

<p>U.S. Department of Agriculture Forest Service</p>	<p>1. WORK PROJECT/ACTIVITY <b>Crosscut Saw Use</b></p>	<p>2. LOCATION <b>Prather</b></p>	<p>3. UNIT <b>0515</b></p>
<p>JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)</p>	<p>4. NAME OF ANALYST</p>	<p>5. JOB TITLE</p>	<p>6. DATE PREPARED <b>03/2016</b></p>
<p>7. TASKS/PROCEDURES</p>	<p>8. HAZARDS</p>	<p>9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE</p>	
<p>Use of Crosscut Saw to remove trees from a project area or trail</p>	<p>Head Injuries, Eye Injuries, Cuts, Abrasions, Puncture Wounds, Falling Objects,</p>	<p>Only as trained to do so. PPE: Hardhats, Eye protection, pants, LS- shirt, Cut resistant or Leather Boots 8" high, non-skid soles, Gloves), and Chaps (optional). First Aid Kit with Infectious Exposure Control large enough for the amount of people on the project.</p>	
<p>Saw Pack Equipment Required</p>	<p>Dull saw/improperly sharpened- can cause various injuries: muscle strains, lacerations, aggravation/fatigue.</p> <p>The lack of proper equipment can lead to safety hazards and problems, possibly injuries.</p> <p>Too free a saw pinched in the kerf: Chopping hazards—glance off flying tool serious Injury, flying pieces of wood and or metal slivers</p>	<p>-Sharp saw: crosscut- only professional to sharpen and tune; Crosscut saws must have proper covering sheath for all the cutting teeth, and must be sheathed when not in use. <u>CROSSCUT SAW PACK</u> -Job Hazard Analysis - Communication/Evacuation Plan - Bucking or Felling Saw -sheath must cover all teeth - Limbing Saw -8" blade min.- for limbing or aid in stuck saw rescue - Falling Axe (3-5lb) with sheath or double bit axe/pulaski and single - jack hammer (drive wedges and chop out the saw when pinched) - 6 Wedges min. various sizes— keep saw from becoming pinched, and to aid in various saw cutting situations and techniques - Shovel —various uses, dig out under the tree - Saw Lube/Cleaner —deisel, desolve it, orange cleaner, keep debris and pitch off saw reduce fatigue in operators - Extra Pin and Wing Nut for Saw Handle — in case of loss to finish cut - First Aid Kit/Infectious Exposure Kit - Bastard Mill File — sharpen Axe - Adjustable Pliers —to tighten or remove handle - Standard Screwdriver (to tighten one man saw "D" Handles) - Orange Flagging/Permanent Marker - to mark any hazards left - Steel Wool — cleaning pitch from saw</p>	
<p>Carrying the Saw</p>	<p>Injury from saw teeth /cuts, Falling – from loss of footing, balance, or saw catching an obstacle</p>	<p>Carry the saw so that the teeth point away from the body. Carry the saw on the downhill side of the trail or slope. As stated above the crosscut saw must have a sheath covering . ALL cutting teeth and rakers. Use the sheath while transporting the saw. When carrying the crosscut saw unsheathed, before cutting or between cuts, grip the saw firmly with both hands. Keep the cutters pointed away from one's body and be cautious. When carrying saw for long distances remove handles to avoid getting caught on obstacles and lessen the "flapping" motion. Keep a safe distance from other crew members</p>	

<b>(Crosscut Saw Use cont'd)</b>		
<b>Saw Transportation, Vehicle</b>	<b>Injury from exposed teeth or loose equipment</b>	Do not transport the saws in the passenger compartment along with people. Do not lay other equipment on the crosscut saw. The saw must be secured in a way to keep it from coming unbound if it is not secured laying flat.
<b>Bucking, Limbing Trees</b>	<b>Lacerations from sheathing the saw and removing the sheath</b>  <b>Injury from falling trees, limbs, logs</b>  <b>Flying Debris</b>  <b>Injury from rolling logs or dislodged rocks</b>	<p>A crosscut saw must be at least two feet longer than the diameter of the tree or trees being cut.</p> <p>Keep a safe working distance so that the activities of one will not create a hazard for another. Dangerous trees should be marked (orange flagging) and an adequate safety zone should be determined and clearly identified to all crew members to stay clear. Those not essential for the project will keep outside of the determined safety zone. Ensure adequate traffic control measures are taken on roads and trails to ensure the safety of all travelers in the area.</p> <p>Establish a means of communication: yelling, radio, hand signals, etc. Communications must be clear, concise and understood by everyone involved.</p> <p>Establish escape routes and clear them before starting to cut.</p> <p>Plan your cuts, and prepare the area removing debris, tools or gear that may cause injury or blockage to an escape or rolling operation. Important to remove limbs flush to log when necessary to roll log out of trail for ease of rolling, and to prevent any clothing or gloves becoming snagged on log and possibly causing some kind of either minor or serious injury.</p> <p>Never make a finishing bucking cut from the downhill side of a tree or log.</p>
10. LINE OFFICER SIGNATURE <i>Janet Laporte</i> Dep	11. TITLE <b>District Ranger</b>	12. DATE <b>4.11.16</b>

Previous edition is obsolete

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U.S. Department of Agriculture Forest Service	1. WORK PROJECT/ACTIVITY Trail Maintenance	2. LOCATION Sierra National Forest	3. UNIT High Sierra RD
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)	4. NAME OF ANALYST Adam Barnett	5. JOB TITLE Wilderness Manager	6. DATE PREPARED 2/29/2016
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE	
Traveling in forested country	Injury from falling branches Pokes in eyes from chips or branches Slip, trips, and falls Falls from unstable ground Exposure to weather Hypothermia	Leave plenty of room between crew members when walking (at least 10'). Let person behind you know if branches will snap back. Keep crews out of steep country with unstable soils during hazardous conditions such as heavy rainfall or severe winds. Be cautious on wet plant material on steep slopes. Stay off of ridgetops during thunderstorms – go to low lying area, away from the tallest protrusions, such as the tallest trees and rocks. Wear warm waterproof gear in rain or snow storm.	
Carrying and using tools	Cuts from sharp tools or blisters Shards of rock in eye or shins	Keep tool guards on tools while transporting them Use gloves while carrying, using or sharpening tools. Wear safety glasses if using axe, chopping tool, double jack or rock hammer. Wear PPE (gloves, hard hat, long sleeve shirt, long pants, boots that cover ankle).	
Lifting	Back strains, pulled muscles, injuries to feet from dropping heavy objects	Good communication with all members of the lifting group to avoid strain on any one individual. Use PPE. Lift with legs and not with back. Do not exceed your personal ability. Careful of slippery footing if working in wet conditions or streams. Use lifting aids; bars, fulcrum, etc.	
Building or maintaining rock walls or other rock structures	Injuries to back Injuries from falling rock Fly rock Injuries to feet or hands moving big rocks	Avoid working under each other if working on a slope to avoid falling rock. Good communication with all members of the lifting group to avoid strain on any one individual. Wear PPE to avoid injury from flyrock while chinking or breaking up rocks. Shout "Rock" if a rock comes loose on a slope and starts to roll – even if it appears noone is below. Use rock bars to move big rocks. Keep all hands away from pinch points when using rock bars.	
Building or maintaining bridges or trail structures with logs or lumber	Back strains, pulled muscles, injuries to feet from dropping heavy objects. Splinters, stepping on nails	Use PPE. Lift with legs and not with back. Do not exceed your personal ability. Careful of slippery footing if working over a stream. Remove all nails from old lumber if dismantling an old structure. Keep 10' distance from each other when preparing walking surfaces on foot logs to avoid injury from swinging axes and adze.	
Cleaning & repairing waterbars	Cuts from tools, back strains, back strains, pulled muscles Foot injuries from dropped rocks	Use gloves while using or sharpening tools. Wear safety goggles or glasses if using axe, chopping tool or rock hammer. Good communication with all members of the lifting group to avoid strain on any one individual. Wear proper PPE (leather boots, gloves, goggles, long pants, long sleeve shirt, hard hat.)	
Brushing	Pokes in eyes from chips or branches. Injury from falling branches	Wear hardhat and goggles when cutting limbs above your head. Leave plenty of room between crew members when walking. Let others know if branch will snap back. Wear safety glasses. Wear gloves and leather boots.	

Logging out trail	Cuts from tools, back strain, flying chips. Possibility of getting hit with rolling logs	Avoid working under each other if working on a slope to avoid rolling logs. Good communication with all members of the lifting group to avoid strain on any one individual. Wear protective clothing and eyewear to avoid injury from chips (check saw JHA). Place sharp tools away from job when ready to move logs. Do not exceed your personal ability. Careful of slippery footing if working over a stream. Use lifting aids; bars, fulcrum, lever.
Maintenance or construction of a stream crossing	Injuries to back Back strains, pulled muscles, injuries to feet from dropping heavy objects. Hypothermia	Use extreme caution while in the stream to assure good footing. Avoid working in streams when in flood stages. Schedule stream work when flows are at a minimum. Use close-toed boots when working in water.
Traveling between worksites in the backcountry.	Getting lost while traveling, or need to evacuate area.	Ensure that all members of the group have access to a map and know how to use it. Each member should be aware of location of quickest route to a trailhead or communication source to call in a rescue if needed. Before groups divide into separate work groups, ensure that all members understand where they're going and when and where to meet others, and that each group has a radio. Identify possible confusing junctions/areas and clarify directions. When traveling in remote backcountry, ensure that all members carry minimum basic supplies to survive a night if separated from group or stock support – including water, jacket, hat, matches, basic first-aid gear.
All Maintenance work	Unidentified safety hazards	Stay in constant communication. If any member of the group feels that something is unsafe, or sees warning signs of a problem, SPEAK UP!!! Talk to each other when working, and watch out for other members' conditions... watch for dehydration, hypothermia, unsafe work habits, dangerous natural conditions.

10. LINE OFFICER SIGNATURE <i>Janah Lapht</i>	11. TITLE Deputy District Ranger	12. DATE 3.3.16
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Previous edition is obsolete

(over)

 U.S. Department of Agriculture Forest Service  	1. WORK PROJECT/ACTIVITY  All field work	2. LOCATION  Sierra National Forest	3. UNIT  High Sierra RD	
	4. NAME OF ANALYST  Raul Moreno Jr.	5. JOB TITLE  Assistant Manager, OHV	6. DATE PREPARED  12/01/2015	
7. TASKS/PROCEDURES		8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE	
DRIVING TO THE JOBSITE		Dusty, winding, narrow roads, rocky or one-lane roads, in an unfamiliar vehicle, stormy weather, near confused tourists, angry or irritated, turning around on narrow roads, sick or medicated; on wet or slimy roads, animals on road	Drive confidently and defensively at all times. Go slow around corners, occasionally clearing the windshield. Stay clear of gullies and trenches, drive slowly over rocks. Yield right-of-way to oncoming vehicles---find a safe place to pull over. Check brakes, steering, seatbelts, fluid levels, lights. Use maintenance checklist in vehicle logbook. Inquire about conditions before leaving the office. Be aware of oncoming storms. Drive to avoid accident situations created by the mistakes of others. Attitude adjustment; change the subject or work out the problem before driving the vehicle. Let someone else drive. Safely turn out with as much room as possible. Know what is ahead and behind the vehicle. Use a backer if available. Let others on the crew know you do not feel well. Let someone else drive. Drive slow and safe, wear seatbelts. Drive slowly, watch for other animals nearby.	
COMMUNICATION  RADIO COMMUNICATION: - ROUTINE COMMUNICATION		No communication due to dead spots from terrain and/or weather. No communication due to malfunction of radio. Nobody in office to receive check-ins on weekends, early and late in season, or after work hours in the evening. Emergency Situation (Accidents: major and minor)	Make sure radio is working before you leave the station. Assure that batteries are charged. Carry a "clam shell" with fresh batteries in the rig for a back up. Sign out in office with destination and return times. Check in during the day. Schedule someone to receive check-in on the weekends. Make sure they know your itinerary. In the field, make sure you know where "dead spots" are and find locations where radio can transmit. Relay messages through lookouts if/when required. When checking in during the day, include your present location, determine when the next check-in time is and where you will be located.	
- EMERGENCY SITUATION		Accident: major and minor	Keep calm. Size up the situation. Contact dispatch and report on conditions. Administer first aid based on medical qualifications. Secure and preserve the scene. Identify the Incident Commander and advise dispatch. Maintain communications and provide dispatch with periodic updates. Use clear text, clear, concise, and to-the-point messages. DO NOT relay names of victims over the radio. Request additional resources through dispatch.	

<p>- CHECK-IN</p>	<p>Dead spots, radio failure, no communication, accidents</p>	<p>For dead spots: move around and find a place to transmit. You may need to walk/drive up out of a valley, or simply walk down the road a way. If there is a failure to communicate, try changing batteries or using a different radio. Set up procedure with the district office in case an accident prevents you from calling in, (for example, if two scheduled check-ins are missed, a search will be initiated). If an employee fails to call in or return on schedule, the Supervisor shall take appropriate follow-up action.</p>
<p>FACE-TO-FACE</p>	<p>Safety, crew unity</p>	<p>Talk to each other. Let other crewmembers know when you see a hazard. Avoid working near known hazard trees. Yell "ROCK!" if you see one start to roll down the hill. Always know the whereabouts of fellow crewmembers. Review Emergency Evacuation Procedures (see below).</p>
<p>WALKING AND WORKING IN THE FIELD</p>	<p>Falling down, twisted ankles and knees, poor footing</p>	<p>Always watch your footing. Slow down and use extra caution around logs, rocks, and animal holes. Extremely steep slopes (&gt;50%) can be hazardous under wet or dry conditions; consider an alternate route. Wear laced boots with a minimum 8" high upper and non-skid Vibram-type soles for ankle support and good traction (no holes, cuts, or tears).</p>
	<p>Falling objects</p>	<p>Wear your hardhat for protection from falling limbs and pinecones, and from tools and equipment carried by other crewmembers. Stay out of the woods during extremely high winds.</p>
	<p>Damage to eyes</p>	<p>Watch where you walk, especially around trees and brush with limbs sticking out. Exercise caution when clearing limbs from tree trunks. Advise wearing eye protection. Ultraviolet light from the sun can be damaging to the eyes; look for sunglasses that specify significant protection from UV-A and UV-B radiation.</p>
	<p>Bee and wasp stings</p>	<p>Watch for respiratory problems. Notify dispatcher and get person to a doctor immediately if there is trouble breathing. Gently scrape stinger off of one if present. Apply analgesic swab and a cold pack if possible, and watch for infection. Flag the location of any known nests and inform other crewmembers. Advise packing an inhaler and Benadryl or Epi-pen if you are prone to severe allergic reaction.</p>
	<p>Ticks and infected mosquitos</p>	<p>Wear long sleeve shirts. Tuck pants into socks/boots. Visually check each other for ticks while in the field. Check yourself carefully at home at day's end. If a tick is imbedded in you:</p>

ENVIRONMENTAL HEALTH CONSIDERATIONS

Handtools: Protection from cuts, flying debris

Cutting yourself or other's on sharp surfaces

Heat Stress/Exhaustion

Severe Environmental Heat Loads Dehydration

Wet Bulb Globe Temperature (WBGT) Index

\*Get the tick out with tweezers or fingernails using a quick tug.  
\*Wash the infected area and monitor for a red rash.

Following PPE is required for handtool use: 1.) appropriate gloves 2.) 8-10 inch high laced boots 3.) longsleeved shirt 4.) Approved hardhat 5.) eye protection  
Maintain a safe working distance.  
Proper signing and visibility vest on high traffic volume roads  
Consider flag person if needed.  
Place roadguards with a communication system in place. Post "crew working" signs along the roadway at specific points.

Remain constantly aware of the four basic factors that determine the degree of heat stress (air temperature, humidity, air movement, and heat radiation) relative to the surrounding work environmental heat load.

Know the signs and symptoms of heat exhaustion, heat cramps, and heat stroke. Heat stroke is a true medical emergency requiring immediate emergency response action.

NOTE: The severity of the effects of a given environmental heat stress is decreased by reducing the work load, increasing the frequency and/or duration of rest periods, and by introducing measures which will protect employees from hot environments.

Maintain adequate water intake by drinking water periodically in small amounts throughout the day (flavoring water with citrus flavors or extracts enhances palatability). Some overhydration is strongly recommended.

Allow approximately 2 weeks with progressive degrees of heat exposure and physical exertion for substantial acclimatization. Acclimatization is necessary regardless of an employee's physical condition (the better one's physical condition, the quicker the acclimatization).

Tailor the work schedule to fit the climate, the physical condition of employees, and mission requirements.

- a. A reduction of work load markedly decreases total heat stress.
- b. Lessen work load and/or duration of physical exertion the first days of heat exposure to allow gradual acclimatization.
- c. Alternate work and rest periods. More severe conditions may require longer rest periods and electrolyte fluid replacement.

Curtail or suspend physical work when conditions are extremely severe (see attached Heat Stress Index).

Compute a Wet Bulb Globe Temperature Index to determine the level of physical activity (take WBGT index measurements in a location that is similar or closely approximates the environment to which employees will be exposed).  
WBGT THRESHOLD VALUES FOR INSTITUTING PREVENTIVE MEASURES  
80-90 degrees F Fatigue possible with prolonged exposure and physical activity.  
90-105 degrees F Heat exhaustion and heat stroke possible with prolonged

ENVIRONMENTAL HEALTH CONSIDERATIONS  
CONT'D...

exposure and physical activity.  
105-130 degrees F Heat exhaustion and heat stroke are likely with prolonged heat exposure and physical activity.

Cold Extremes

Cover all exposed skin and be aware of frostbite. While cold air will not freeze the tissues of the lungs, slow down and use a mask or scarf to minimize the effect of cold air on air passages.

Additional measures to avoid cold weather problems are:

- a. Dress in layers with wicking garments (those that carry moisture away from the body) and a weatherproof slicker. A wool outer garment is recommended.
  - b. Take layers off as you heat up; put them on as you cool down.
  - c. Wear head protection that provides adequate insulation and protects the ears.
  - d. Maintain your energy level. Avoid exhaustion and over-exertion which causes sweating, dampens clothing, and accelerates loss of body heat and increases the potential for hypothermia.
  - e. Acclimate to the cold climate to minimize discomfort.
  - f. Maintain adequate water/fluid intake to avoid dehydration.
- Wind chill greatly affects heat loss (see attached Wind Chill Index).

Wind

Avoid marking in old, defective timber, especially hardwoods, during periods of high winds due to snag hazards.

EMERGENCY EVACUATION PROCEDURES  
(EEP)

Illness/Injury

Activate EMS  
Refer to Emergency Evacuation Instructions on the next page.  
Render first aid to sick or injured until relieved by a higher-level medical responder. Do not abandon the patient.  
Use Blood borne Pathogen precautions.  
Use care when moving patients and transporting the injured.  
Maintain communications.  
Notify your supervisor.  
Complete necessary paperwork.

10. LINE OFFICER SIGNATURE

*Samh Caputo*

11. TITLE

*Dep* District Ranger

12. DATE

*12.9.15*

Previous edition is obsolete

*DAN LUND* ~~12/16/15~~ *12/18/15*

(over) *Samh Caputo* *12/18/15*



U.S. Department of Agriculture Forest Service		1. WORK PROJECT/ACTIVITY Wilderness Travel	2. LOCATION Sierra National Forest	3. UNIT High Sierra R.D.
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)		4. NAME OF ANALYST	5. JOB TITLE Wilderness Ranger	6. DATE PREPARED 3/2016
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE		
Environmental Hazards (cont'd) (H&SCH p. 50- 33)	Lightning and Thunderstorms (H&SCH p. 50 – 42)	1) Don't use radios or phones 2) Put down tools 3) Turn off generators and electrical equipment 4) Don't handle flammable materials in open containers 5) Stay in your vehicle 6) Move away from water tanks, ponds, lakes, streams. 7) Avoid ridgetops, hilltops, meadows/wide open spaces. rock out-crops, sheds/shelters in exposed locations and avoid grouping people together 8) Move away from horses and stock 9) If feel an electrical charge, if hair stands on end or skin tingles, a lightning strike may be imminent. 10) Avoid tall objects –lone trees. If in open area, best to make self as small as possible. Insulate yourself from the ground while crouching on your tip toes hold yourself into a ball.		
	Cold Exposure/ Hypothermia	Know the causes, signs and symptoms. The 3 components of weather that affect cooling of the body core are: temperature, moisture and wind. Avoid exposure. Stay dry, change into dry clothes if possible, get out of wind, stay active, prevent dehydration by drinking warm water, and eat balanced meals.		
10. LINE OFFICER SIGNATURE <i>Sarah Lepelt</i>		11. TITLE District Ranger	12. DATE 4.11.16	




\* H&SCH = Health & Safety Code Handbook 12/1999 version




<p>U.S. Department of Agriculture Forest Service</p>	<p>1. WORK PROJECT/ACTIVITY Wilderness Travel</p>	<p>2. LOCATION Sierra National Forest</p>	<p>3. UNIT High Sierra R.D.</p>
<p>JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)</p>	<p>4. NAME OF ANALYST</p>	<p>5. JOB TITLE Wilderness Ranger</p>	<p>6. DATE PREPARED 3/2016</p>
<p>7. TASKS/PROCEDURES</p>	<p>8. HAZARDS</p>	<p>9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE</p>	
<p>Environmental Hazards  (H&amp;SCH p. 50- 33)</p>	<p>Change in weather</p>	<p>Be prepared. Obtain or listen to an updated weather forecast before going out into the field/backcountry. Carry necessary gear and equipment, or make plan adjustments. Dispatch announces forecast at 11am and 4pm daily.</p>	
	<p>Heat exposure/ Exhaustion/Dehydration</p>	<p>Be alert during periods of continued extreme temperatures. Know and watch for signs of heat- stress disorders. Adjust by setting a moderate work pace, take frequent breaks in cool locations if possible, always have an adequate supply of drinking water and stay hydrated by drinking frequently. Bathe or wash daily to keep pores and hair clean. Wear hardhat, and lightweight, loose fitting clothing to prevent sunburn and allow air circulation.</p>	
	<p>Sunburn</p>	<p>Minimize exposure by using sunscreen, hat, sunglasses (must have 100% UV protection), lip balm (with sunscreen), longsleeves, pants, and utilize shade when possible.</p>	
	<p>Altitude sickness</p>	<p>Know the signs and symptoms. Preventative measures include making a slow ascent, taking frequent breaks to avoid excessive fatigue, eating foods high in carbohydrates for energy, and maintaining hydration by drinking fluids.</p>	
	<p>Water Treatment</p>	<p>There are several ways to treat water for consumption: Boil 3 to 5 minutes, use a water filter, or chlorine treatment drops. Follow directions on alternative methods of water treatment other than boiling. Treat all water sources.</p>	
	<p>(continued)</p>		

<p>U.S. Department of Agriculture Forest Service</p>	<p>1. WORK PROJECT/ACTIVITY Wilderness Travel</p>	<p>2. LOCATION Sierra National Forest</p>	<p>3. UNIT High Sierra R.D.</p>
<p>JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)</p>	<p>4. NAME OF ANALYST</p>	<p>5. JOB TITLE Wilderness Ranger</p>	<p>6. DATE PREPARED 3/2016</p>
<p>7. TASKS/PROCEDURES</p>	<p>8. HAZARDS</p>	<p>9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE</p>	
<p><b>Wilderness Travel</b>  (H&amp;SCH p. 10 – 6)</p>	<p><b>Working Alone</b></p>	<p>Never travel alone or work in isolated areas without an emergency plan including evacuation procedures, radio with extra batteries, compass and map. Leave an itinerary of planned trip with supervisor and family which includes : destinations, planned routes of travel and approximate date and time of return. Check in and out with dispatch in the morning and evening on a daily basis in the field.</p>	
	<p><b>Disorientation or becoming lost</b></p>	<p>Plan ahead, go over routes with entire crew, 'buddy-up' Keep calm don't panic. Contact dispatch for assistance. Don't walk aimlessly, try to orient yourself with gps or map/compass Select a sheltered area, prepare a camp and stay there. Gather fuel before dark. Put out visual markers if available.</p>	
	<p><b>Personal Protective Equipment</b></p>	<p>Personal Protective Equipment (PPE) required: 1) 1st Aid Kit 2) Map and compass 3) Matches or fire starter in weatherproof container 4) Water purifier 5) Food for 1-3 days if planning a single day trip 6) Flashlight with extra batteries and bulb 7) Two-way radio, cell phone, or similar communication device 8) Eye protection (100%UV) and sunscreen 9) Lightweight shelter and appropriate clothing for climatic condition 10) additional PPE identified in JHA</p>	
		<p>(Continued)</p>	

U.S. Department of Agriculture Forest Service	1. WORK PROJECT/ACTIVITY Wilderness Travel	2. LOCATION Sierra National Forest	3. UNIT High Sierra R.D.
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)	4. NAME OF ANALYST	5. JOB TITLE Wilderness Ranger	6. DATE PREPARED 3/2016
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE	
Wilderness Travel (continued)			
Backpacking/ Hiking	Poor fitness/health problems (H&SCH p. 50-13)	Physical fitness. Stretch and warm up muscles before throwing on a 50lb pack and hiking over rough terrain for 10 miles!	
	Twisted ankles/ strained muscles	Watch footing while hiking on uneven terrain and slippery rocks in creek crossings.Pace yourself, take breaks, drink fluids, and re-fuel (eat) to help prevent fatigue. Use care when lifting pack by using leg muscles, setting pack on rock or stump, or recruiting help from a crewmember.	
	Blisters/footcare (H&SCH p. 10 – 50)	Wear proper fitting boots. Wear clean, quality socks for cushioning, wicking moisture, reducing friction, for insulation, and comfort. Recognize and treat 'hotspots' before they blister.	
	(Continued)		

\* H&SCH = Health & Safety Code Handbook 12/1999 version

 U.S. Department of Agriculture Forest Service   <b>JOB HAZARD ANALYSIS (JHA)</b> References-FSH 6709.11 and -12 (Instructions on Reverse)	<b>1. WORK PROJECT/ACTIVITY</b>  RADIO COMMUNICATION	<b>2. LOCATION</b>  Sierra National Forest	<b>3. UNIT</b>  High Sierra RD
	<b>4. NAME OF ANALYST</b>  K.Thompson	<b>5. JOB TITLE</b>  FPT	<b>6. DATE PREPARED</b>  12/18/2015
<b>7. TASKS/PROCEDURES</b>	<b>8. HAZARDS</b>	<b>9. ABATEMENT ACTIONS</b> Engineering Controls * Substitution * Administrative Controls * PPE	
Routine Communication	No communication due to dead spots from terrain and weather. No communication due to malfunction of radio. Nobody in office to receive check-ins on weekends, early and late in season, or after work hours in the evening.	<ul style="list-style-type: none"> <li>Make sure radio is working before you leave the station. Assure that batteries are charged. Carry a "clam shell" with fresh batteries in the vehicle for a backup. Sign out in office with destination and return times. Check in during the day. Schedule someone to receive check-in on the weekends. Make sure they know your itinerary. In the field, make sure you know where "dead spots" are and find locations where radio can transmit. Relay messages through lookouts if/when required. When checking in during the day, include your present location, determine when the next check-in time is and where you will be located.</li> </ul>	
Emergency Situation	Accidents: major and minor	<ul style="list-style-type: none"> <li>Keep calm. Size up the situation. Contact Modoc Interagency Command Center (MICC) and report on conditions.</li> <li>Administer first aid based on medical qualifications.</li> <li>Secure and preserve the scene.</li> <li>Identify the Incident Commander and advise MICC. Maintain communications and provide MICC with periodic updates.</li> <li>Use clear text, clear, concise, and to-the-point messages.</li> <li>DO NOT relay names of victims over the radio.</li> <li>Request additional resources through MICC.</li> </ul>	
Check-In	Dead spots, radio failure, no communication, accidents, Spot devices	<ul style="list-style-type: none"> <li>For dead spots: move around and find a place to transmit. You may need to walk/drive up out of a valley, or simply walk down the road a way.</li> <li>If there is a failure to communicate, try changing batteries or using a different radio.</li> <li>Set up procedure with the district office in case an accident prevents you from calling in, (for example, if two scheduled check-ins are missed, a search will be initiated).</li> <li>If an employee fails to call in or return on schedule, the Supervisor shall take appropriate follow-up action.</li> <li>If there are known dead spots in the area of travel carry a Spot device as necessary. Spot devices are beneficial to your safety and others. Discuss use of Spot with supervisor.</li> <li>Learn how to use a Spot device before taking it into the field.</li> </ul>	
<b>10. LINE OFFICER SIGNATURE</b>  		<b>11. TITLE</b>  Dep District Ranger	<b>12. DATE</b>  12.18.15

 U.S. Department of Agriculture Forest Service   <b>JOB HAZARD ANALYSIS (JHA)</b> References-FSH 6709.11 and -12 (Instructions on Reverse)	<b>1. WORK PROJECT/ACTIVITY</b>  Snag awareness	<b>2. LOCATION</b>  Sierra National Forest	<b>3. UNIT</b>  High Sierra RD
	<b>4. NAME OF ANALYST</b>  Raul Moreno Jr.	<b>5. JOB TITLE</b>  Assistant Manager, OHV	<b>6. DATE PREPARED</b>  12/03/2015
<b>7. TASKS/PROCEDURES</b>		<b>8. HAZARDS</b>	
SNAG AWARENESS		<b>9. ABATEMENT ACTIONS</b> Engineering Controls * Substitution * Administrative Controls * PPE	
Green Trees- root rot, strong wind, rotor wash, ground saturated, species, size, weekend top(dead)		Hard hat with PPE must be worn when scout out work areas. Be alert for environmental conditions that could increase risk of falling trees (strong/gusty winds, steep slopes etc.).  If an identified tree cannot be safely removed from a work area and it presents a hazard, the area will be flagged off at a safe distance and an alternate mitigation used. Communicate the identified hazard, move to a safe area. Identify lean, limb weight, size, loose limbs and or bark, dead tops in green trees, direct crews away from snag patches.	
Fire Damaged Trees- species, size, soundness, rolling rocks or logs from above, dead limbs, direction of lean, wind direction and velocity		Leave good spacing between snags (two and a half times the height of the tree). Leave a spotter at the snag to warn crews, or flag extremely well.  A snag or weekend green tree can fall in any direction(360 degrees). Keep communications on location of snags and observe your work area always review snag awareness guidelines annually during refresher training.	
Dead Trees- snag patches(bug kill and frost kill), direction of limbs, roads and travel in the area, location of people, escape routes, loose limbs or bark, amount of rot, rotor wash.		current and previous fire damage, split or broken top, widow makers, and other hazard tree indicators.  If the identified tree cannot be safely removed and presents a hazard, the area will be flagged off at a safe distance and an alternate mitigation used.	
<b>10. LINE OFFICER SIGNATURE</b> 		<b>11. TITLE</b> District Ranger	
		<b>12. DATE</b> 12.8.15	

Previous edition is obsolete

(over)

<p>U.S. Department of Agriculture Forest Service</p>	<p>1. WORK PROJECT/ACTIVITY Campsite Selection</p>	<p>2. LOCATION Sierra National Forest</p>	<p>3. UNIT High Sierra R.D.</p>
<p>JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)</p>	<p>4. NAME OF ANALYST</p>	<p>5. JOB TITLE Wilderness Ranger</p>	<p>6. DATE PREPARED 03/2016</p>
<p>7. TASKS/PROCEDURES</p>	<p>8. HAZARDS</p>	<p>9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE</p>	
<p>Campsite Selection ( H&amp;SCH p. 50-51 spikecamp selection)</p>	<p>Rock slides/avalanches</p>	<p>Don't camp below boulder fields, or areas of known or possible rock slides</p>	
	<p>Unsound trees or limbs falling  See publication: Minn. Depart. of Nat. Res. &amp; USDA Forest Service. 1996. How to Recognize Hazardous Defects In Trees. USDA Forest Service NA-FR-01-96</p>	<ul style="list-style-type: none"> <li>• Know how to identify hazard trees. Inspect campsite for hazard trees. Look for:                             <ul style="list-style-type: none"> <li>a. Dead wood and/or branches</li> <li>b. Cracks or deep splits in the tree</li> <li>c. Weak branch unions / Split tops</li> <li>d. Decay / Fungus</li> <li>e. Cankers</li> <li>f. Root problems / Soil lifting</li> <li>g. Disease or insect damage</li> <li>h. Poor tree architecture</li> </ul> </li> <li>• Don't camp under or near trees that have been determined to be hazardous</li> </ul>	
	<p>Flooding (H&amp;SCH p. 50-44)</p>	<p>Choose a site above creek high water mark; stay out of dry creek beds, swells or depressions</p>	
	<p>No or poor radio reception</p>	<p>Avoid camping in areas with no radio contact with dispatch Perform a radio check with dispatch and know where you have radio contact before an emergency happens Inform dispatch if you will be in a "dead zone" and plan your next radio check with them Make sure everyone knows how to operate the radio Always have extra batteries</p>	
	<p>Contaminated Water (H&amp;SCH p. 50-55)</p>	<p>Choose a camp with available water source nearby. Consider all undeveloped water sources unsafe for drinking and either boil the water for 5-10 minutes or use a water purifier that removes particles 1 micron or less in diameter</p>	
	<p>Poor sanitation</p>	<p>Washing for general health, and help prevent food poisoning from contamination.</p>	
	<p>Dehydration</p>	<p>Carry water and water purifier. Don't wait until thirsty to drink, by then probably already dehydrated Drink water throughout the day; urination should be occurring at least every 2 hours to be considered hydrated.</p>	
	<p>Bear Visits (H&amp;SCH p. 50-29)</p>	<p>Bears are attracted to food, dirty pots/pans and garbage. Keep a clean camp, use proper storage techniques/containers. Set up sleeping areas at least 100 ft. From where food and kitchen is stored. Don't eat in or around sleeping area, and store toiletries such as toothpaste, soap, chapstick and deodorants with the food as well.</p>	
<p>10. LINE OFFICER SIGNATURE <i>Garth Laplante</i></p>		<p>11. TITLE District Ranger</p>	<p>12. DATE 4.11.16</p>

*Dep.*