

U.S. Department of Agriculture Forest Service	1. WORK PROJECT/ACTIVITY CHAINSAW, CROSSCUT & HANDTOOL USE	2. LOCATION Flathead National Forest	3. UNIT Spotted Bear R.D.
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)	4. NAME OF ANALYST Dave Arbach	5. JOB TITLE Forestry Technician	6. DATE PREPARED 01/03/2011
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE	
Power Tool Use (Chainsaw, winch, auger, brush saw) (22.48) (22.48c) (22.48d) (22.48e)	Injury	<ul style="list-style-type: none"> - Power tools will only be used by trained personnel over the age of 18 - 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 - The crew working with a power tool operator must never approach unannounced - Always approach from above on inclines - KEEP AT LEAST TWO-TREE LENGTHS BETWEEN YOU AND THE FELLER - Keep a safe distance from an operating brush saw as it can throw material nearly 25 feet - Protective equipment must be worn at all times when operating a power tool (Hardhat, goggles and/or face shield, hearing protection, chaps, 8" high boots, a long sleeve shirt and gloves) - Operators must be aware of the presence and location of other personnel and must yell out when a tree is coming down - Lookouts must be posted when necessary - Not recommended to operate a chainsaw alone - a ten person first aid kit is required to be carried during all saw operations. - All potential sawyers should be checked out by the supervisor prior to power tool use - If using a chainsaw winch, be sure to position self in a safe location - Individual saw operators have the obligation to say "NO" and walk away from any situation they determine to be an unacceptable risk - Proper bar length is important for the specific work project - Space employees and organize their duties so that the actions of one do not create hazards for others -Do not drop trees at night 	
Chainsaw Handling Techniques (22.48f)	Cuts	<ul style="list-style-type: none"> - Carry the chainsaw in a way to prevent contact with the chain, muffler, or bucking spikes - Point the bar forward when going downhill with the chainsaw at your side - Point the bar backward when going uphill with the chainsaw at your side - When carrying a saw on your shoulder, take extra care due to the sharpness of the chain and "dogs". Wear a long-sleeved shirt, gloves, and a shoulder pad. Cover the bar and chain. 	

		<p>guard is recommended</p> <ul style="list-style-type: none"> - Set the saw at idle speed and activate the chain brake when carrying a saw for short distances - Shut off the saw when carrying it more than 50 feet, or in hazardous conditions, such as slippery surfaces, heavy under-brush or crossing streams and others bodies of water
Starting/Operating Chainsaws (22.48f)	Cuts	<ul style="list-style-type: none"> - MAINTAIN A SECURE GRIP ON THE SAW AT ALL TIMES - WHEN RUNNING A CHAINSAW MAKE SURE YOUR THUMB IS IN THE PROPER POSITION, wrapped around the bar - DO NOT "DROP START" A CHAINSAW - In general, throttle up to full speed before letting the chain contact the wood - In general, do not throttle down before the cut has been completed - Avoid cutting with the power head positioned between the waist and shoulders, which is considered a danger zone - DO NOT CUT WITH THE POWER HEAD POSITIONED ABOVE SHOULDER HEIGHT - Always use both hands when operating the saw
Fueling Chainsaws (22.48f)	Burns	<ul style="list-style-type: none"> - Allow the saw to cool at before refueling - Fill the tank on bare ground or other noncombustible surface - Immediately clean up spilled fuel / use a funnel - Refuel outdoors and at least 20 feet from an open flame or other sources of ignition - Start the saw at least 10 feet from the fueling area
	Kickback	<ul style="list-style-type: none"> - All chain saws must have a chain break - Training for cutting techniques - Check for anything that may interfere with saw while cutting - Know proper procedures for starting
	Felling	<ul style="list-style-type: none"> - Clear work area and escape route - Face cut 1/4 to 1/3 diameter of tree – NEVER CUT ALL THE HOLDING WOOD - Visually check top of tree for over head dangers (Widowmakers)
	Weather	<ul style="list-style-type: none"> - Do not drop trees if the wind is strong or changing directions - Wear proper clothing
Hand Tool Use (41.13) (41.21)	Cut Toes and Limbs	<ul style="list-style-type: none"> - STANDING ON A LOG TO CHOP IS NOT RECOMMENDED - DO NOT LIMB ON THE SAME SIDE OF THE TREE YOU ARE STANDING, LIMB ON THE OPPOSITE SIDE - KEEP A SAFE WORKING DISTANCE, AT LEAST 10 FEET APART - NEVER CARRY CHOPPING TOOLS ON YOUR SHOULDER - Carry the tool on the downhill side so that it can be more easily discarded in case of a fall, and this will prevent you from falling on the

<p>Tool Maintenance (41.21)</p>	<p>Flying rock fragments Sharp edges</p>	<p>tool</p> <ul style="list-style-type: none"> - INSPECT WOODEN HANDLES FOR SPLITTING, CRACKING, CHECKING, WARPING, AND SLIVERS, AND FOR LOOSE HEADS, DO NOT USE A TOOL WITH THESE PROBLEMS - DISCARD OR REPAIR DAMAGED OR ABUSED TOOLS PROMPTLY - SEPARATE and red flag DAMAGED TOOLS FROM OTHER TOOLS - Never throw tools under any circumstances, throwing tools can damages the handles resulting in blisters or broken handles. - When a tool is not in use, shield any sharp edges and place the tool in a predetermined location, away from personnel - When transporting tools to and from the job site, ensure that sharp edges are guarded - REMOVE ALL OVERHEAD OBSTRUCTIONS THE TOOL MIGHT STRIKE OR HANG UP IN BEFORE SWINGING A CHOPPING TOOL - Never transport loose tools inside the same compartment with employees unless the vehicle is equipped with a protective screen, net, or secured station toolbox - Chop with both feet on the same side of the tree - Do not allow two people to chop together on the same tree - For all chopping and digging tool use wear proper clothing (see above) - Bean boots (rubber bottoms, leather uppers) may be worn in very wet weather or muddy conditions - NEVER CHOP TOWARDS YOUR FEET - Do not swing tools toward your body - DO NOT ALLOW THE TOOL HANDLE TO DROP BELOW A PLANE THAT IS PARALLEL WITH THE GROUND UNLESS CHOPPING ON THE OPPOSITE SIDE OF A TREE FROM WHERE YOUR BODY IS POSITIONED - If the cutting edge picks up a wood chip, stop. Remove the chip before continuing - Be aware of foot position - MAINTAIN PROPER GRIP ON CHOPPING TOOLS TO PREVENT THE TOOL FROM GLANCING - Wear proper clothing and eye protection - Clear other personnel from the area - Wear gloves and use controlled strokes when sharpening - Firmly secure tool when sharpening - Sharpen with file moving away from blades/teeth - When filing, use a file equipped with a handle and knuckle guard - Keep tools sharp to help prevent bounce backs - Provide and use sharp files and training in sharpening - When grinding, grind slowly away from the cutting edge, avoid overheating the metal - DO NOT SHARPEN TOOLS WITH A GRINDER WITH OUT EYE
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Crosscut Saw Use (22.48h)	Crosscut Saw Injuries	<p>& EAR PROTECTION, GLOVES AND A CHEST PROTECTOR.</p> <p>DO NOT POSITION YOUR LEG UNDER THE CROSSCUT WHILE SAWING, CUTS COULD RESULT</p> <ul style="list-style-type: none"> - Keep in communication with your partner at all times about holding wood, binds, limbs, and knots that might affect safety - NEVER reach across a moving crosscut - Pick up the saw with teeth away from your body. Rotate the teeth toward your body before handing the crosscut to another employee - When attaching handles, keep the teeth away from your body and secure a firm grip on the saw - When using a two-person crosscut saw for bucking, ensure that any person placed downhill is in a safe position. If it is not certain that the downhill partner would be in a safe position, single buck from the uphill side - When using a two-person crosscut saw for falling, always predetermine who will remove the saw - Ensure hands are in proper position on the crosscut handles - Proper stance - Think before you cut - Eliminate obstacles in work area - Keep sheath on saw when not in use - Keep teeth out of dirt and rocks to maintain sharpness - Use wedges to prevent saw from becoming pinched - When situations are deemed unsafe, use alternate methods or cancel the task
Crosscut Transport - personnel (22.48h)	Cuts	<ul style="list-style-type: none"> - Remove the rear handle when transporting a crosscut on your shoulder. If left on, the rear handle will catch on trees and branches. - Balance the crosscut on your shoulder with the sheath on the crosscut and the teeth facing away from your neck - Carry the saw on the downhill side - Walk last in line if you are the person carrying the crosscut saw
Transporting Crosscuts On Pack Animals (22.48h)	Stock Injury	<ul style="list-style-type: none"> - SELECT THE MOST GENTLE ANIMAL TO CARRY THE CROSSCUT AND PLACE THAT ANIMAL AT THE FRONT OF THE PACK STRING - When transporting a crosscut on a pack animal, take extra care. Adequately guard and secure the saw - WHEN TRANSPORTING A TWO-PERSON CROSSCUT, DO NOT BEND THE CROSSCUT AROUND AND CROSS THE HANDLES, THE CROSSCUT COULD BREAK - Center the crosscut on the pack animal draped over both packs, tie both handles to the packs and also tie the center of the crosscut to the highest point on one of the packs - ENSURE THAT THE WING NUTS ARE TIGHTENED IN THE HANDLE OF THE CROSSCUT SO THE HANDLE DOES NOT

General

Physical Exhaustion

- COME LOOSE FROM THE CROSSCUT ON THE PACK ANIMAL
- MONITOR THE PACK ANIMAL TO ENSURE THE SAW AND LOAD REMAIN SECURE IN PLACE
- Duct tape can be placed on the crosscut handle pins to prevent the handles from coming loose during transport on pack stock.
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- Pace yourself
- Know your limitation
- Report for work in reasonable physical shape

10. LINE OFFICER SIGNATURE

11. TITLE

12. DATE

District Ranger

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) writing the JHA, the date(s) of development, and the name of the appropriate line officer approving it. The supervisor 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 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 frequency(s).
- e. Contact person.
- f. Local hazards to ground vehicles or aviation.
- g. Weather conditions (wind speed & direction, visibility, temp).
- h. Topography.
- i. Number of person(s) to be transported
- j. Estimated weight of passengers 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
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Work Leader	

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