

Appalachian National Scenic Trail		1. WORK PROJECT/ACTIVITY Crosscut Saw	2. LOCATION TRAIL WIDE	Includes work performed on lands of National Park Service, and various states' park and lands
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 OSHA (Instructions on Reverse)		4. NAME(S) OF ANALYST(S) Keith Stegall	5. Work Supervisor Various	6. DATE PREPARED 7/11/2023
Required Standards and General Notes:	Must hold current saw certification and be current with CPR and First-Aid certification in order to perform activities. Sawyers may not operate beyond skill level. Sawyers have the obligation to say "no" and walk away from any situation determined to have unacceptable risk. Additional resources include the OHLEC planning logic.			
Required Personal Protective Equipment	Hard hat, Hearing Protection, Long pants, Chaps, Gloves, Eye protection, and Cut-resistant or leather, laced boots that provide ankle support and nonskid soles. Refer to additional PPE that may be associated with specific tasks or activities below.			
Tools and Equipment	Crosscut saw, Sheath, 3-5 lb. Axe with sheath, Plastic or metal wedges, Loggers first aid kit			
Required Training	USFS Thinking Sawyer Chainsaw Safety Training or NPS Chainsaw Training, First-Aid; CPR, TrailSafe! (Operational Leadership) Training			
Optional Additional Equipment	Double bit axe, Crosscut saw lubricant, Under-buck tool, Hanging wedges, Pruning saw, Digging tools			
7. TASKS/PROCEDURES	8. HAZARDS, POTENTIAL HAZARDS / INJURY SOURCE	9. ABATEMENT ACTIONS OR PROCEDURES Engineering Controls * Substitution * Administrative Controls * PPE		
Pre-Operation Inspection	Injury Due to Lack of Training	<ul style="list-style-type: none"> ● Prior to operating chainsaw sawyers are required to take the following trainings: <ul style="list-style-type: none"> ○ USFS Thinking Sawyer Chainsaw Safety Training or NPS Chainsaw Training. ○ First-Aid; CPR ○ TrailSafe! (Operational Leadership) Training. ● Use universal precautions - treat all human body fluids as if they were known to be infectious. 		
	Injury from lack of inspection	<ul style="list-style-type: none"> ● If not familiar with saw to be used, review the owner's operational manual. ● Ensure all covers on the chainsaw are in place and secured, and all screws and bolts tightened. ● Ensure the chain sharp, and free of damage. 		
Transport	Injury from saw in vehicle during transport	<ul style="list-style-type: none"> ● Transport saws and axes with guards or sheathes installed. Secure the saw from movement. ● Cover the cutting teeth with sheath when not in operation. Sheath must cover the full length of the teeth on the saw. 		
	Injury from saw while walking to worksite	<ul style="list-style-type: none"> ● Cover the cutting with sheath when walking to worksite. Sheath must cover the full length of the teeth on the saw. ● Carry saw so cutters/rakers point downhill and away from the body. ● Remove rear handle to prevent snagging. ● Walk last in line if you are the person carrying the saw. 		
General Crosscut Saw Use	Cuts to body, or injuries to eyes	<ul style="list-style-type: none"> ● Wear PPE at all times as described above. ● Handle with teeth facing away from your body. ● Rotate teeth toward your body before handing to another person. 		

		<ul style="list-style-type: none"> • Ensure body position is such that you are not underneath the cutting line of the saw teeth.
	Injury due to miscommunication	<ul style="list-style-type: none"> • Develop cutting plan and communicate plan to co-workers. • Crosscut saws have only one operator who is entirely responsible for sawing even when second sawyer is used. • Must have established means of communication, ie yelling, radio, hand signals, etc. Communication must be clear, concise and understood by everyone involved.
	Injury due to faulty tool	<ul style="list-style-type: none"> • Inspect saw prior to operation. • Must have good working handles. Tighten handles as needed. • Saws must be properly set and sharpened by trained crosscut saw professionals. If you are not trained to sharpen crosscut saws, do not attempt to do so.
	Injury to second sawyer	<ul style="list-style-type: none"> • Second sawyer must be in a safe position. Single buck if in doubt. • Predetermine initial saw direction and who will remove the saw.
Situational Awareness and Size Up		<ul style="list-style-type: none"> • A sawyer will not work alone. • Consider your condition, fatigue, experience, comfort level. • Analyze the cutting area by considering: location of people, structures, power lines, and other obstacles. • Identify travel routes in the cutting area. Consider topography and steep ground. • Identify nearby hazards such as trees, low-hanging and dead limbs, rocks, brush: moisture (rain, snow, ice). • Define primary and secondary escape routes and safe zones. • Know: wind direction and velocity, tree species - both alive and dead, diameter (and height) of trees. Soundness of tree. Lean direction. Widow makers. • Look up and around often. • Through your assessment, develop a plan for the proposed scope of work and communicate the plan with co-workers around you.
Bucking and Limbing	Injury from bucking and limbing	<ul style="list-style-type: none"> • Develop bucking/limbing plan. Communicate plan with coworkers. • Ensure stable footing. • Anticipate binds / tension and compression and plan mitigation. • Initiate cut slowly to observe/read bind. • Use wedges. • Use caution when cutting limbs that support logs off the ground. • Avoid finishing cuts from the downhill side. • On steep ground, try to prevent bucked sections from rolling or sliding. Do not buck logs on steep slopes with people below. • Limb from top of large logs. • Carefully relieve tension on saplings and limbs (spring poles) with a series of small cuts to the compression side.

		<ul style="list-style-type: none"> ● If bucking situation deemed unsafe, use alternate method or cancel task. ● Sound warning for all objects moving downhill.
	Injury from working too closely together	<ul style="list-style-type: none"> ● Space activities so one will not create a hazard for another. ● Ensure adequate traffic control measures are taken on trails ● Develop communication strategy. ● Always stop the saw to let visitors pass. Use spotter when feasible.
Felling	Injury from inadequate planning/preparation	<ul style="list-style-type: none"> ● After determining the project scope, and assessing the tree and its condition, develop a felling plan and communicate plan with co-workers. ● Determine who handles the saw as the tree falls. ● Sawyers must have appropriate certification for felling. ● Ensure you have enough support (i.e. swampers/spotters) for scope of work. ● Temporarily close off access to the public if necessary, and position spotter/guards.
	Injury from felling	<ul style="list-style-type: none"> ● Before initiating undercut, warn nearby personnel that a tree is about to fall. ● Undercut must be clean, no dutchman, and an opening large enough to control the tree to the ground. ● Warn bystanders before beginning back cut and as tree falls. ● Insert a wedge into the backcut as soon as possible. ● Maintain adequate hinge wood for type of undercut used. ● As the tree commits to the undercut, watch the top as you quickly move away from the stump. ● If the tree moves in a direction that compromises your primary safety route, use the alternate. ● Watch for falling tops and limbs for at least 30 seconds. Give an "All Clear!" shout when it is safe for personnel to return to cutting site. ● Do not leave a partially cut tree without the marking the safety circle and warning others. ● Do not fell during high winds, electrical storms, or other hazardous weather. ● Do not conduct felling if the top of the tree, intended lay, or escape route is obscured by darkness, smoke, fog, or any other obstruction, or when wind can affect the control of the fall of the tree. ● When situations are deemed unsafe, alternate methods shall be used or the task cancelled. ● Always wear required PPE.
10. OFFICIAL SIGNATURE Kurt Speers	11. TITLE Chief Ranger	12. DATE

Previous edition is obsolete

(over)

JHA Instructions (References-FSH 6709.11 and .12)

The JHA shall identify the location of the work project or activity, the name of employee(s) involved in the process, the date(s) of acknowledgment, and the name of the appropriate line officer approving the JHA. The line officer acknowledges that employees have read and understand the contents, have received the required training, and are qualified to perform the work project or activity.

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 potential to cause injury or illness to personnel and damage to property or material. Include emergency evacuation procedures (EEP).

Block 8: Identify all known or suspect hazards associated with each respective task/procedure listed in block 7. For example:

- a. Research past accidents/incidents.
- b. Research the Health and Safety Code, FSH 6709.11 or other appropriate literature.
- c. Discuss the work project/activity with participants.
- d. Observe the work project/activity.
- e. A combination of the above.

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.
- c. Administrative Controls. For example, limiting exposure by reducing the work schedule; establishing appropriate procedures and practices.
- d. PPE (least desirable method of abatement). For example, using hearing protection when working with or close to portable machines (chain saws, rock drills, and 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.

Emergency Evacuation Instructions (Reference FSH 6709.11)

Work supervisors and crew members are responsible for developing and discussing field emergency evacuation procedures (EEP) and alternatives in the event a person(s) becomes seriously ill or injured at the worksite.

Be prepared to provide the following information:

- 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), identifiable ground/air landmarks.
- d. Radio frequencies.
- e. Contact person.
- f. Local hazards to ground vehicles or aviation.
- g. Weather conditions (wind speed & direction, visibility, temperature).
- h. Topography.
- i. Number of individuals to be transported.
- j. Estimated weight of individuals for air/water evacuation.

The items listed above serve only as guidelines for the development of emergency evacuation procedures.

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
