



Risk Assessment Worksheet



1. Project/Work Activity: Ax Use	2. Location: White Mountain National Forest
3. Specific Objective: Limbing, bucking and clearing trail.	4. Name and Title of Preparer: Saco, Andro and Pemi Trails Trails/Wilderness Staff; Al Hilshey - Safety Manager
5. Date Prepared/Updated: Friday, March 15, 2024	

6. Risk Decision Authority: The risk decision authority block should be signed after the worksheet is completed. Use the Risk Decision Authority matrix to determine the authorization required to sign in block 6.

Signature:	Title: Forest Supervisor	Date:
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Identify Hazards		Assess Hazards			Develop Controls	Make Risk Decisions				Implement
7. Task	8. Hazard	9. Hazard Probability	10. Severity	11. RAC	12. Identify hazard mitigations & controls (press [alt + enter] to add a line)	13. Hazard Probability	14. Severity	15. RAC	16. Task Necessary?	17. Hazard Control Assigned to:
Emergency Preparedness	Lost, missing, or overdue employee	Possible	Critical	High	Follow unit check-in/check-out protocols. Ensure a communications device (radio, SPOT, cell phone) and backup are available. Employees shall be trained in use. Carry a GPS with extra batteries. Carry survival gear appropriate for conditions (map, first aid kit, head lamp, food, water, extra clothing, knife or multi-tool). Weather should be checked before every trip, and a determination made whether or not the trip is necessary.	Rare	Moderate	Low		All Personnel
Emergency Preparedness	Delayed or inadequate emergency response to illness or injury due to no emergency planning	Possible	Catastrophic	Extremely High	All work projects must have a documented emergency medical plan. Employees shall be briefed on protocols and procedures before work begins. Implement periodic scenario training / discussion to increase employee awareness. Employees shall be certified in First Aid / CPR. An appropriate first aid kit must be immediately available.	Rare	Critical	Moderate		All Personnel
Training and Certification	Injury or damage to tools due to lack of training	Likely	Critical	Extremely High	USFS Ax Training is required prior to Ax use or maintenance. Felling techniques are NOT part of USFS Ax Training. S-212 Chainsaw Training or Crosscut Saw Training teach appropriate felling techniques and are required for any tree falling.	Unlikely	Critical	Moderate		All Personnel
Carrying an Ax	Injury - cuts, Damage to equipment	Possible	Moderate	Moderate	Secure sheathed ax to pack when possible. When carrying by hand, always carry tools on your downhill side so that in the event of a slip, trip or fall, the tool is easily released and out of harm's way. Always use sheathes for carrying axes and when not in use.	Unlikely	Moderate	Low		All Personnel

Ax - Sharpening, Hanging and Maintenance	Injury (cuts, eyes, contusions, strains) due to use of unmaintained tools	Possible	Critical	High	Inspect equipment and tools prior to use. Ax should be clean and free of rust and pitch. Ax should be sharp. Use appropriate techniques to sharpen axes. Sharpen tools to appropriate specifications being aware of suggested bevels, gauges, and measurements. Wear appropriate PPE-long pants, leather boots, gloves and eye protection with side shields (Z87.1 rated), when sharpening. Files must be used with handle guards.	Unlikely	Moderate	Low		All Personnel
Transporting Axes in Vehicles	Cuts, struck by injuries, damage to equipment	Possible	Critical	High	Sheath and secure axes during transport. Do not transport in the passenger compartment of vehicles. Do not lay other equipment or tools on top of axe.	Rare	Negligible	Low		All Personnel
Inspecting the worksite	Failure to identify hazards - struck by injuries, crushing injuries, damage to equipment	Likely	Catastrophic	Extremely High	<p>Size up the work site as a team to identify potential hazards - look up during size up and wear PPE:</p> <ul style="list-style-type: none"> -Escape routes. -Slope of work site. -Rocks or objects on or under logs to be bucked. -Overhead hazards (snags, widow makers...) -Limits of personal ability and equipment. -People and property in the chopping zone. -Spring poles. -Falling or rolling root wads. -Binds, tension and compression in log where cuts are -planned. Logs tendency to roll, slide or bind. Broken limbs under log that could hook ax user if log rolls. -Footing and traction issues depending on rain, snow, etc. Maintain situational awareness, continually assess and communicate. 	Rare	Catastrophic	Moderate		All Personnel

Ax Use - Preparation	Injury - cuts, eye injuries, strains, crushing injuries, struck by injuries; Damage to equipment	Likely	Critical	Extremely High	<p>Always wear appropriate Personal Protective Equipment including leather boots, hard hat and safety glasses with side shields (Z87.1 rated). Shin guards should be considered for inexperienced ax users, and must be worn if required by a supervisor. Gloves are not required for chopping because bare hands afford a better grip on axes which leads to better control.</p> <p>Prior to ax use, always inspect axes for damage and, if needed, replace with an ax that is in good condition, customized for the user. Check handles and ax heads for proper tightness, bent shafts, and identify axes in need of repair. Loose ax heads and cracked handles are not safe to use. Axes should always be properly sharpened for use. Handle length and shape should be customized for user. Double-bit axes and chopping alone require supervisor approval for all users.</p>	Unlikely	Critical	Moderate		All Personnel
Ax Use - Preparation	Injury - cuts, eye injuries, strains, crushing injuries, struck by injuries; Damage to equipment	Likely	Critical	Extremely High	<p>Be aware of your surroundings and keep a safe distance (following "circle of danger" guidelines) from others when using hand tools. Also be aware of those around you that are using axes. Use extra caution when limbing trees. Keep the tree between you and the limb. Always keep two hands on your ax and avoid the temptation to hold brush out of the way with one hand and cut with another. Use the right tool for the job. Having small hand clippers and a folding saw will help you do so.</p>	Unlikely	Critical	Moderate		All Personnel
Ax Use - Technique	Struck by injuries, cuts, impalement, amputation, injuries to joints, damage to equipment	Likely	Critical	Extremely High	<p>Check for overhead hazards. Clear the area of any branches, etc. that may interfere with your swing, physically or visually or that may pose a hazard while chopping, i.e. dead limbs that may shake loose while chopping. When using an ax, never break the plane (Merriam-Webster Definition of PLANE : a surface in which if any two points are chosen a straight line joining them lies wholly in that surface of the ground) with the ax handle; keeping your knees flexed will aid in this. Aim the bit of the ax to achieve a 45 degree angle perpendicular to the tree to avoid glancing. Never throw tools.</p>	Unlikely	Critical	Moderate		All Personnel

Ax Use - Technique	Struck by injuries, cuts, impalement, amputation, injuries to joints, damage to equipment	Likely	Critical	Extremely High	Special considerations for "root axes": although not maintained to be as sharp as the average ax used for chopping, root axes should always be as sharp as possible. Techniques should mirror above techniques however when chopping roots in the ground it is impossible to "never" break the plane of the ground with the ax handle therefore extra caution should be taken. Using a slower, wider, more flexed stance helps with this as well as routinely cleaning cutting area as well as ax bit so one can maintain accuracy by having a good view of the roots needing to be removed as well as the cutting edge.	Unlikely	Critical	Moderate	All Personnel
Removing Spring Poles	Struck by injuries	Likely	Catastrophic	Extremely High	Remove spring poles before limbing and chopping tree. Cut only when necessary. Is there a limb, log or other obstruction pinning the spring pole that can be removed to release the tension. Work from a safe location, identify escape routes, stay out of the line of fire. When making cuts to relieve tension use a pruning saw. Go slow! Allow spring pole to respond to cuts. Make a series of small cuts on the tension or compression side. Go Slow! Know your limits. Get help from a more experienced sawyer if needed.	Rare	Catastrophic	Moderate	All Personnel
Clearing Blowdown	Lack of planning, failure to identify escape routes, crushing injuries, impalement, struck by, cuts	Likely	Catastrophic	Extremely High	Know your limitations. Identify and clear escape routes prior to starting the cut. When chopping uprooted trees do not stand behind or downhill from root plates/wads; ensure area is clear of bystanders + other workers. Remove small trees growing on root plates before limbing and bucking. Leave limbs that may be preventing log from rolling. Finish cut from uphill side if safe. Warn co-workers when release cut is about to be made. Beware of tension side during release. Never approach clearing operations from down hill.	Unlikely	Critical	Moderate	All Personnel
Field Work	Fatigue	Possible	Moderate	Moderate	Rest when needed, stay hydrated, eat for performance. Use proper techniques to minimize fatigue.	Unlikely	Moderate	Low	All Personnel

Field Work - Ergonomics	Poor biomechanical position resulting in immediate acute or long-term chronic injury that affect muscles, nerves, tendons, ligaments, joints, cartilage, blood vessels or spinal discs of the body.	Possible	Critical	High	<p>Be aware of and consider the best correct position to avoid:</p> <ul style="list-style-type: none"> • CTDs (cumulative trauma disorders) • RSIs (repetitive stress or repetitive strain injuries) • RMIs (repetitive motion injuries) • Overuse syndrome <p>Warm up parts of the body that will be most used in the job. Avoid awkward and static positions, static loads and sustained exertion, repetition, contact stress, extreme temperatures, and vibration. Consider job rotation, more staffing, more rest breaks, slower work pace, and altering work methods.</p>	Unlikely	Negligible	Low		All Personnel
Placing an Ax when not in use	Tripping hazard, cuts, loss of equipment	Possible	Moderate	Moderate	When not chopping, axes should be sheathed and placed out of the way and in clear view.	Unlikely	Moderate	Low	YES	All Personnel

REVIEWED BY:

SIGNATURE

DATE

SIGNATURE

DATE

