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Comments: Subject : Failure to Fully Disclose Potential Effects on Public Health and Safety in USDA-Forest Service Northwest Forest Plan Amendment - Draft Environmental Impact Statement (DEIS)

I am a retired U.S. Forest Service geologist with 51 years experience on National Forests across the United States including Pacific Northwest National Forests. Over my career I served on hundreds of interdisciplinary teams for proposed management activities (timber harvest, road construction and maintenance, fire management, post-fire salvage, storm damage, watershed restoration, developed recreation, special uses, etc.). My participation in the environmental analyses included assessing the proposed action's potential impacts on geologic hazards, and visa versa, the potential impacts of geologic hazards on the proposed action (landslides including debris flows, floods, sinkholes, volcanic activity, earthquakes, hazardous minerals (asbestos, uranium, etc.); groundwater contamination, etc.).

Geologic hazards are geologic conditions (naturally occurring or altered by humans) that create a threat (risk) to public health and safety, infrastructure, and resources. While many geologic hazards are natural, some geologic hazards are a direct result of management activities, such as debris flow landslides caused by failure of road fill slopes or log landing fill slopes.

My career included more than 10 years on the Klamath, Six Rivers and Mt. Baker-Snoqualmie National Forests. As an engineering geologist on the Pacific Northwest National Forests I conducted field investigations of proposed roads and timber harvest including post-fire salvage, and made recommendations to avoid or reduce potential impacts relating to geologic hazards.
I also conducted field investigations and made stabilization/remediation recommendations along hundreds of miles of Forest Service roads for 1) road cut slope failures, 2) road fill slope failures and log landing failures and resulting debris flows, 3) slope failures in timber harvest units in unstable geologic settings such as steep slopes in disintegrated granite.

One example related to public safety is my discovery of a log landing and a road fill undergoing progressive slumping and debris flow activity in a post-fire salvage area above the community along Indian Creek in Happy Camp, California. I prepared a debris flow hazard and risk assessment for the District Ranger who then held a community meeting to inform residents about the hazard and risks to people and homes along Indian Creek as well as to the highway serving the community. See Figure 1 in:
Collins, T.K., Debris flows caused by failure of fill slopes: early detection, warning, and loss prevention, Landslides (2008) 5: 107.
https://link.springer.com/article/10.1007/s10346-007-0107-y

DEIS Failure to Fully Disclose Potential Effects on Public Health and Safety
Potential effects on the human environment are the focus of the National Environmental Policy Act of 1969 (NEPA law) and the implementing regulations 40 CFR Parts 1500-1508 (NEPA regulation):

"40 CFR 1502.3 Statutory requirements for environmental impact statements.
As required by section 102(2)(C) of NEPA, environmental impact statements are to be included in every Federal agency recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment."

The NEPA law requires focus on potential effects on the "human environment", not simply the "environment" or the "northern spotted owl environment". As a result, the NEPA law and regulations have specific requirements to

consider potential effects on public health and safety.

The NEPA regulation makes clear the overarching importance of public health and safety in the human environment (40 CFR 1501.3 (d)(2) Determine the appropriate level of NEPA review):
"Agencies shall analyze the intensity of effects considering the following factors…
"(i) The degree to which the action may adversely affect public health and safety."

Public health and safety is the first factor among the eight factors that "Agencies shall analyze the intensity of effects" (40 CFR 1501.3 (d)(2).

Potential effects on public health and safety include more effects than wildland fire effects. The DEIS fails to disclose the potential effects of all relevant hazards and risks to public health and safety (such as proposed actions resulting in debris flows that affect public health and safety; proposed actions resulting in public exposure to asbestos and other hazardous minerals; etc). The DEIS failure to recognize the scope of potential effects contributes to the DEIS failure to identify public health and safety as a significant issue.

The DEIS needs to be revised to 1) recognize public health and safety as an significant issue with multiple components, and 2) analyze the potential effects of the proposed action on the multiple components of the significant issue.

Potential effects on public health and safety resulting from ground disturbance in geologic areas with asbestos and other hazards minerals

The proposed action includes ground disturbance in geologic areas with naturally occurring hazards minerals such as asbestos. The proposed ground disturbance required for timber harvesting, prescribed fires, and wildfire suppression may release asbestos to airborne and waterborne pathways and result in potential effects on public health and safety.

Many National Forests in the Northwest Forest Plan (NWFP) have areas of ultramafic rocks containing asbestos. Yet the DEIS does not assess the proposed action's potential to release asbestos and the resulting risks to public health and safety. The DEIS also does not disclose the proposed action's potential effects on other naturally occurring hazardous minerals such as arsenic, mercury, uranium, etc.

This major deficiency in the DEIS needs to be remedied. The following recommendations are identified by DEIS sections that need updated analysis and revision. Because the geologic areas with asbestos are so large and widespread throughout the NWFP area, asbestos will be used as an example of how potential effects related to hazardous minerals should be assessed.

Recommendation 1 - Issues (DEIS Chapter 1.9)
Add the following new Significant Issue:
Issue 8 - Public Health and Safety: What effect would the proposed alternatives have on public health and safety?

Recommendation 2 - AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES CHAPTER 3
Add to Chapter 3 the following analysis of the Issue:

3.9 Issue 8 - Public Health and Safety
Although not identified as a key issue/theme in the Notice of Intent, the proposed amendment includes clarifying direction for actions that could have effects on public health and safety. The NEPA regulation makes clear the overarching importance of public health and safety in the human environment (40 CFR 1501.3 (d)(2) Determine the appropriate level of NEPA review):

"Agencies shall analyze the intensity of effects considering the following factors…
"(i) The degree to which the action may adversely affect public health and safety."

Public health and safety is the first factor among the eight factors that "Agencies shall analyze the intensity of effects" (40 CFR 1501.3 (d)(2). Therefore, this section addresses what effects the proposed alternatives would have on public health and safety. This section will also provide a summary and reference to public health and safety effects assessed in other Issues, such as Air Quality and Fire Resistance and Resilience.

Instead of having public health and safety effects scattered under different Issues, this section provides a one-stop location to disclose the full scope and magnitude of potential effects on public health and safety.

The following is a preliminary outline of the multiple hazards and risks to public health and safety to be assessed in Chapter 3 Affected Environment.

3.9.1 Affected Environment

Wildfire

[Assessment TBD]

Prescribed Fire

[Assessment TBD]

Air Quality

[Assessment TBD]

Asbestos

Add a geologic assessment of the affected environment for asbestos.

Other Hazardous Minerals

Add a geologic assessment of the affected environment for other hazardous minerals (arsenic, mercury, uranium, etc.)

Landslides

Add a geologic assessment of the affected environment for landslides.

Floods

Add a geologic assessment of the affected environment for floods.

Karst (sinkholes and groundwater contamination)

Add a geologic assessment of the affected environment for karst (sinkholes and groundwater contamination).

Coal fires

Add a geologic assessment of the affected environment for coal fires.

The following is a preliminary outline of the multiple hazards and risks to public health and safety to be assessed in Chapter 3 Environmental Consequences.

3.9.2 Environmental Consequences

Wildfire

[Assessment TBD]

Prescribed Fire

[Assessment TBD]

Air Quality

[Assessment TBD]

Asbestos

Add a geologic hazards and risk assessment of the environmental consequences due to ground disturbance of asbestos.

Other Hazardous Minerals

Add a geologic hazards and risk assessment of impacts of the alternatives on other hazardous minerals (arsenic, mercury, uranium, etc.)

Landslides

Add a geologic hazards and risk assessment of impacts of the alternatives on natural landslides and management-induced landslides.
Floods
Add a geologic hazards and risk assessment of impacts of the alternatives on floods.
Karst (sinkholes and groundwater contamination)
Add a geologic hazards and risk assessment of impacts of the alternatives on karst (sinkholes and groundwater contamination).
Coal fires
Add a geologic hazards and risk assessment of impacts of the alternatives on potential coal fires.

The following is a first draft of the recommended addition of an affected environment and environmental consequences for asbestos.
Affected Environment
Asbestos - Add a geologic assessment of the affected environment for asbestos.

Many National Forests in the Northwest Forest Plan (NWFP) have areas of ultramafic rocks containing asbestos. Add a geologic assessment of the affected environment to identify the geographic distribution of ultramafic rock areas, and to describe the scope and magnitude of asbestos hazards and risks.

The first part of the geologic assessment would be to collect data from existing geologic maps such the "Maps of the Locations of Ultramafic and Serpentine Rock Formation on National Forests in California" which includes the Klamath, Lassen, Mendocino, Shasta-Trinity, Six Rivers National Forests.
https://www.fs.usda.gov/detail/r5/landmanagement/resourcemanagement/?cid=STELPRDB5363833

The geologic assessment of the affected environment would describe the scope and magnitude of ground disturbance from past and present management activities (roads, trails, campgrounds, wildland fire control lines, bulldozed lines, timber harvest areas, log landings, mining, etc.) in the ultramafic rock areas where asbestos hazard may be present. Identify especially where road and trail maintenance and fire break maintenance are continuing ground disturbances in ultramafic rock areas.

The existing ground disturbance may have created hazardous asbestos conditions. Such asbestos hazards need to be identified as part of the existing condition and in the cumulative effects.

Identify potentially affected stream drainages in or downstream from the ultramafic rock areas as well as potentially affected municipal watersheds and/or watersheds that are sources of domestic drinking water. Describe the proximity of ultramafic areas to private lands and residences or communities.

The geologic assessment should comply with Forest Service policy (Forest Service Manual 2885.03): Reports on geologic studies or investigations, and transmittal of geologic data must be prepared and reviewed by a geologist with qualifications in the subject area (FSM 2885.3).

Environmental Consequences
Asbestos - Add a geologic hazards and risk assessment of potential impacts due to ground disturbance of asbestos.
The proposed ground disturbance required for timber harvesting, prescribed fires, and wildfire suppression may release asbestos to airborne and waterborne pathways and result in potential effects on public health and safety.

The USDA-Forest Service Pacific Southwest Region identifies public health and safety impacts due to asbestos exposure on National Forests in the following five paragraphs:

Asbestos Exposure and Health Facts

Naturally occurring asbestos may be a health risk if disturbed and asbestos fibers are released into the air. When asbestos-containing rocks are crushed or broken through natural weathering processes or through human activities, asbestos-containing dust can be generated. Once asbestos fibers are released into the air, they may remain airborne or in the soil for a long time. Airborne asbestos fibers may pose a health hazard because of the potential risks associated with inhalation of the fibers.

When these fibers are inhaled, over time they may cause mesothelioma (a rare cancer directly associated with asbestos exposure), lung cancer (smoking significantly increases the risk of lung cancer if one is exposed to asbestos), and non-cancer diseases such as asbestosis. All forms of asbestos fibers can cause cancer and are classified as known human carcinogens. Any exposure to a carcinogenic compound involves some risk; therefore, no "safe" exposure level has been established for asbestos. No one knows how many fibers are needed to cause cancer or other lung disease.

Diseases caused by asbestos may not be observed for twenty or more years. Being exposed to asbestos does not necessarily mean you will develop health problems. Many factors influence a person's chances of developing disease. A doctor can help you find out whether you are at risk for health problems from asbestos exposure.

Since naturally occurring asbestos is present on some national forest lands, there is a potential for your exposure to asbestos fibers on your visit to national forests in California. Natural weathering and routine human activities may disturb asbestos-bearing rock or soil and release asbestos fibers into the air. Examples of dust-generating activities include, but are not limited to:

Driving over unpaved roads, trails or soils

Riding horses or moving livestock on unpaved roads, trails, or soils

Recreational activities on unpaved roads, trails, or soils where dust may be generated, such as riding off-road vehicles, riding bicycles, running or hiking

Digging or shoveling dirt

Mining and quarrying operations

Health risks associated with exposure to naturally occurring asbestos are not yet fully understood. Recent studies and investigations by the U. S. Environmental Protection Agency in El Dorado County and at the Bureau of Land Management's Clear Creek Management area near Hollister, the U. S. Agency for Toxic Substances and Disease Registry, and by the University of California at Davis are increasing our understanding of the potential health risks associated with naturally occurring asbestos.

https://www.fs.usda.gov/detail/r5/landmanagement/resourcemanagement/?cid=STELPRDB5363833

Based on areas of ultramafic rocks identified in the affected environment and on the areas where the proposed actions would be permissible, assess the potential impacts on public health and safety.

Identify each type of ground disturbance that could result in asbestos exposure to employees, firefighters, contractors and the public. Use the information to develop plan standards and guidelines to reduce risk to employees, firefighters, contractors and the public.

Assess the potential for the proposed action to cause asbestos releases (such as asbestos-containing dust) during project implementation (log landing construction, construction of skid trails or skid roads, log skidding, yarding, timber felling/bucking/delimbing, piling and burning timber slash, chipping operations, road maintenance, road grading, road ditch and culvert cleaning, etc.). Assess asbestos release and transmission in airborne and waterborne pathways.

Assess the potential for the proposed action ground disturbance to result in asbestos releases in the years after project implementation. Assess asbestos release and transmission in airborne and waterborne pathways. Assess potential impacts on municipal watersheds and/or watersheds that are sources of domestic drinking water. Identify the populations that would be at increased risks of health effects due to project-related asbestos releases in the years after project implementation (such as visitors using affected roads and trails, road maintenance crews, Forest Service personnel, tree planting crews, and residents if private land is nearby operations).

This is my first comment letter on revisions needed to remedy the DEIS failure to fully disclose potential effects on public health and safety. As time permits before the March 17 comment deadline, I plan to submit one or more letters adding more recommended revisions on public health and safety.

Thomas Collins
March 16, 2025