

<p>U.S. Department of Agriculture Forest Service</p> <p><b>JOB HAZARD ANALYSIS (JHA)</b> References-FSH 6709.11 and -12 (Instructions on Reverse)</p>	<p>1. WORK PROJECT/ACTIVITY</p> <p><b>Trail maintenance</b></p>	<p>2. LOCATION</p> <p><b>Ozark-St. Francis NF</b></p>	<p>3. UNIT</p> <p><b>Supervisor Office</b></p>
	<p>4. NAME OF ANALYST</p> <p><b>Robert Duggan</b></p>	<p>5. JOB TITLE</p> <p><b>Natural Resources Specialist</b></p>	<p>6. DATE PREPARED</p> <p><b>06/12/2015</b></p>
<p>7. TASKS/PROCEDURES</p>	<p>8. HAZARDS</p>	<p>9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE</p>	
<p>Power Tool Use (Chainsaw, winch, auger, brush saw_</p>	<p><b>Injury from falling branches</b></p> <p><b>Pokes in eyes from chips or branches</b></p> <p><b>Slips, trips, and falls</b></p> <p><b>Cuts from sharp tools or blisters</b></p> <p><b>Lifting</b></p> <p><b>Falls from unstable ground</b></p>	<p><b>Wear hardhat in forested areas.</b></p> <p>Leave plenty of room between crew members when walking. Let others know if a branch will snap back. Wear safety goggles if using axe or chopping tool. Wear proper gear if using chainsaw. (Refer to Brushing/Chainsaw JHA.)</p> <p>Wear proper footgear, pay attention to ground conditions, carry tools on downhill side.</p> <p>Use gloves and good protective foot wear (Tennis shoes are not adequate).</p> <p>Lift with legs and not with back. Do not exceed your personal ability. Be careful of slippery footing.</p> <p>Keep crews out of steep country with unstable soils during hazardous conditions such as heavy rainfall or high winds. Be cautious on wet plant material on steep slopes.</p> <p>Power tools will only be used by trained personnel over the age of eighteen.</p> <p>All potential sawyers are required to attend a saw-training course before operating a chainsaw, and are only allowed to saw to their individual rating qualifications.</p> <p>The crew working with a power tool operator must never approach unannounced. Make sure they see you and motion you over. Always approach from above on inclines. Keep at least two tree lengths between you and a feller. Keep a safe distance from an operating brush saw, qualified sawyers should always carry wedges and an axe.</p> <p>Protective equipment must be worn at all times when operating a power tool. This includes hardhat, goggles and/or face shield, hearing protection, chaps, 8" high boots, a long sleeve shirt, and gloves.</p> <p>Operators must be aware of the presence and location of other personnel, and must yell out when a tree is coming down. Guards must be posted when necessary. The public within campgrounds must be made aware of any falling activities. Out of courtesy, do not start power tools within the campgrounds too early in the morning if campers are present.</p>	

<p>Hand Tool Use (Pulaski, Sanvic, Crosscut and other saws)</p>		<p>Sawyers must work with a spotter/assistant. No one is allowed to saw alone.</p> <p>All potential sawyers should be checked out by the supervisor prior to power tool use.</p> <p>If using a chansaw winch, be sure to position self in a safe location.</p> <p>A chainsaw auger exerts strong torc. A loose grip on the trigger should be used to slow the speed and prevent injury.</p> <p>Always carry tools on the downhill side when walking. Carry tools at your side with a tight grip at the head of the tool. Never carry tools over your shoulder except chainsaws or cross cut saws that have proper guards on them.</p> <p>Keep proper spacing, 10 feet minimum, between yourself and a co-worker when either is using a hand tool.</p> <p>Keep tools sharp to help prevent bounce-backs. Keep handles free of cracks and flaws, and make sure that tool-heads are secure on the handle.</p> <p>Do not swing tools toward your body. Be especially aware of ankle position when using a pulaski.</p> <p>Maintain proper grip on tools. Handles can become extremely slippery in cold or wet weather.</p> <p>Wear eye protection, especially when using a pulaski on rocky terrain. A hardhat is to be worn at all times.</p> <p>Keep proper body positioning when using crosscut saws. Do not stand below a tree on steep inclines. Use wedges to prevent saw from becoming pinched.</p>
<p>Sawing Windfalls (crosscut saw, pulaski, wedge)</p>	<p>Cuts from saw teeth, logs falling or under tension, cuts from glancing blows, bee's nests.</p>	<p>Keep cover on crosscut saw when not in use. Saw teeth are extremely sharp.</p> <p>Wear gloves. Keep hands on handles on top of saw. Don't finish cut on downhill side of large logs when your cut is nearly finished. Use wedges to avoid pinching the saw. Always replace saw cover when not in use or carry with teeth away from your body if a short distance to next log. Direct where the log will roll and avoid hitting other people. Call out a warning if rolling downhill.</p>
<p>Chopping Windfalls (axe, pulaski)</p>	<p>Cuts from glancing or misplaced blows, being caught by falling logs under tension, bee's nests, overhead limbs.</p>	<p>Watch your cut at all times. Communicate with your partner. A sharp tool is a safe tool. Wear gloves when hand filing. Maintain a safe working distance of 10 feet. Beware of obstructions when swinging. Size up the situation before acting. Clean chips off cutting blade when they appear.</p>
<p>Brushing (pulaski, clippers)</p>	<p>Cuts to feet and legs, limbs slapping the face while chopping, glancing blows from springy</p>	<p>Watch where you are chopping. Communicate with your partner. Use the right tool for the job (ie pulaski vs. clippers), keep alert to where you throw and fall brush and small trees. Watch for rattle snakes in appropriate conditions or time of year.</p>

	bushes, falling brush and small trees, pinched fingers from clippers, mental fatigue	
Boulder Removal and Riprack (prybar, shovel)	Smashed appendages, back strain, abrasions	Look the situation over before acting. Lift with your legs, not back. Communicate with your partner. Watch where the rock may roll when its off the trail. Don't be afraid to ask for help. Maintain balance. Take breaks when tired. Plan where the rock will be placed before rolling.
Water Barring (pulaski, hammer, saw, drawknife)	Cuts while peeling, back strain, smashed appendages, glancing blows, chipping rock	Use the most appropriate tool for the job. When using a pulaski to peel, peel on side away from you. Lift with your legs. Communicate while sawing. Watch the cut. Choke up when pounding stakes with pulaski. Watch what you are doing. Swing in control. Take breaks when tired.
<b>Corduroy Construction</b>		
- Falling trees (crosscut saw, wedges, chainsaw)	Limbs falling out of snag	Wear hardhat. Have a lookout. Keep area clear. Have a getaway. Follow all safety procedures for chainsaw use.
- Bucking trees (same as above)	Same as logging trail.	Same as bucking trees.
- Splitting trees (maul, wedges)	Working too close, overhanging lines	Work in open area.
- Peeling trees (pulaski, draw knife)	Cuts from tools	Place tree in position to work which does not force bending over long periods. Peel sections at a time rather than full length of log. Use prybar or peevee to roll big logs.
- Carrying trees (swede hook)	Back strain, tripping	Lift with legs. Work as a team. Watch where you step. Take you time. Use proper tools.
- Placing Corduroy (gloves)	Back strain, tripping	
- Tying Corduroy (wire, pliers)	Eye injury from wire	Same as above.
- Placing dirt (shovel, wheel barrow)	Back strain, working too close	Work slow and think. Maintain 10 foot working space. Do not turn with wheel barrow.  Use legs. Work in teams of 3.
Fill rock tread with fines using wheelbarrow or gunny sacks.	Back strain, smashed feet, losing control of wheelbarrow	Find your personal weight limit and do not exceed it. Attempt to use barrow site as close to fill area as possible. Take a break when tired. Watch where you are going at all times. Clear trail of unusual obstacles that might upset the wheel barrow. Get help lifting when unloading if load is heavy, have person at dump site with that job. Give right of way to loaded wheel barrow.
Building tread with pick mattox	Back strain, hitting other workers, blisters, glancing blows to shins, legs and feet	Take a break when tired. Watch where you are swinging. Move overhead obstacles that will interfere with swing. Maintain 10 foot working space between people. Have firm footing and be balanced before beginning. Work at a comfortable pace. Wear well fitted gloves to prevent blisters. If they occur take

<p>Drilling holes with gas powered rock drill</p>	<p>Muscle fatigue, noise, dust, burns from exhaust, back strain</p>	<p>immediate first aid. A sharp tool is a safe tool. Have a good file with fileguard to sharpen tools.</p> <p>Pay attention to the individual hole you are working on. Guide the drill at all times. If it binds, don't force it but flip to position. Drill will rotate on steel when bound. Use eye and ear protection, gloves and long sleeve shirt. Be aware of the exhaust as it will become very hot. Have good footing when drilling lift drill from the hole with legs not back. When beginning a new hole use boot to guide steel rather than another persons hand. Examine a rock face for unexploded explosives before beginning to drill. When field grinding steel have secured, use eye protection, gloves. Get help from more experienced crew member.</p>
<p>Environmental hazards</p>	<p>Hunting Season</p>	<p>Hunter orange safety vests will be worn during big game season to increase visibility.</p> <p>Trails with a high concentration of hunters should be avoided during hunting season. These trails, if known, should be completed earlier in the work season to avoid the hazard. If vehicles are present at the trailhead, select another pre-planned trail, if practical.</p>
	<p>Hypothermia</p>	<p>Be aware of potential for hypothermia which usually occurs on a cold, wet, windy day with temperatures at or above freezing. Utilize a rain jacket, if one is at your disposal, to hold in heat and to block the wind.</p> <p>Always anticipate bad weather, dress accordingly, carry warmer clothes, and carry protective gear.</p> <p>Pack extra food items of high calories to supplement between meals.</p> <p>Know the signs: drowsiness, shivers, disorientation, slowness.</p> <p>Carry a radio with you at all times and maintain contact with someone in your vicinity. Be sure to have extra batteries.</p>
	<p>Hot Weather</p>	<p>Carry plenty of water. Drink often.</p> <p>Set a moderate pace and gradually slow down as temperatures increase. Schedule the hardest work during the cooler morning hours.</p> <p>Crew members may want to eat less. High protien and other foods increase metabolic heat production and water loss.</p> <p>As the temperature increases, give crew members needed rest periods to help prevent heat exhaustion. Rest in the shade when possible, and limit or avoid pop intake.</p> <p>Avoid prolonged periods in the sun and use sunscreen when practical.</p>
	<p>Allergies</p>	<p>Advise supervisor, at a minimum, of any allergy problems. Preferably, all members of the crew should know about any problems.</p>

<p><b>Field Work</b></p> <p><b>Vehicle Travel</b></p>	<p><b>Stream Water</b></p> <p><b>Working alone</b></p>	<p>Carry any necessary medication or kits for prevention or minimization of reactions.</p> <p>Do not drink surface water unless treated. Slow-moving water can contain bacteria that will cause uncomfortable stomach problems. If necessary, be sure a swift water flow can be seen for a long distance.</p> <p>Use a water-filtration system if one is available and it is necessary to drink from a natural water source.</p> <p>Sign out at district office. Carry a radio or cell Iphone. Call office if coming in late.</p> <p>Identify all personnel in vehicle, destination, vehicle used and estimated time of return. Radio ahead if wil be late returning to the station. Keep passenger area of vehicle clear of loose objects, and secure items in the bed when practical. Inspect vehicle before leaving the station. Complete monthly PM check on schedule. Wear seatbelts and shoulder harnesses at all times when vehicle is in motion. Defensive driving courses should be attended on a scheduled basis and skills learned should be practiced on a daily basis. Be aware that driving conditions can change abruptly and adjust driving techniques. Do not park vehicle where traffic or logging operations could damage it. Use parking brake when parking on inclines. Check before backing. Choose a clear area, and use a spotter when possible. Avoid if at all possible. Face yor danger when turning around. A flashlight with extra batteries and/or road flares should be kept in the vehicle for emergency use. Turn on headlights for safery measures. Be sure that windows are clean, clear and free of obstructions. The driver is responsible for the safe operation and maintenance of the vehicle.</p>
<p>10. LINE OFFICER SIGNATURE</p>	<p>11. TITLE</p> <p style="text-align: center;"><b>District Ranger</b></p>	<p>12. DATE</p>

Previous edition is obsolete

(over)

