U.S. Department of Agriculture Forest Service JOB HAZARD ANALYSIS (JHA)	WORK PROJECT/ACTIVITY Chainsaw Operations 4. NAME OF ANALYST	2. LOCATION Cheoah Ranger District Tusquitee Ranger District National Forest Ocoee Ranger District Tellico Ranger District Blue Ridge Ranger District Conasauga Ranger District 5. JOB TITLE	Unit National Forest in North Carolina Cherokee National Forest Chattahoochee-Oconee National Forest 6. DATE PREPARED
References-FSH 6709.11 and 12 (Instructions on Reverse)	Peter Myers	AFMO/Chainsaw Coordinator	02/11/2020
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Control	ols *PPE
General Chain Saw Use and Operations	Equipment All PPE should be worn at all times. Personal Protective Equipment (PPE)	 Engineering Controls * Substitution * Administrative Controls *PPE Proper saw for the job: bar length, power head size, chain brake, dogs, chain and proper wedges and felling axe or equivalent. Wear appropriate Personal Protective Equipment (PPE), including: Leather gloves Leg protection (chaps) - chaps shall have 14 inches of cover over the full length of the thigh and overlap the top of the boots by 2 inches. Chaps shall meet the US Forest Service Specifications 6170 – 4F as directed in the FS Health and Safety Code Handbook. Check the tag on the upper left inside hip of the chaps to ensure they meet these specifications. Hardhat approved for saw operations ANSI Z89.1 – 1986. 8" high laced leather boots, sturdy, with skid resistant soles. Long sleeved shirt Eye protection - safety glasses or face shield Hearing protection rated to reduce noise levels to 85dBA First aid kits shall be available at the work site and on eachtransport vehicle. First aid kits available for chainsaw operations should be supplied to handle traumatic injuries. Maintain appropriate Communication at all times: Vehicle radio and hand- held radio's - turned on, appropriate channel selected for location Cell phone – check coverage 	
Carrying Chain Saw	Cuts Falls Burns	Stop saw before carrying. Point bar forward w saw is at the side. Point bar to the rear when the side. Pack and guard bar and dogs when c and check saw as not to be hot and cause bur	then going downhill and the going uphill and the saw is at arrying saw on the shoulder, ns. Maintain minimum 10 feet

Pre-use Inspection	Damage Hazardous Conditions	 walking space between crewmembers. Ensure fuel cap is secure. Know the saw you will be using. Saws vary by brands and models. Check that parts of the saw are securely attached and that no parts are missing or damaged. Make corrections as required. Check the chain condition; sharpen or replace as necessary. Check the bar adjustment and set chain tension as required. Test run the saw and ensure that the chain break and kill switch operate properly.
Fueling Chain Saw	Burns Spillage Fire	Stop the saw when checking fuel or bar oil levels. When refueling fill tank on bare ground or other noncombustible surface. Wipe spilled fuel off saw. Never start saw within 10 feet of the fueling area. Refuel saw at least 20 feet from persons smoking or other potential sources of ignition. Beware of Fuel geysering. The pressurization of fuel in fuel containers that can result in unintended fuel spray when fuel cap is removed.
Environmental Conditions	Darkness	All work shall terminate and each volunteer shall move to a place of safety when environmental conditions create a hazard for the volunteer. No felling at night.
Starting Saw	Kickback Cuts	There are two recognized methods for safely starting a saw - On ground starting and stand starting. In both methods the trigger lock should not be used. Drop Starting is prohibited. Ensure the area is clear of people and hazards. Start the saw with the chain break on. Keep a secure grip on the saw at all times.
Size Up	Obstacles Species Conditions Escape Route's	The first hazard mitigation is analyzing the felling job by considering: (1) Location of people, structures, and power lines. (2)Roads and travel in the cutting area. (3)Topography and steepness of ground. (4)Nearby hazards such as trees, low hanging and dead limbs, rocks, and brush. (5)Primary and secondary escape routes, safety zones and alternatives. (6)Wind direction and speed. (7)Tree species, both live and dead. (8)Tree conditions: diameter and height of tree. (9)Soundness of tree: split, lighting struck, broken off top, rot, deterioration or physical damage to the root system, trunk, stem, limbs, or bark. (10) Lean direction and or limb distribution. (11) Widow makers. (12) Spiked top and/or schoolmarm. (13) Burning top or fire inside cavity. (14) Moisture in the form of rain, snow, or ice. (15) Insect damage trees.
Felling Considerations	Qualifications Space Escape routes Species Tree condition	Train new operators in chain saw use. Never let trainee sawyers operate without constant, direct supervision until they demonstrate the ability to handle the saw independently and proficiently and/or are carded to do so. A sawyer should not work alone. Individual chain saw operators have management support in any situation in which the faller opts toward safety in folling, bucking, and bruching operations. This should be based as higher.

	Lean distribution Weather	individual skill, knowledge and understanding of personal capabilities. The final decision to fell any tree is up to the faller. A secure felling area will be established, with a radius of at least two times the height of the tree to be felled. Escape path and safety zones and alternate path should be 45 degrees from direction of tree fall and in place before first cut is made. Some tree species may split or barber chair worse than others. Slope also will increase risk of tree splitting or barber chairing. Tree conditions and deformities can be very hazardous such as splits, lightning or wind shaken damage, rot or soundness of tree, whether burning interior or top on fire, dead limbs, insect activity, frost cracks, knot, conks or fungi activity, unstable root system, root protrusion and vines all these hazards need mitigation measures taken so tree or trees may be fell safely. Adjust for lean whether it be slight or great, head or side lean, heavy limbs or weight distribution from snow /ice or wind. By using the cross sight or plum bob it will help to adjust amount of lean.
Cutting Alone for Road Debris Removal	Communications Delayed Medical Response	Communication must be established with dispatch (District Office/Gainesville Dispatch, Cherokee Dispatch, or North Carolina District Office/ Asheville). • Task • Location • Estimated time of completion • Contact dispatch when work is finished Radio must be carried <u>On Person</u> during cutting operations Have medical/First Aid Kit readily available either on person or in an easy to access location on vehicle. Reference the USDA Forest Service Saw Operations Guide v 1.3.1
Personal Safety Considerations and Attitude.	Personal Physical Considerations General health and mental considerations Medication or under the influence	Maintain regular fitness with exercise throughout the year. Medical testing when needed. Do not operate a chainsaw with mental or physical impairment including: medication, poor frame of mind, excessive fatigue, etc. Hold safety "tailgate" briefings and sign JHA. Talk about safety for the job at hand.
Maintenance	Missing Equipment Damaged Equipment Saw Not Ready to Use	Return the saw to the saw kit in a ready to use condition Ensure that all equipment is returned to the saw kit (box). This should include: Clean saw with sharp chain Wedges Saw tool Axe Spare chain for the saw Spare chain bar Spark plug

		File for the chainFlat file
		All operators shall be currently certified in First Aid, CPR, and BBP (Bloodborne Pathogens). OSHA 1910.266 App B. First Aid kits and BBP kits MUST be readily available. In case of serious injury or illness, notify office by radio or personal communication device to request for EMS from local agency. Follow EMS protocols. Notify your supervisor as soon as possible of the incident. Use Bloodborne Pathogens precautions. Complete necessary paperwork.
10. LINE OFFICER SIGNATURE	11. TITLE:	12. DATE
DERRICK MORRIS Date: 2021.06.21 16:37:11 -04'00'	Forest Supervisor	6/21/2021

EDWARD HUNTER

ANDREW GASTON

Digitally signed by EDWARD HUNTER Date: 2021.07.14 10:35:23 -04'00'

Digitally signed by ANDREW GASTON Date: 2021.07.12 16:54:46 -04'00'

JHA Instructions (References-FSH 6709.11 and .12)	Emergency Evacuation Instructions (Reference FSH 6709.11)	
The JHA shall identify the location of the work project or activity, the name of volunteer(s) writing the JHA, the date(s) of development, and the name of the appropriate line officer approving it. The supervisor acknowledges that volunteers have read and understand the contents, have received the required training, and are qualified to perform the work project or activity.	Work supervisors and crew members are responsible for developing and discussing field emergency evacuation procedures <i>(EEP)</i> and alternatives in the event a person(s) becomes seriously ill or injured at the worksite. Be prepared to provide the following information:	
 Blocks 1, 2, 3, 4, 5, and 6: Self-explanatory. Block 7: Identify all tasks and procedures associated with the work project or activity that have petential to cause injury or illeges to percented and damage to property or 	 a. Nature of the accident or injury (avoid using victim's name). b. Type of assistance needed, if any (ground, air, or water evacuation) c. Location of accident or injury, best access route into the worksite (road name/number) identified ground/air landmarks. 	
material. Include emergency evacuation procedures (EEP).	 d. Radio frequency(s). e. Contact person. f. Local bazards to ground vehicles or aviation. 	
task/procedure listed in Block 7. For example:	g. Weather conditions (wind speed & direction, visibility, temp).	
a. Research past accidents/incidents	h. Topography.	
 Research the Health and Safety Code, FSH 6709.11 or other appropriate literature. 	j. Estimated weight of passengers for air/water evacuation.	
c. Discuss the work project/activity with participants	The items listed above serve only as guidelines for the development of emergency	
d. Observe the work project/activity	evacuation procedures.	
e. A combination of the above	IIIA and English English Decision Astronomy to the second	
 Block 9: Identify appropriate actions to reduce or eliminate the hazards identified in Block 8. Abatement measures listed below are in the order of the preferred abatement method: a. Engineering Controls (the most desirable method of abatement). For example, ergonomically designed tools, equipment, and furniture. b. Substitution. For example, switching to high flash point, non-toxic solvents. 	JHA and Emergency Evacuation Procedures Acknowledgment We, the undersigned work leader and crew members, acknowledge participation in the development of this JHA (as applicable) and accompanying emergency evacuation procedures. We have thoroughly discussed and understand the provisions of each of these documents: SIGNATURE DATE SIGNATURE DATE	
c. Administrative Controls. For example, limiting exposure by reducing the work schedule; establishing appropriate procedures and practices.	Work Leader	
d. PPE (least desirable method of abatement). For example, using hearing		
protection when working with or close to portable machines (chain saws, rock drills portable water pumps)		
e. A combination of the above.		
Block 10: The JHA must be reviewed and approved by a line officer. Attach a copy of the JHA as justification for purchase orders when procuring PPE.		
Blocks 11 and 12: Self-explanatory.		