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First name: Bud
Last name: Hoekstra
Organization:
Title:
Comments: STF HAZARD TREE COMMENTSToday is April 13[deg]', a Thursday, and yesterday I received a USDA announcement (letter,file code 1950, April 6, 2023) opening a comment period for a hazard tree removal NEPAscoping for a Determination of NEPA Adequacy (DNA). I have not read the EA.The letter prefaces the call for comments with the principles "providing a safeenvironment for the public ... is a priority for the Forest Service" and "If hazard trees are leftunabated, they may fall on roads ... and either cause direct injury or death to people ... or indirectinjmy." Hence the purpose of the removal of hazard trees is to eliminate "widow-makers" andavoid lawsuits from a limb that smashes through a windshield.It occurs to me, from events I saw on Skyline Drive, Shenandoah National Park, whererocks dislodged by freezing and thawing, rolled onto the pavement of the parkway and puncturedthe oil pan of a visitor's car, thus requiring a tow to Elkton or Waynesboro. It occurred to methat the Forest Service may be over-emphasizing the hazard tree threat in order to procureancient old-growth and granddaddy trees for market purposes. Even the Farm Bureau inTuolumne County has come out in favor of taking old-growth "for climate change."Just to set the record straight, Dr Eugene Odum, the famed ecologist, once remarked thathe thought younger forests sequestered more carbon, and his word was taken as gospel until theresearch was done and his notion proved wrong. The Administrative Law textbook used at UCDavispoints to the paradoxical nature of policies, that are veiled in the promise of public goodwhen they fortify some market share in reality, often teasing both accounts, so that I wonderabout what's happening on the ground - whether what is on paper matches what is on theground. Hazard tree removal can easily be constmed to mean access to forbidden old-growthtimber.If tree removal counts as a safety aspect, why does Stanislaus National Forest exercise aprogram that removes hazard rocks that might roll into roads. IfSNF were serious, if the ForestService were serious, about public safety, the agency would hire interpreters who can trainvisitors in outdoor skills, like survival skills on stream crossing and what to do when onebecomes lost. But the Forest Service does not accord public safety a high rank of importance,except in old-growth tree removal, an issue which timber interests have moved to the forefront.Being of a suspicious nature when the Forest Service makes a decision, I am inclined tobelieve that the EA may hide a monetary interest for the private sector - employmentoppmtunities for sawyers and high-grade lumber for mills. The way to get hold of off-limitsold-growth is to declare the old-growth a hazard - and access is often a matter of roads, andhazard trees line roads - I don't see the problem extending to trails; I don't see an EA for hazardrock removal.It has been policy at the CDC's Center for Injury Control to say that there is no such thingas an accident. We can engineer a safe environment, and there are controllable factors behindevery injury. Hazard trees are controllable features of injmy, but so are rocks - and lightning.And bears that get out on the road at night and let cars mn smack into them. Does the USDAForestService need to sponsor a safety program aimed at genetic selection of light-coated bears- perhaps a breeding program for albino bears - change bear fur to white to ave1t fewer roadinjuries.Perhaps we need lightning rods every 100 feet on high-country trails to make the forestsafer for hikers.Wnile I poke fun at the notion of tree removal, removing hazard trees does have practicalvalue along highways and in campgrounds to prevent injuries, but I worry that the EA will go toofar and abuse 'the forest proper' for its salable trees. Does the work on the ground reclaimsafety or market timber?Another aspect of hazard tree removal is the fact that it is a default policy. Clean wateris our most important product, and resource management should prevail at the Forest Service.In the Sierra-Nevadas where fire is as important as rain to the ecology, and to water yield, theUSDA-FS has ignored the free goods (water) and concentrated on the economic goods - timber.Let me elaborate in case the concepts escape management personnel. If a progran1 ofprescribed fire were in place, if the Forest Service allowed fire instead of suppressing it since1909, the forestland would be less dense, and fewer hazard trees would abound, and fire wouldreplace chainsaws to some extent. Hazard tree removal is a default program because ofmanagement inaction.Now we come to forestry science, and the need to examine the effects and impetus of pastforest management.Dr Malcom North, UC-Davis, has made the case that, in an acre of forestland, if given allthe nutrients and water it wants, tree density reaches a maximum, a cap on carrying capacity fortrees. Dr No1th estimates that California is at 70% of that max, and if a program of fire hadbeen in place instead of a suppression program over the span of a centmy,

the state would hoverat 35%. Fuel loads make healthy, ecological fires almost impossible today.Trees are ET pumps that suck out soil water and relocate moisture into the atmosphere.Too much pumping, that is too dense of a stand, results in environment degradation of theforest's ecology. For example, in the southeast regions, the southern bark beetle is unstoppable,so it seems. Aerial photos of outbreaks show progressive rings of tree deaths around theoutbreak over a span of years. Where tree density was managed with fire, the concentric ringsbecome a flat wall - why? The theory is that pheromones attract beetles that mate, and whenthinner forests lie, the phermones of beetles are driven off by winds, disrupting theirreproduction. We see this in evolution's patterns of bud formation - pines along ridgetops andaside lakes are resinous, the resin protective of the bud, whereas interior understory shrubs, thepawpaw comes to mind, have fragile, naked buds that, exposed to wind, are damaged. Researchon wind-borne effects on insects is almost nil.Density affects rainfall. The canopy layer of the forest traps snow, and the snow doesnot melt and fall - it sublimes, robbing the snowpack on the ground of vital moisture. Calledcanopy interception in journals, there is also log interception from too much duff and litter, thelayers that wildfires, and prescribed fires, burn off.Fuel build-up is devastating to a forest health. Duff layers that decompose without bumoffacidify the soil and water - pools where yellow-legs and red-legged frogs breed tend to dropin pH and their breeding curtails. Georgia or North Carolina, one of those states, has a programwhere they rake the duff, then burn seasonal pools so the salamanders again breed. Fireneutralizes pH. Even in Washington-state, the eastern WA wheat fields began to suffer yieldlosses because ammonium-nitrate fertilizer over decades has changed the pH from almost pH 7to below pH 5 in places where yields dropped. Below pH 5, aluminum is mobilized which istoxic to root growth.Likewise, excessive fuel feeds megafires, high-severity, high-impact fires that bum belowthe duff layer and vaporize nutrients which are the future forest. High-severity mega-firessterilize the soil, and according to USFS researcher and book-writer Chris Maser, kill off themice that burrow into the subsurface to escape fires and re-emerge to poop and reinoculate thesoil with mycorrhizal spores with their poop. Most trees require mycorrhizae to grow andthrive. Forests are mycorrhizal entities, mostly below the ground, and we can't see the realforest because of the trees.Fire also begats water - an article in the JOURNAL OF THE AMERICAN WATERRESOURCE ASSOCIATION (McLaughlin, Kaplan & Cohen) calculates a 64% increase inwater yield in the southeast's coastal pine forests of the USFS if the states return to theindigenous longleafpine (afire-climax species) and add prescribed fire to the mix.September's SCIENCE NEWS had two articles recounting research in Washington-state wherebeavers added immensely to water storage - more water means cooler water for salmonreproduction and moister vegetation for fire resistance and longer seasons for seasonal streams.Another aspect of a program to return to natural fire regimes and normal forest densitiesis fewer hazard trees. Fire removed hazard trees.Hazard trees can be snags - dead trees. "DEAD" is a misnomer. Science has shownmore living biomass to be in snags that live trees, when one weighs insects, fungi and microbes.In some ways, hazard tree removal makes for an anthropogenically designed forestinstead of an ecologically designed forest. Also, as aforesaid, hazard tree identification can gooverboard and be an unecological disturbance.To really comment on the EA, I'd have to walk the project area and examine whichhazard trees are tagged for removal to see if safety is the real motive, or whether we find fraud, aharvesting of timber in disguise, and there is no way that I have time for this. Nor will theUSDA Inspector-General audit the biomass removal to see if it's a safety measure or harvest salein disguise. That leaves understaffed nonprofits to do the inspection work, like CSERC or theSierra Club. I'd feel much better about the EA if the Forest Service would hire CSERC toinspect.I want to remind Stanislaus National Forest ofits duty to protect and preserve theresources of the forest so that they are available for economic use by future generations - I amtalking sustainable management.Regeneration is management priority, and it takes water to grow a forest. As we enter anera of climate distress, forests are at risk, especially from catastrophic wildfires from too muchfuel on the ground. Ultra-hot fires eat up nutrients, sterilize the soil and reduce pyrocarbons inthe soil. Pyrocarbons hold water. The USDA, including the USFS, has a biochar program thatlooks at the lost carbon (from plows & from mega-fires), that measures the shrinking capacity ofsoil to hold water and proposes making biochar. The NRCS says that 1 % increase in soilorganic matter per acre results nan increase in water-holding capacity of about 25,000 gallons.If Stanislaus National Forest does not own a Carbonator or Charboss, if it is not making biocharfor dry-farming in the valley, its management has failed - we need to reduce the density ofvegetation that is fire-prone and hazardous. Water comes first, and biochar is the longest-livedsequestered carbon, and biochar is needed by both forest and field to survive climate distress.This is the number #1 hazard awaiting Stanislaus

NF attention.Bud Hoekstra