

Jenkins Hollow Fire – BAER Risk Assessment

Documented by Katherine Foster, BAER Team Leader, April 11, 2010

Human health and safety

Values	Threats considered	Team assessment of threats	Risk
<p>Human safety There are several dwellings on the north and south perimeter of the fire that are very close to the control lines and burned area. The BAER team visited those known to be the closest to the burned area.</p>	Hazard trees	Closest upslope trees of sufficient size to cause damage were either more than a tree length from a dwelling or did not appear to be damaged by the fire, or both.	<p>Probability of damage or loss = unlikely Magnitude of consequence = moderate Risk = low Emergency treatment needed = no</p>
	Rock fall	Cliffy terrain on eastern portion of burned area. Based on district knowledge, no recent history of rock fall from similar terrain following fires. Most dwelling not right next to toe of slope.	<p>Probability of damage or loss = unlikely Magnitude of consequence = moderate Risk = low Emergency treatment needed = no</p>
	Debris flows	Based on history, little potential. Majority of burned drainages are first order. Based on aerial reconnaissance, fire intensity and severity in the drainages appears to be generally low.	<p>Probability of damage or loss = unlikely Magnitude of consequence = moderate Risk = low Emergency treatment needed = no</p>

Property and infrastructure

Values	Threats considered	Team assessment of threats	Risk
<p>Roads There are no NFS roads or trails in the burned area. There are public roads and driveways adjacent to the north and south perimeter of the burned area.</p>	Culvert blockage by floatable debris and increased runoff	The public roads are generally not culverted.	<p>Probability of damage or loss = unlikely Magnitude of consequence = minor Risk = very low Emergency treatment needed = no</p>

Cherokee National Forest, Jenkins Hollow Fire, BAER Risk Assessment

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Town of Hampton water system	Infrastructure damage due to soil sloughing and erosion	The BAER team went to the storage tanks on the southern perimeter of the fire. Dozer and hand lines were constructed around the tanks and appear to be sufficiently upslope to provide a good buffer zone to capture any soil movement before it would reach the tank site.	Probability of damage or loss = unlikely Magnitude of consequence = moderate Risk = low Emergency treatment needed = no
	Change in water yield characteristics	System is spring fed; source area unknown. If portion of source are is in the burned area, low intensity/severity fire should not alter infiltration or runoff characteristics.	Probability of damage or loss = unlikely Magnitude of consequence = moderate Risk = low Emergency treatment needed = no

Natural Resources

Values	Threats considered	Team assessment of threats	Risk
Native or naturalized communities on NFS lands where invasive species or noxious weeds are currently absent or present in only minor amounts	Noxious and invasive plant species	Based on District experience, there is high probability that <i>Paulownia</i> will invade severely burned sites. There is also concern about the spread of privet, Japanese honeysuckle, kudzu, and multiflora rose. However, active detection and control would not occur until the second growing season following the fire; this does not meet BAER timeframes for funding.	Probability of damage or loss = very likely Magnitude of consequence = major to moderate depending of species Risk = very high Emergency treatment needed = no
Soil productivity and hydrologic function on burned NFS lands.	Altered soil conditions sufficient to result in detrimental soil erosion and	Based on aerial reconnaissance, fire intensity appears to be generally low with patches (3 to 10 acres each) of high. A ¾ to 1¼ inch rain the day before the fire was	Probability of damage or loss = unlikely Magnitude of consequence = moderate Risk = low

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	runoff	declared contained did not result in any observed soil or litter/duff movement on control lines or the burned drainages. The BAER team takes this as an indicator that soils in the burned area are relatively unaltered and that burn severity at the subwatershed scale is also low.	Emergency treatment needed = no
Critical habitat or suitable occupied habitat for federally listed threatened or endangered terrestrial, aquatic animal or plant species on or in close proximity to the burned NFS lands.	Terrestrial species	Cliffs in the southeastern portion of the burned area are likely habitat for eastern woodrat. Carolina hemlock does occur in the burned area.	Probability of damage or loss = possible Magnitude of consequence = minor/localized Risk = low Emergency treatment needed = no.
	Aquatic species	The BAER team was initially concerned about fire-induced erosion and sediment effects in the Doe River adjacent to the burned area. Affected species would have been hellbenders and longhead darter. The containment lines go to the river on the eastern flank of the fire; however, the fire did not burn to the river and no backfiring is anticipated.	Probability of damage or loss = unlikely Magnitude of consequence = moderate Risk = low Emergency treatment needed = no

Cultural and heritage resources

Values	Threats considered	Team assessment of threats	Risk
Historic site, probably unrecorded	Site alteration due to heating.	Site appears to be primarily stacked rock with no wood members. Burn intensity low	Probability of damage or loss = unlikely Magnitude of consequence = moderate Risk = low Emergency treatment needed = no

Rehabilitation and restoration needs

Boundary lines reestablished

Detection and control of noxious and invasive species