



7. TASKS/PROCEDURES (CONTINUED)	8. HAZARDS (CONTINUED)	9. ABATEMENT ACTIONS (CONTINUED) Engineering Controls * Substitution * Administrative Controls * PPE
<b>Use of Chainsaw</b>	Injuries	<ul style="list-style-type: none"> <li>a. Operator must have chain saw certification.</li> <li>b. Ensure volunteer has working knowledge of Job Hazard Analysis for Brushing/Chainsaw Use.</li> <li>c. Wear hardhat, gloves, face shield, ear protection and chaps when using chainsaw.</li> </ul>
<b>Working during Hunting Season</b>	Injuries Death	<ul style="list-style-type: none"> <li>a. Wear hunter orange vest.</li> <li>b. Avoid times of poor visibility.</li> </ul>
<b>Emergency Evacuation Procedures</b>	Illness/Injury	<p><b>All</b> vehicles shall have first aid/infectious control kits. Each work crew shall have at least one person currently certified to render first aid and CPR. If broken down on the open road, use two-way radio or cell phone to initiate call for EMS. Maintain communications with the 911 Operator until help arrives. Render first aid to the sick or injured until relieved by a higher-level medical responder. Do not abandon the patient. All volunteers treating patients shall observe Universal Precautions at all times. In remote work areas, it may be quicker to transport the injured patient out to meet with the EMS agency. Care shall be taken while moving and transporting the injured and communications must be maintained. Use Blood Borne Pathogen precautions. <b>Notify the Forest Service of the injury.</b> Complete necessary paperwork.</p>



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Walking and Working in the Field	Falling Down Twisted Ankles and Knees Poor Footing	Always watch your footing. Slow down and use extra caution around logs, rocks, and animal holes. Extremely steep slopes (>50%) can be hazardous under wet or dry conditions; consider an alternate route. Tree root holes are prevalent and should be flagged. Work boots, hiking boots, or sturdy shoes will be required. Open toes shoes such as sandals, tennis shoes, and the like are prohibited.
	Damage to Eyes	Watch where you walk, especially around trees and brush with limbs sticking out. Exercise caution when clearing limbs. Wear eye protection. Ultraviolet light from the sun can be damaging to the eyes; look for sunglasses that specify significant protection from UV-A and UV-B radiation.
	Insect Stings and Bites	Review the Job Hazard Analysis for Insect Stings/Bites.
	Tools and Equipment	<ul style="list-style-type: none"> <li>a. Ensure that tools are not modified or used in any manner that increases the risk of injury.</li> <li>b. Ensure that tools remain in a safe condition through periodic inspection and repair.</li> <li>c. Monitor performance periodically to ensure proper methods are followed.</li> <li>d. Gloves shall be worn while performing work tasks.</li> </ul>
	Lifting	Ask for help if the load is too heavy. Do not try to lift or otherwise move material beyond abilities.

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Environmental Health Considerations	Heat Stress	<p>a. Remain constantly aware of the four basic factors that determine the degree of heat stress (air temperature, humidity, air movement, and heat radiation) relative to the surrounding work environment heat load.</p> <p>b. Know the signs and symptoms of heat exhaustion, heat cramps, and heat stroke. Heat stroke is a true medical emergency requiring immediate emergency response action.</p> <p><b>NOTE:</b> The severity of the effects of a given environmental heat stress is decreased by reducing the workload, increasing the frequency and/or duration of rest periods, and by introducing measures which will protect volunteers from hot environments.</p> <p>c. Tailor the work schedule to fit the climate, the physical condition of volunteers, and mission requirements.</p> <ol style="list-style-type: none"> <li>1. A reduction of workload markedly decreases total heat stress.</li> <li>2. Lessen workload and/or duration of physical exertion the first days of heat exposure to allow gradual acclimatization.</li> <li>3. Alternate work and rest periods. More severe conditions may require longer rest periods and electrolyte fluid replacement.</li> </ol>





### HEAT STRESS INDEX

Actual Thermometer Reading (F°)

	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104
<b>RELATIVE HUMIDITY</b>	<b>HUMIDITURE F° (Equivalent Temperature)</b>															
10 %	68	70	72	75	77	78	80	82	85	87	89	91	93	95	97	98
20 %	70	72	75	77	79	81	84	86	88	90	93	95	97	99	101	104
30 %	73	75	77	78	80	83	85	87	90	92	95	98	101	105	108	110
40 %	74	76	78	79	81	85	87	89	92	96	100	104	106	110	117	120
50 %	75	77	79	81	84	86	90	93	96	100	105	108	110	120	125	132
60 %	75	77	80	83	86	89	92	95	100	106	111	120	125	132		
70 %	75	77	81	85	89	91	96	100	106	115	122	128				
80 %	76	78	83	86	91	95	100	106	114	122						
<b>HUMIDITURE F°</b>	Below 80		80 - 90			90 - 105			105 -130			Above 130				
<b>DANGER CATEGORY</b>	NONE		CAUTION			EXTREME CAUTION			DANGER			EXTREME DANGER				
NONE	Little or no danger under normal circumstances.															
CAUTION	Fatigue possible, if exposure is prolonged and there is physical activity.															
EXTREME CAUTION	Heat cramps and heat exhaustion, if exposure is prolonged and there is physical activity.															
DANGER	Heat cramps or exhaustion likely; heat stroke possible, if prolonged and there is physical activity.															
EXTREME DANGER	<b>HEAT STROKE IMMINENT!</b>															

NOTE: Add 10 ° F when protective clothing is worn and add 10 ° F when in direct sunlight.

## WIND CHILL INDEX

Actual Thermometer Reading (F°)												
	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
Wind Speed (mph)	Equivalent Temperature (F°)											
Calm	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
5	48	37	27	16	6	-5	-15	-26	-36	-47	-57	-68
10	40	28	16	4	-9	-21	-33	-46	-58	-70	-83	-95
15	36	22	9	-5	-18	-36	-45	-58	-72	-85	-99	-112
20	32	18	4	-10	-25	-39	-53	-67	-82	-96	-110	-124
25	30	16	0	-15	-29	-44	-59	-74	-88	-104	-118	-133
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109	-125	-140
35	27	11	-4	-20	-35	-49	-67	-82	-98	-118	-129	-145
40	26	10	-5	-21	-37	-53	-69	-85	-100	-116	-132	-148
	LITTLE DANGER (for properly clothed person)				INCREASED DANGER				GREAT DANGER			
	DANGER OF FREEZING EXPOSED SKIN											

**NOTE:** Wind speeds greater than 40 mph have little additional effect.



7. TASKS/PROCEDURES (CONTINUED)	8. HAZARDS (CONTINUED)	9. ABATEMENT ACTIONS (CONTINUED) Engineering Controls * Substitution * Administrative Controls * PPE
<p><b>Fueling Chain Saw</b></p>	<p>Burns Spillage Fire</p>	<ul style="list-style-type: none"> <li>a. Stop the saw when checking fuel or bar oil levels and when refueling.</li> <li>b. Fill tank on bare ground or other noncombustible surface.</li> <li>c. Wipe spilled fuel off saw.</li> <li>d. Never start saw within 10 feet of the fueling area.</li> <li>e. Refuel saw at least 50 feet from persons smoking or potential sources of ignition.</li> </ul>
<p><b>Environmental Conditions</b></p>	<p>Lightning Rain Strong Winds Darkness</p>	<p>All work shall terminate and each volunteer shall move to a place of safety when environmental conditions create a hazard for the volunteer.</p>
<p><b>Starting Saw</b></p>	<p>Kickback Cuts</p>	<p>There are two recognized methods for safely starting a saw. In both methods, the trigger lock should not be used.</p> <ul style="list-style-type: none"> <li>a. On ground starting</li> <li>b. Stand starting.</li> <li>c. <b>***Drop starting is prohibited***.</b></li> </ul>
<p><b>Personal Protection Equipment</b></p>	<p>Cuts Hearing Loss Eye Injuries Head Injuries</p>	<ul style="list-style-type: none"> <li>a. Wear gloves, chaps, hardhat, safety glasses, and hearing protection, long-sleeved shirt, and sturdy boots with slip resistant soles.</li> <li>b. Use shoulder pads for carrying chainsaw.</li> <li>c. Keep shirt collar up while carrying saw on shoulder.</li> <li>d. The leg protection (chaps) shall cover the full length of the thigh to the top of the boots.</li> <li>e. First aid kits shall be available at the work site and on each transport vehicle.</li> </ul>









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<p><b>Emergency Evacuation Procedures</b></p>	<p>Illness/Injury</p>	<p><b>All</b> vehicles shall have first aid/infectious control kits. Each work crew shall have at least one person currently certified to render first aid and CPR. If broken down on the open road, use two-way radio or cell phone to initiate call for EMS. Maintain communications with the 911 Operator until help arrives. Render first aid to the sick or injured until relieved by a higher-level medical responder. Do not abandon the patient. All volunteers treating patients shall observe Universal Precautions at all times. In remote work areas, it may be quicker to transport the injured patient out to meet with the EMS agency. Care shall be taken while moving and transporting the injured and communications must be maintained. Use Blood Borne Pathogen precautions. <b>Notify the Forest Service of the injury.</b> Complete necessary paperwork.</p>

U. S. Department of Agriculture Forest Service  <b>JOB HAZARD ANALYSIS (JHA)</b> References – FSH 6709-.11 and -12 <i>(Instructions on Reverse)</i>	1. WORK PROJECT/ACTIVITY <b>Insect Stings and Bites</b>	2. LOCATION <b>Nantahala National Forest</b>	3. UNIT <b>Cheoah/Tusquitee Ranger Districts</b>
	4. NAME OF ANALYST <b>Heath Emmons</b>	5. JOB TITLE <b>Natural Resource Specialist</b>	6. DATE PREPARED <b>11/1/2021</b>
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS <i>Engineering Controls * Substitution * Administrative Controls * PPE</i>	
<b>Avoiding/Treating Tick Bites</b>	Lyme Disease Rocky Mountain Spotted Fever Etc.	a. Spray clothing with insect repellent as a barrier. b. Wear light colored clothing that fits tightly at the wrists, ankles, and waist. c. Each outer garment should overlap the one above it. d. Cover trouser legs with high socks or boots. e. Shirts should be tucked in and secured with a snug belt. f. Search the body on a regular basis, especially hair and clothing; ticks generally do not attach for the first couple of hours. g. If a tick becomes attached, pull it by grasping it as close as possible to the point of attachment and pull straight out with gentle pressure. Wash skin with soap and water then cleanse with rubbing alcohol. Place the tick in an empty container for later identification. If the victim should have a reaction, record dates of exposure and removal. h. Do not try to remove the tick by burning with a match or covering it with chemical agents.	

7. TASKS/PROCEDURES (CONTINUED)	8. HAZARDS (CONTINUED)	9. ABATEMENT ACTIONS (CONTINUED) Engineering Controls * Substitution * Administrative Controls * PPE
<p><b>Avoiding/Treating Tick Bites</b> (Continued)</p>		<ul style="list-style-type: none"> <li>i. If you cannot remove the tick, or the head detaches, seek prompt medical help.</li> <li>j. Watch for warning signs of illness <ul style="list-style-type: none"> <li>1. A large red spot on the bite area</li> <li>2. Fever</li> <li>3. Chills</li> <li>4. Headache</li> <li>5. Joint and muscle ache</li> <li>6. Significant fatigue</li> <li>7. Facial paralysis</li> </ul> </li> <li>k. Reactions may appear within two weeks of the attack.</li> <li>l. Symptoms specific to Lyme Disease include: <ul style="list-style-type: none"> <li>1. Confusion</li> <li>2. Short-term memory loss</li> <li>3. Disorientation</li> </ul> </li> <li>m. Seek medical attention immediately if any symptoms listed above appear. Notify Forest Service if symptoms appear.</li> </ul>

7. TASKS/PROCEDURES (CONTINUED)	8. HAZARDS (CONTINUED)	9. ABATEMENT ACTIONS (CONTINUED) Engineering Controls * Substitution * Administrative Controls * PPE
<p><b>Avoiding/Treating Bee Stings</b></p>	<p>Allergic Reactions Painful Stings</p>	<ul style="list-style-type: none"> <li>a. Be alert to hives in brush or in hollow logs.</li> <li>b. Watch for insects traveling in and out of one location.</li> <li>c. If you or anyone you are working with is known to have allergic reactions to bee stings, tell the rest of the work crew. Make sure you carry emergency medication with you at all times.</li> <li>d. Wear long sleeve shirts and trousers.</li> <li>e. Shirts should be tucked in.</li> <li>f. Bright colors and metal objects may attract bees.</li> <li>g. If you are stung, cold compresses may bring relief.</li> <li>h. If a stinger is left behind, scrape it off the skin. Do not use tweezers to remove sting, as this squeezes the venom sack, worsening the injury.</li> <li>i. Seek medical attention immediately if victim develops any symptoms shown below: <ul style="list-style-type: none"> <li>1. Hives</li> <li>2. Asthmatic breathing</li> <li>3. Tissue swelling</li> <li>4. A drop in blood pressure</li> </ul> </li> <li>j. Give victim antihistamine, such as Benadryl.</li> </ul>



U. S. Department of Agriculture Forest Service  <b>JOB HAZARD ANALYSIS (JHA)</b> References – FSH 6709-.11 and -12 <i>(Instructions on Reverse)</i>	1. WORK PROJECT/ACTIVITY  <b>Cutting with Weed Eater</b>	2. LOCATION  <b>Nantahala National Forest</b>	3. UNIT  <b>National Forest in North Carolina</b>
	4. NAME OF ANALYST  <b>Heath Emmons</b>	5. JOB TITLE  <b>NRS</b>	6. DATE PREPARED  <b>11/1/2021</b>
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS <small>Engineering Controls * Substitution * Administrative Controls * PPE</small>	
<b>Carrying Weed Eater</b>	Injuries Cuts Falling objects	a. Carry only with harness while in operation. b. Conduct tailgate safety sessions. c. Wear hardhat, gloves, goggles, and shin guards. All protective equipment should meet standards set forth in Job Hazard Analysis for Personal Safety – Personal Protective Equipment.	
<b>Starting</b>	Injuries	Start only with harness securely attached.	
<b>Refueling</b>	Burns	a. Allow weed eater to cool for at least 5 minutes before refueling. b. Fill on bare ground only. c. Start at least 10 feet from the refueling area.	
<b>Kickback</b>	Cuts Injuries	a. Maintain a safe distance between operator and other crewmembers. b. Maintain a minimum of 100 feet between workers.	



<p align="center"><b>U.S. Department of Agriculture</b> Forest Service</p>	<p align="center"><b>1. WORK PROJECT/ACTIVITY</b> COVID-19</p>	<p align="center"><b>2. LOCATION</b> National Forests in North Carolina</p>	<p align="center"><b>3. UNIT</b> Cheoah/Tusquee Ranger Districts</p>
<p align="center"><b>JOB HAZARD ANALYSIS (JHA)</b> References-FSH 6709.11 and -12 (Instructions on Reverse)</p>	<p align="center"><b>4. NAME OF ANALYST</b> Heath Emmons</p>	<p align="center"><b>5. JOB TITLE</b> Natural Resource Specialist</p>	<p align="center"><b>6. DATE PREPARED</b> 11/1/2021</p>
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<p><b>General Considerations</b></p>	<p>COVID-19 Exposure: Reported illnesses have ranged from mild symptoms to severe illness and death for confirmed coronavirus disease 2019 (COVID-19) cases.</p> <p>The following symptoms may appear 2-14 days after exposure.</p> <ul style="list-style-type: none"> <li>• Fever above 100.4F</li> <li>• Cough</li> <li>• Shortness of breath</li> </ul> <p><b>UPDATE:</b> CDC recently added the following symptoms as possible indicators of COVID-19:</p> <ul style="list-style-type: none"> <li>• Chills</li> <li>• Repeated shaking with chills</li> <li>• Muscle pain</li> <li>• Headache</li> <li>• Sore throat</li> <li>• and, new loss of taste or smell.</li> </ul>	<p><b>The best way to prevent illness is to avoid being exposed to this virus.</b></p> <p><b>Clean your hands often</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Wash your hands often with soap and water for at least 20 seconds especially after you have been in a public place, or after blowing your nose, coughing, or sneezing.</li> <li><input type="checkbox"/> If soap and water are not readily available, use a hand sanitizer that contains at least 60% alcohol. Cover all surfaces of your hands and rub them together until they feel dry.</li> <li><input type="checkbox"/> Avoid touching your eyes, nose, and mouth with unwashed hands.</li> </ul> <p><b>Avoid close contact</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Avoid close contact with people who are sick.</li> <li><input type="checkbox"/> Practice social distancing (i.e., six feet distance between individuals) to the extent practicable.</li> <li><input type="checkbox"/> Use of audio and video teleconferencing capabilities, where possible.</li> </ul> <p><b>Stay home if you're sick</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Stay home if you are sick, except to get medical care. Learn <a href="#">what to do if you are sick</a>. Notify the Forest Service <b>immediately</b> if you have any of the mentioned symptoms or if you have tested positive to COVID-19 after volunteer activities.</li> </ul> <p><b>Cover coughs and sneezes</b></p> <ul style="list-style-type: none"> <li>   <b>Cover your mouth and nose</b> with a tissue when you cough or sneeze or use the inside of your elbow. <b>Throw used tissues</b> in the trash. Immediately <b>wash your hands</b> with soap and water for at least 20 seconds. If soap and water are not readily available, clean your hands with a hand sanitizer that contains at least 60% alcohol.</li> </ul>	

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		<p><b>Wear/use appropriate PPE</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Wear a facemask <ul style="list-style-type: none"> <li>○ N-95 masks should be reserved for first responders.</li> <li>○ CDC is now recommending the use of facemask coverings in public settings where other social distancing measures are difficult to maintain. Face coverings should be maintained in a sanitary manner and should not be distracting or offensive to others. CDC recommends that face coverings should: <ul style="list-style-type: none"> <li>• fit snugly but comfortably against the side of the face;</li> <li>• be secured with ties or ear loops;</li> <li>• include multiple layers of fabric;</li> <li>• allow for breathing without restriction;</li> <li>• and be able to be laundered and machine dried without damage or change to shape.</li> </ul> </li> </ul> </li> <li><input type="checkbox"/> Nitrile gloves</li> <li><input type="checkbox"/> Safety glasses/eye protection</li> <li><input type="checkbox"/> Hand sanitizers</li> </ul> <p><b>Clean and disinfect</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Clean AND disinfect <a href="#">frequently touched surfaces</a> daily. This includes tables, doorknobs, light switches, countertops, handles, desks, phones, keyboards, computer mouse, toilets, faucets, and sinks. Avoid sharing writing instruments like pens and pencils.</li> <li><input type="checkbox"/> If surfaces are dirty, clean them: Use detergent or soap and water prior to disinfection.</li> </ul>
<p><b>Driving</b></p>	<p>COVID-19 exposure</p>	<p><b>Avoid close contact</b></p> <ul style="list-style-type: none"> <li>• Avoid close contact with people who are sick.</li> <li>• Practice social distancing by traveling one person/ vehicle, to the extent practicable.</li> </ul> <p><b>Clean and disinfect</b></p> <ul style="list-style-type: none"> <li>• Disinfect vehicle after each use using approved disinfectant for COVID19.</li> </ul>

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<b>Travel to and From Project Sites</b>	COVID-19 Exposure	<p>Limit the use of each individual vehicle to one individual or co-habitant. Throughout the day, spray the equipment with disinfectant spray or wipe it down using disinfectant wipes. Following the completion of a job, disinfect your hands and wipe down your vehicle. Wipe down the inside of the vehicle and any exposed surfaces with spray disinfectant or disinfectant wipes. Have a small trash bag to dispose of soiled gloves, towels and wipes; make sure that you dispose of that small trash bag at the end of each shift. At the end of your shift, wash your hands again thoroughly at a sink for 20 seconds with soap and water.</p>
<b>Stay Informed</b>		<p>NOTE: Pandemic information changes rapidly. Refer to the USDA Be Prepared site for the latest specific guidance:  <a href="https://www.dm.usda.gov/beprepared/Covid19.htm">https://www.dm.usda.gov/beprepared/Covid19.htm</a></p> <p>The Forest Service will reference national and international guidelines as published by the CDC (<a href="http://www.cdc.gov">www.cdc.gov</a>) and the WHO  <a href="https://www.who.int/influenza/preparedness/pandemic/en/">https://www.who.int/influenza/preparedness/pandemic/en/</a></p>

