide considerations regarding wildlife when making decisions during hazard tree assessments. The decision-making model provided with this guide can be used as a tool during tree inspections.



What is the link between hazard tree management and wildlife? There are more than 120 species of birds, 140 kinds of mammals and 270 species of reptiles and amphibians that nest and forage in dead or deteriorating trees. Often in hazard tree management, it is the dead and deteriorating parts of a tree, or the entire tree (such as a snag), that is removed. This can negatively impact wildlife populations and species that are dependent on these trees as essential habitat components. It is likely that these trees may not be replaced for years. As the number of cavity trees decrease, wildlife species that depend on cavities may disappear.



Why are considerations for wildlife important?

Surveys demonstrate that wildlife is important to people. In a recent study, landowners identified wildlife as a key reason for owning land. Other studies show that, in urban areas, 93% of residents want to know how to attract wildlife and support habitat, and each year 49 million people in the U.S. enjoy feeding and watching birds. In addition, some threatened and endangered species use snags, cavity trees, or dead and down logs as important habitat components. When a tree dies, its usefulness does not end, its role simply changes.



How to identify trees currently and potentially useful to wildlife.

A few ways to identify trees currently used by wildlife include:

- 1. observations of wildlife using a tree
- 2. signs of wildlife use (existing cavities, dens or current woodpecker activity in a tree)
- 3. presence of fresh scat or bird droppings in, on or around a tree

Trees potentially useful to wildlife include:

- 1. trees with decay
- trees with fungal conks
 (a sign of decay)
- 3. trees with broken off tops and branches
- 4. trees with old wounds or scars



If a tree does not have a cavity, it can still be used by wildlife. Dead or partially dead trees without cavities can provide foraging, perching and nesting sites for non-cavity nesting species.

Where and when is it appropriate to consider wildlife in hazard tree management? It is appropriate where and when human safety is not compromised.

Who benefits by using hazard trees and for what purpose?



forage sites woodpeckers

perches hawks

nest sites chickadees, great blue herons, ospreys, wood ducks, mergansers, woodpeckers

den sites raccoon, fisher, pine marten, porcupine, gray and flying squirrels, cottontail rabbits, snowshoe hare, bear, bobcat

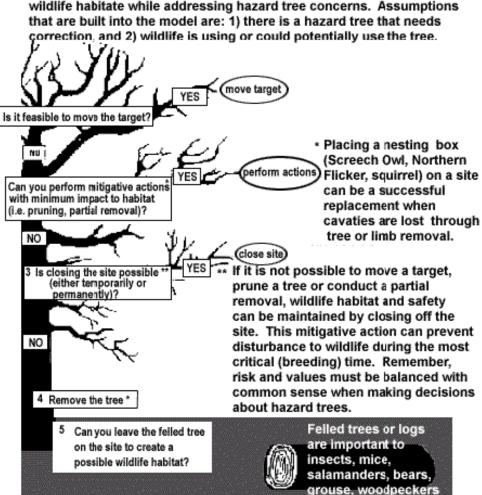
singing perches songbirds

roost sites bats, tree frogs



Wildlife Habitat / Hazard Tree Decision Model

This model provides a logical order of decision making that will help minimize impact to wildlife and maintain, enhance, and/or create wildlife habitate while addressing hazard tree concerns. Assumptions that are built into the model are: 1) there is a hazard tree that needs











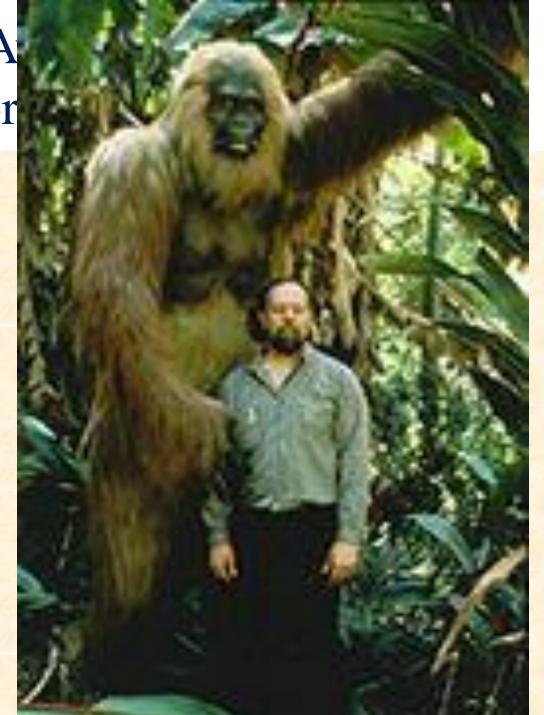








Tree Hazard A for Forest Wor



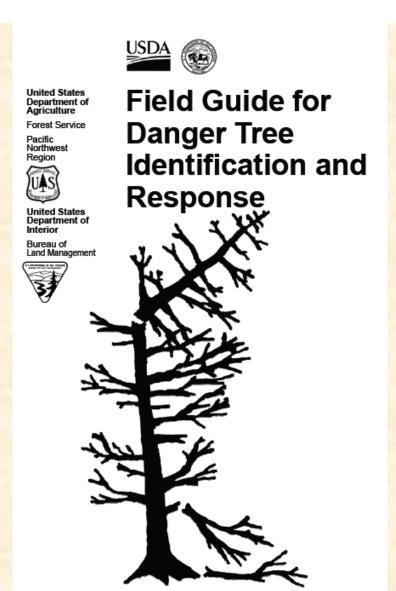




resources

publications





Field Guide for

Identification and

Danger Tree

Response





United States Department of Forest Service

Pacific Northwest Region





Safe Workplace

Trained Observer

Levels of Exposure

passing through

working under

equipment (dozer/aircraft)

Duration of Exposure

intermittent

brief

prolonged



Tree Hazard Aw for Forest Work









Evaluation of Hazard Trees in Urban Areas.

This book is published by the International Society of Arboriculture.

This is the second edition of this guide which is comprehensive in the information offered and practical in approach. The many photographic illustrations describe common defects, decay patterns and pruning abuses. A form for the collection of data is provided along with guidance on its completion. Species failure patterns are listed and and formulae are given to calculate the strength loss in trees with cavities. The approach to hazard evaluation is based on the work of Paine and others as described in

Hazard Trees a background.

In order for a tree to pose a hazard there must be a likelihood of failure and the risk that, having failed, the tree will do damage. To evaluate the degree of hazard three distinct factors must be assessed.

The factors are.

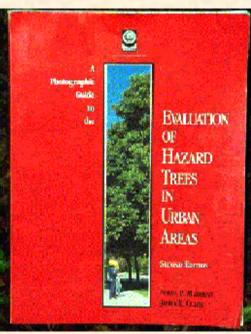
1/ The likelihood of failure.

- 2/ The size of the piece most likely to fail. (from small branch to whole tree)
- 3/ The presence of a 'target' (something that would be affected in the event of the failure).

The rating relates to the occupancy or use of the target.

The three factors; Failure potential, Target and Size of part are given a numerical rating, 1 to 4. Failure Potential is rated based on known problems in tree species, existing defect or disease and exposure The three numbers added together give a Hazard Rating with the number 12 being a large part the most likely to fail and cause extensive damage to a significant target.

The hazard rating may be used to prioritize treatment and forms part of an ongoing assessment of tree hazard.



HOW to

Recognize Hazardous Defects in Trees





United States Department of Agriculture Prepared by Forest Service

Northeastern Area State & Private Forestry

NA-FR-01-96





resources

PowerPoint programs

Hazard Tree Awareness

USDA Forest Service, Pacific Southwest Region



Hazard Trees Recognizing Them Before You Climb

Diseases, Defects, and Structural Problems

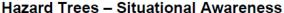


resources

URLs

Today's discussion is from the Hazard Tree Category.



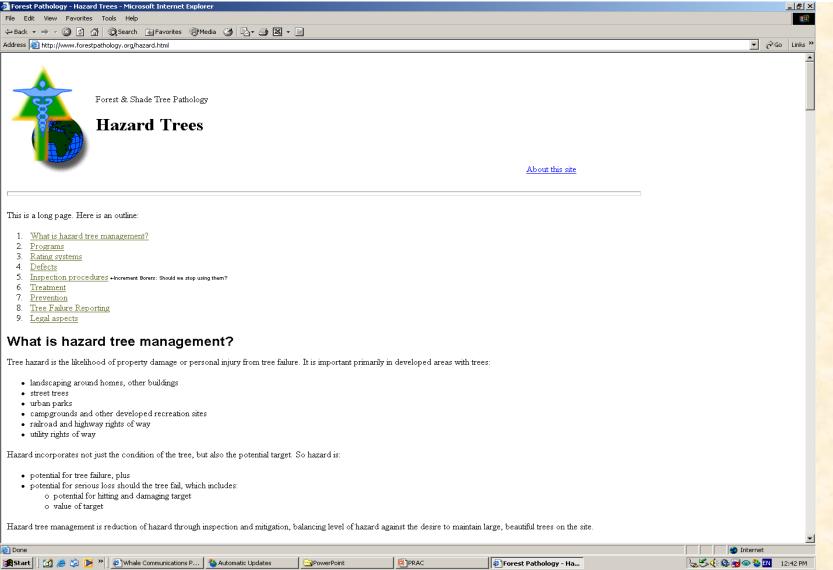


Snags (dead, standing trees without leaves or needles in the crowns) and green hazard trees present a significant threat to wildland firefighter safety. Snags typically have much lower fuel moistures than live, green trees; and they burn more readily. In the process, they often throw off embers creating spot fires in advance of the main fire. Snags may burn through more quickly than green trees and can fall without warning. Live, green trees weakened by insects, disease, weather, fire, and age presents another hazard and they can also fall without notice.

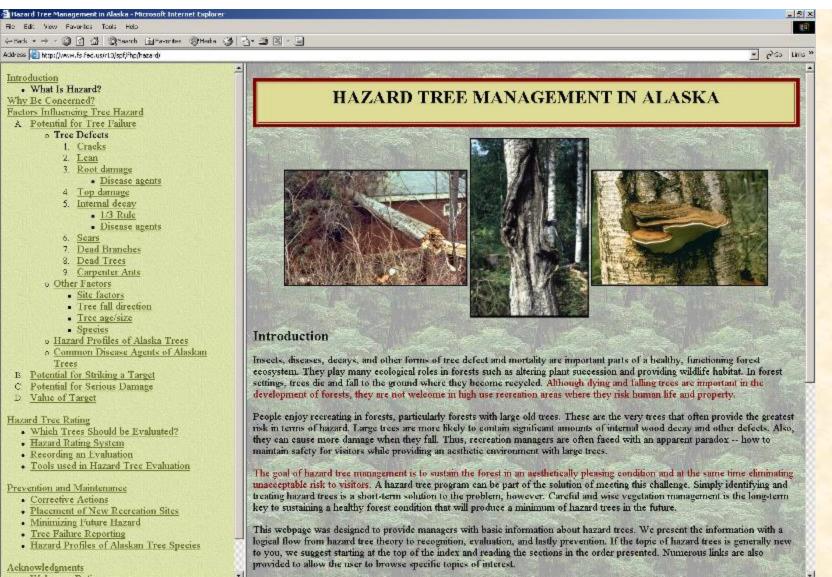
- The risk of serious injuries from hazard trees may increase during the night operational period when visibility is reduced.
- While work in cooler, nighttime environments can help control efforts, it also presents an increased risk from unseen falling snags and weakened live trees. Night operations should be restricted in areas of high risk rated dead and dying trees.
- Environmental conditions that increase risk from hazard trees: Strong or gusty winds from storm cells. Air operations - water or retardant drops, rotor wash from helicopters. Steep slopes with rolling material. Erosion and undercut root systems. Diseased or bug-killed areas (Mountain Pine Beetle).
- Things to consider when assessing the potential dangers of hazard trees: Trees have been burning for an extended period. High-risk tree species (those that are known for rot and shallow root systems) in the area. Numerous downed trees/material. Broken tops and dead limbs overhead. Accumulation of downed limbs, tree decay, cavities, splits, cracks, lack of needles, bark, limbs or other indicators of overhead hazards. Roots damaged by equipment, fire or erosion create hazards.
- Mitigation measures to take: Identify and establish No-Work-Zones (NWZ) in all high-risk areas until the hazard has been mitigated. Instruct firefighters of established NWZ in briefings. Identify with flagging/signs, and show area on maps. Establish lookouts to protect NWZs. Assign only qualified sawyers and Falling Bosses. Order additional professional fallers in advance. Use heavy equipment, and blasters when appropriate. Plan a quick and safe escape routes. Do not turn your back on a falling tree or known hazard. Use lookouts to maintain secure felling areas. Maintain situational awareness.















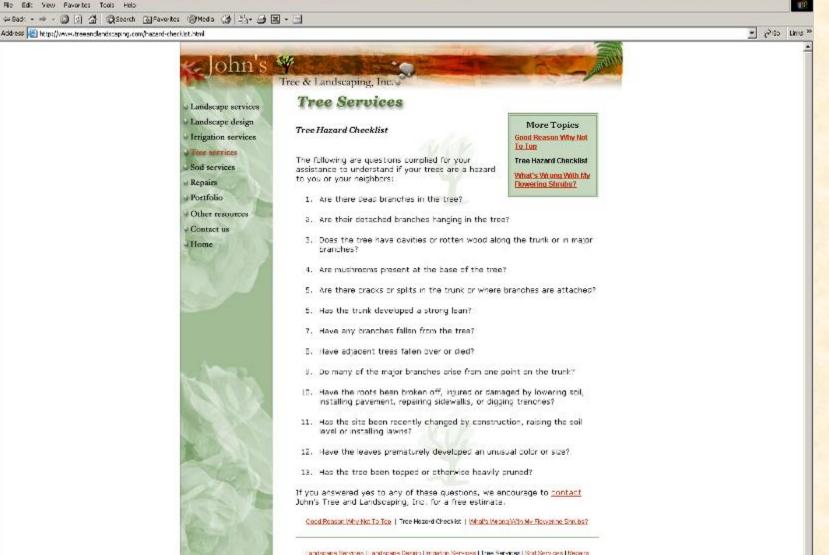




👰 Tree Hazard Checklist from John's Tree & Landscaping, Inc., Pasadena, CA - Microsoft Internet Explorer



_ 2 ×







👣 Tree Hazard Assensment - Microsoft Internet Explorer

File Edit View Favorites Tools Help

ARBOR GLOBAL

Arboriculture & Vegetation Management Consulting

ABOUT US DEVELOPMENT MANAGEMENT TRAINING/PR CONTACTS

Tree Hazard Assessment

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Trees are valuable contributors to our health. and welfare, but they also present liabilities. Poorly maintained, damaged, or diseased trees can fall or drop limbs causing injury to property. and people. The key to minimizing hazards and liabilities is to recognize when a tree becomes hazardous and take proper actions to correct these hazards and reasonably minimize risk of damage and injury.

Assessing tree hazard is an art and a science. To ensure that hazards are recognized and proper actions are taken, it is imperative to

retain an experienced, qualified, competent Arborist who understands tree biology and physiology, tree structure and decay processes. The arborist must also be skilled at determining how trees grow in the area, the history of care of the tree(s) in question, how construction or other activities may have effected the tree, and how soil and weather conditions may affect the tree's integrity:

Arbor Global has extensive experience assessing tree hazard in many different conditions and environments. Arbor Global's president is recognized as an expert at tree hazard assessment and has developed and conducted training for professional arborists and others in tree hazard identification.

To learn more about Tree Hazard Assessment Services , please contact Arbor Global at info@arborglobal.com

Links:

Recognizing Tree Hazards - http://www2.champaign.ise-arbor.com/consumer/hazards.html



Tree Care Information: Why Hire an Arborist Tree Benefits Tree Values Tree Selection

Trees Are Good - Microsoft Internet Explorer

Address ISA http://www.brecsaregood.com/treecore/hazards.aspe.

File Edit View Favorites Tools Help

Buying High Quality

Avoiding Tree & Utility Conflicts

New Tree Flanting

Mature Tree Care Plant Health Care

Trees and Turf.

Proper Huldring Techniques

Pruning Young Trees

Pruning Mature Trees

Why Topping Hurts Trees

Insect & Disease

Problems

Hazards

Recognizing Tree

Avoiding Tree Damage During Construction

Treatment of Trees Damaged by Construction



Recognizing Tree Hazards

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Trees provide significant benefits to our homes and cities, but when people or damage property, they are liabilities. Taking care of tree l property safer and prolongs the life of the tree.

Trees are an important part of our world. They offer a wide range of benefits (provide tremendous beauty.

However, trees may be dangerous. Trees or parts of trees may fall and cause of damage to property. We call trees in such situations hazardous, to signify the r presence. While every tree has the potential to fall, only a small number actually someone

It is an owner's responsibility to provide for the safety of trees on his or her or provides some tips for identifying the common defects associated with tree has evaluating the seriousness of these defects is best done by a professional arbon help identify hazardous trees and the risk they present. Once the bazard is reco taken to reduce the likelihood of the tree falling and injuring someone.

Hazardous Trees and Utility Lines

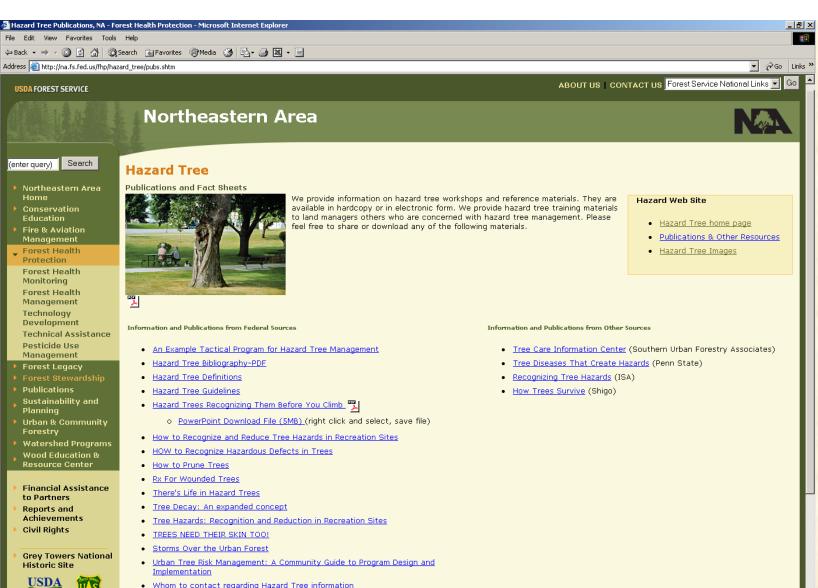
Trees that fall into utility lines have additional serious consequences. Not only of property near the line, but hitting a line may cause power outages, surges, fires Downed lines still conducting dectricity are especially dangerous. A tree with a utility line is a very senous situation.

Tree Hazard Checklist

Consider these questions:

- Are there large dead branches in the tree?
- Are there detached branches banging in the tree?
- Does the tree have cavities or rotten wood along the trunk or in major b
- · Are mushrooms present at the base of the tree?
- · Are there cracks or splits in the trunk or where branches are attached?
- · Have any branches fallen from the tree?
- · Have adjacent trees fallen over or died?
- · Has the trunk developed a strong lean? Do many of the major branches arise from one point on the trunk?



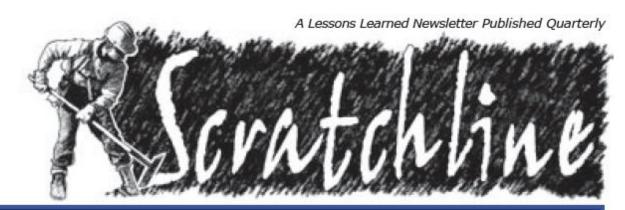




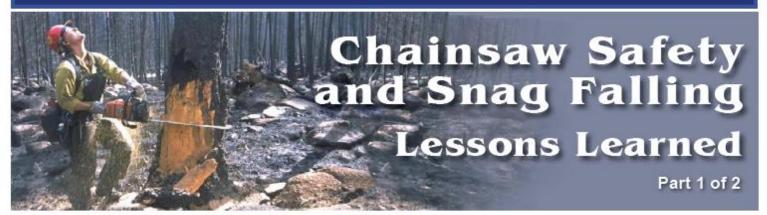


Issue 16 • 2006





A lesson is truly learned when we modify our behavior to reflect what we now know.



Twelve journeymen chainsaw operators including regional saw program coordinators from the federal fire agencies and the private sector were recently interviewed regarding their notable successes, most difficult challenges, effective practices, and most pressing safety issues in chainsaw operations with respect to Lookout/Communications/Escape Routes/ Safety Zones (LCES) and Situational Awareness (SA). Special thanks are extended to these subject matter experts for sharing their important lessons and practices with the wildland fire community.



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California Department of Forestry and Fire Protection Madera-Mariposa-Merced Unit



