

U.S. Department of Agriculture Forest Service	1. WORK PROJECT/ACTIVITY Crosscut Saw Operations - bucking, limbing & felling	2. LOCATION USFS - Forest Wide	3. UNIT Region 6			
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)	4. NAME OF ANALYST Back Country Horsemen of Washington	5. JOB TITLE BCHW Safety Committee		6. DATE PREPARED March 2017		
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE		10. POST ABATEMENT ACTION RISK RATING (Severity/Probability Matrix)		
				Severity	Probability	Risk Code
General Crosscut Saw Operation	Serious potential injury during crosscut saw operation to sawyer(s), crew members or public trail users	Maintain Required Qualifications: Crosscut saw operation certification in accordance with FSM 2358 Must operate within the limits of certification First aid / CPR certification		III - Marginal	D - Seldom	4 - Low
Personal Protective Equipment (PPE)	Serious potential personal injury from falling limbs, flying debris, or sharp tools	Operators are responsible for having proper PPEs: Hard hat, eye protection, gloves, long sleeve shirt, long pants, and boots Boots must be leather or cut-resistant, with non-skid soles and have ankle support See PPE FSH 6709.11,21,13 First aid kit located on the jobsite OSHA standard 1910.266 App. A.		III - Marginal	D - Seldom	4 - Low
Tailgate Safety Meeting	Communication between Trail Work Leader and crew members is important to avoid injuries	Trail Work Leader and crew members must participate in a Tailgate Safety Briefing at the start of the project. See Tailgate Safety Guide Crew members MUST fill out a Medical Declaration Form Discuss communication procedures Discuss Emergency Action Plan (EAP) Discuss tasks and procedures for the project Sawyers MUST NOT work alone		IV - Negligible	E - Unlikely	4 - Low
Travel to worksite	Potential personal injury during transport of sharp crosscut saw(s) and trail tools	Use covering sheath for crosscut blade Use tool guards for trail tools Use proper transport for saws and tools carried on trail stock Foot traffic must travel 10 feet apart. Carry crosscut saw with teeth facing outward from your body Remove rear handle of saw when walking to worksite		III - Marginal	D - Seldom	4 - Low

Equipment	<p>Potential personal injury with improper use of sharp crosscut saw(s) and trail tools</p> <p>Cuts and lacerations</p>	<p>Follow safety, operation and maintenance recommendations for crosscut saws</p> <p>Have on hand an axe, wedges, maul, or single bit axe</p> <p>When not cutting always have the crosscut teeth protected and away from workforce</p>	IV - Negligible	D - Seldom	4 - Low
Worksite	<p>Potential worksite injuries must be discussed between Trail Work Leader and trail crew before project starts</p> <p>Overhead hazards</p> <p>Down logs in escape route</p> <p>Brush and limbs in worksite</p> <p>Log movement during cutting</p> <p>Slippery and uneven worksite</p>	<p>Make worksite hazard assesment prior to sawing.</p> <p>Check for overhead hazards and NEVER work under overhead hazards.</p> <p>Determine escape routes</p> <p>Clear area around work site of hazards</p> <p>Pay close attention to footing</p> <p>Pay close attention to log movement during cutting</p> <p>Post lookouts to alert trail users moving through the area</p>	IV - Negligible	D - Seldom	4-Low
Worksite Safety	<p>Potential worksite injuries must be discussed between Trail Work Leader and trail crew throughout the project</p> <p>Log movement during and after cutting</p> <p>Cut piece track after cutting</p>	<p>Space workers so the activities of one will not create a hazard</p> <p>Workers not essential for the project must keep outside the safety circle</p> <p>Except for sawyers have workers work on the same contour rather than some working above others</p>	IV - Negligible	D - Seldom	4 - Low
	<p>Potential personal injury from rain, snow and / or wind conditions</p>	<p>Do not saw in the dark or under hazardous weather conditions</p>			
Crosscut Operation	<p>Serious potential personnel injury during improper crosscut sawing techniques</p> <p>Binds trapping crosscut saw</p> <p>Log drop when cutting limbs</p> <p>Rolling log pieces</p> <p>Splintering saplings and limbs</p> <p>Not notifying a NO-GO decission</p> <p>Hazardous trail conditions left for other trail users</p>	<p>Anticipate log tensions and compressions, then plan mitigation</p> <p>Use caution when cutting limbs supporting logs off the ground</p> <p>Use caution when sawing on the downhill side of a log especially a second sawyer on a crosscut saw.</p> <p>Do not saw logs on steep slopes with workers below</p> <p>Carefully relieve tension on saplings and limbs before cutting</p> <p>Asses all potential hazards using GO/NO-GO checklist</p> <p>Never leave a hazardous situation, such as a half cut or hung up log</p>	IV - Negligible	C - Occasional	4 - Low

Cut Plan	<p>Serious potential personnel injury during crosscut sawing from unplanned log movement</p>	<p>Mitigate cut sequence for potential binds based on bearing points and lie of log  Determine mechanics of removing the cut pieces  Execute cut plan  Brief swampers  Remove springpoles first  Observe kerf closely to determine if behavior of log corresponds to predicted bind  Insert wedges on compression side as soon as possible  When double-bucking, move second sawyer from offside for the release cut</p>	I V – Negligible	D - Seldom	4 – Low
Communications	<p>Critical information must be available for personnel in case of an injury</p> <p>Delays in getting prompt medical aid for seriously injured</p>	<p>Trail Work Leader must have a Trailhead Communication Plan (TCP) and an Emergency Action Plan (EAP) for the trail crew.  Communication equipment as specified in TCP  If trail crew divides into multiple teams, a copy of the TCP and EAP must accompany each team.  Two-way radios and / or mobile phones for communication between separate teams  Check in and check out before and after project in accordance with TCP  If an EAP is activated contact BCHW and land management agency</p>	III - Marginal	D - Seldom	4 – Low
Felling Operations	<p>Serious potential injury to sawyer(s), crew or public trail users</p> <p>Struck by snags, down trees, widow makers</p> <p>Rot on the stump affecting holding wood</p> <p>Tripping/struck due to poor escape route</p>	<p>SIZE UP (Situational Awareness)  From a short distance, walking 360 degrees around tree, look up for widow makers, conk, slipping bark. Don't move from the escape route towards the felled tree until all movement has stopped. Detect solid or sponge wood by "sounding" with falling axe.  If needed bore into stump looking for coloring in the sawdust  Always look for and clear out escape routes 45 degrees away from tree.  Walk out both the escape route and where the tree is to be felled looking for such hazards as snags, down logs, jill pokes, rocks, stumps, hang ups and low hanging limbs  Situational Awareness/Individual Complexity Form</p>	I - Catastrophic	D - Seldom	2 - High

Securing Felling Area

Serious potential injury to sawyer(s), crew or public trail users  
  
Potential fatal injury to sawyer(s), crew or public trail users

The faller has the responsibility and authority to identify, secure, and manage the felling area.  
A MINIMUM OF 2-1/2 TIMES THE HEIGHT OF MATERIAL BEING FELLED IN ALL DIRECTIONS MUST BE SECURED.  
No one shall be allowed in the secured felling area without the authorization of the faller  
In addition on the entire downhill side will be included in the secure area on hillsides with steep slopes where material can roll for long and unpredictable distances  
A safety zone will be established outside the secured area and everyone must remain there until all felling is completed and the "all clear" has been given by the faller  
One person shall be appointed and responsible to maintain reliable communications with the faller and the crew members in the safety zone to ensure nobody enters the secured felling area  
A road or trail guard will be set up on all roads and trails entering and leaving the secured felling area  
Effective communications must exist between the guards and the faller  
Before leaving the felling area the faller needs to ensure that no hazards remain such as hang ups, unusable logs, or other dangers  
To protect the lives of employees, contractors, and the public it is the responsibility of the faller to see that these standards are firmly adhered to  
It is the responsibility of the supervisors and all employees engaged in chainsaw operations to understand and follow these established standards

I – Catastrophic

D – Seldom

2 – High

<p>Felling Cut</p>	<p>Serious potential injury to sawyer(s), crew or public trail users</p> <p>Serious fatal injury to sawyer(s), crew or public trail users</p>	<p>Make the horizontal cut of the face 1/3" the diameter of the stump</p> <p>Always match the sloping cut and horizontal cut together, use 2" stump shot (this means make the back cut 2" higher than the horizontal cut</p> <p>Look up as you make all cuts to tree</p> <p>Use a wedge on all back cuts unless the tree has a heavy lean, or the tree is too small to insert a wedge.</p> <p>Use adequate felling axe for felling</p> <p>Always look up after each time of wedge has been driven into tree</p> <p>Be aware of wind direction and speed</p> <p>Always leave a minimum of 2" of holding wood across the stump.(DEPENDING ON THE SIZE OF TREE BEING FELLED AND OR CONDITION OF TREE BEING FELLED)</p> <p>Do not cut corner wood</p> <p>Always give a warning shout before you start the back cut, NEVER BE AFRAID TO SAY NO</p>	<p>1 – Catastrophic</p>	<p>D – Seldom</p>	<p>2 – High</p>
<p>10. LINE OFFICER SIGNATURE</p> <p><i>Kelley Young</i></p>		<p>11. TITLE</p> <p>BCHW President</p>	<p>12. DATE</p> <p>3.17.17</p>		

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