

U.S. Department of Agriculture Forest Service	1. WORK PROJECT/ACTIVITY Heritage-Site Steward Field Inspection, Site Visitation and Field Trips		2. LOCATION Santa Fe National Forest	3. UNIT Supervisor's Office
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)	4. NAME OF ANALYST Jason McInteer		5. JOB TITLE SFNF Assistants Forest Arch	6. DATE PREPARED 6/1/2016
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE		
DRIVING TO AND FROM SITES AND TRIP AREAS	Dusty, winding, narrow roads Rocky or one-lane roads Stormy weather Turning around on narrow roads Off-road driving	Check brakes, steering, seatbelts, fluid levels, lights. Drive confidently and defensively at all times. Drive slow, safe, and at posted speed limits on roadways. Wear seatbelts. 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. Be aware of oncoming storms. Drive to avoid accident situations created by the mistakes of others. Safely turn out with as much room as possible. Know what is ahead and behind the vehicle. Use a backer if available.		
	Preventive Maintenance	Keep vehicle properly maintained, maintain repair equipment (jack, spare, traffic reflectors), carry a cell phone, and use ATL/AATL check-in/check-out procedure.		
	When angry or irritated	Attitude adjustment; change the subject or work out the problem before driving the vehicle. Let someone else drive.		
	Tired, Sick or Medicated	Do not drive when drowsy. Let others on the crew know if you do not feel well or a taking medication which may make have an effect on your driving ability. Let someone else drive.		
	Animals on road	Drive slowly, watch for other animals nearby.		
WALKING IN THE FIELD	General attire and goods	Wear a hard hat when appropriate; wear proper footwear and protective clothing, carry a first-aid kit; maintain good physical health, get adequate rest, eat high energy foods		
	Falling down, twisted ankles and knees, poor footing	Always watch your footing. Slow down and use extra caution around logs, rocks, wet terrain and animal holes. Extremely steep slopes (>50%) can be hazardous under wet or dry conditions; consider an alternate route.		
	Getting Lost/Disoriented	Be aware of where you are and always know how to get back to your vehicle at all times, carry a GPS, a compass, and a map of the area, carry a cell phone and/or be within voice contact with others.		
	Working alone	When authorized by the Forest Archaeologist to work alone check-out/check-in with the ATL/AATL; leave location information and schedule with trusted friend or family member; be "situationally aware" of potential hazards; carry a cell phone, a citizen's band radio or (if permitted) a Ham radio to maintain contact; carry personal protective equipment (PPE) and appropriate emergency equipment to deal with situations on your own.		
	Damage to eyes	Watch where you walk, especially around trees and brush with limbs sticking out. Exercise caution when clearing limbs from trees trunks (and watch out for other crew members behind you). Advise wearing eye protection. Ultraviolet light from the sun can be damaging to your eyes, use sunglasses that specify significant protection from UV-A and UV-B radiation.		
	Weather and aerial	Look up, look down and look all around to observe potential wind hazards fall and other aerial		

	hazards	hazards; avoid walking under or near trees with dead branches; be aware of unpredictable win events resulting from local thunderhead formation; when wind is excessive leave area; in areas of recent wildfire or prescribed burning wear hard hat at all times; be aware of local storm conditions and possibility of flash floods; do not walk in inactive stream or erosional channels during periods of intense local weather.
WILDLIFE, INSECTS, PLANTS	Poisonous Snakes	<p>Poisonous Snakes, Spiders, and Scorpions: Rattlesnakes, copperheads, and coral snakes are poisonous snakes known as pit vipers. They have vertically elliptical (egg-shaped) pupils and a heat-sensing pit midway between the eyes and nostrils on each side of a triangularly shaped head. The coral snake (also poisonous) may be identified by this rule of thumb: Red bands bordered by yellow (or white) indicate a venomous animal; thus, "Red on yellow, kill a fellow; red on black, venom lack." This rule applies to all coral snakes native to the United States.</p> <ol style="list-style-type: none"> 1. Learn what poisonous snakes (if any) are native to the area you will be working in. 2. Learn how to identify whether or not a snake is poisonous. If unsure, treat all snakes as poisonous. Study field guides or text book illustrations of indigenous venomous snakes (ex. 01). 3. Do not assume a young snake is not poisonous, because venomous snakes are capable of inflicting a fatal bite from birth. <p>Precautions for Working in Snake Country: When working in snake-infested areas:</p> <ol style="list-style-type: none"> 1. <i>Wear high top boots (just below the knee is preferred) and/or protective snake-proof leggings.</i> Use a hiking stick. 2. Although snakes are deaf, they have a good sense of smell and vision and are very sensitive to ground-conducted vibrations. Since they are defensive animals and rarely attack, they remain immobile or attempt to retreat if given the opportunity. When going through thick underbrush, be alert. Walk slowly and give snakes ample time to move out of the way. 3. Be particularly watchful in areas obscured by foliage or near ledges when walking or climbing in rocky country. Snakes have excellent camouflage ability so train your eyes to see their shape and coloration. 4. Walk on clear paths as much as possible. Be careful where placing your feet and hands at all times. 5. Probe areas with a hiking stick or long-handled tool before stepping over logs or piles of brush or debris. 6. Use a long bar or pole for moving material and timbers that have been stacked or piled. Never put your hands under any stored material and be especially cautious when moving rocks. <p>First Aid for Snake Bites: Snake bites in the United States are rarely fatal when medical care is sought early and appropriate antivenin is readily available.</p> <ol style="list-style-type: none"> 1. Avoid panic. 2. Immobilize the bitten extremity and obtain medical assistance. 3. If you are alone when bitten, walk slowly, resting periodically and using a makeshift crutch if the lower extremity is involved. Again, keep activity to a minimum.
	Bears	<p>Try to avoid contacts by:</p> <ol style="list-style-type: none"> 1. Making noise: Most bears will avoid people and leave an area when they know people are in present. Making noises allows the bear to move away before a confrontation occurs. Making noise: talking, singing, whistling, yodeling, or wear bells all help to let bears know you are coming. 2. Finding safety in numbers: Travel with someone else and avoid hiking at night.

		<p>3. Keep your Dogs Under Control- Roaming dogs can easily disturb a bear and may lead an angry bear back to you. In National Parks, dogs must be leashed and are not allowed on trails.</p> <p>4. Not attracting bears with odors from: food, grills & fire pits used for cooking, stoves, fishing tackle, ice chests/coolers, trash, wash basins, cosmetics, toiletries, beverage containers, perfumes, soaps.</p> <p>5. Avoiding high use areas</p> <p>6. You can avoid encounters with bears by avoiding areas that they like. If you cannot avoid these areas, be extra careful when traveling through them. Bears like you travel on saddles, ridges, game trails and along water. They feed on carcasses whenever they can find them and like vegetation that grows in wet areas. They often rest in cool, dark, thick forest. If you find a carcass or their den, backtrack immediately and quickly. Do not investigate. Do not force a bear to defend it's meals from you.</p> <p><u>If you do encounter a black bear:</u></p> <p>1. Never approach bears: Not even to take a photo. Some bears may seem "tame" until you threaten them.</p> <p>2. Be aware of wind direction. If the wind is in your face the bear may not smell you.</p> <p>3. Do not run from a Black Bear: Running away from a black bear may stimulate its instinct to chase. You cannot out run a bear. Instead, stand and face the animal. Make eye contact without staring.</p> <p>4. Give the bear room so it can avoid you: Allow the bear a way out. Pretend you are not afraid. Talk to the bear in low, soft tones and slowly back away. The secret with bears is to avoid surprises.</p> <p>5. Try to demonstrate to the bear that you may be a danger to it. Make yourself appear larger, stand up raise your arms and open your jacket. Yell at the bear, bang pots and pans or whatever objects you make have with you, and create general commotion.</p> <p>Note: Bears don't like to be surprised. Most bear attacks are caused when a bear is startled at close range.</p> <p>If you encounter cubs: Cubs mean that mamma is close by. Sows with cubs are very protective and dangerous. Back away slowly but deliberately, in the direction from which you came and at a slight angle so that you are moving across her vision. Bear depth perception is poor and if you move directly backwards it may look to her like you are moving towards her.</p> <p>Black bear behavior is quite variable. Research indicates that black bear attacks have been avoided or injuries reduced when the victims FIGHT BACK using any means available. Throwing rocks and striking the bear with branches or camping equipment have shown to be affective.</p> <p>Bear Repellant Spray is another option however...</p> <ul style="list-style-type: none"> - Know how the spray canister works: limitations, range etc. - Avoid spraying into the wind or breeze - it will blow back into your face. - Repellent spray is considered a hazardous material for transport - use an approved container for transport in aircraft. - Handling the spray canister must be considered the same as a loaded gun - never point or spray the canister at anyone.
	Mountain lions	<p><u>Try to avoid contact by:</u></p> <p>1. Making noise: Most lions will avoid people and leave an area when they know people are in present. Making noises allows the lion to move away before a confrontation occurs. Making noise:</p>

		<p>talking, singing, whistling, yodeling, or wear bells all help to let lions know you are coming.</p> <p>2. Finding safety in numbers: Travel with someone else and avoid hiking at night.</p> <p>3. Whenever possible avoid brushy, thickly wooded areas.</p> <p><u>If you do encounter a mountain lion:</u></p> <p>1. Do not bend over, squat or bend down.</p> <p>2. Carry a noise-maker and something to throw or strike a lion with if needed. Be alert to your surrounding and check behind you frequently.</p> <p><u>Being attacked:</u></p> <p>1. If being chased, turn immediately and face the animal.</p> <p>2. Face the animal and stand your ground. Do not lose eye contact and remain standing and do not run away or bend over.</p> <p>3. Raise your arms and look big.</p> <p>4. Talk aloud and in the firm voice.</p> <p>5. If the lion starts to crouch or advance, make noise or throw whatever you can without losing eye contact or bending over.</p> <p>6. Wait for the lion to withdraw before moving.</p> <p>7. Although unusual, be alert for a second lion.</p> <p>8. If attacked FIG-IT BACK</p>
	Insect and infected mosquito bites	<p>Wear long sleeve shirts and trousers. Tuck pants into socks/boots. Use insect repellants (spray clothing). Avoid heavy scents. Carry after-bite medication to reduce skin irritation.</p> <p>Check yourself carefully at home at day's end. If a tick is imbedded in you:</p> <p>*Gently pull the tick out with tweezers or fingernails using a quick tug.</p> <p>*Wash the infected area and monitor for a red rash.</p>
	Bee and wasp stings	<p>Be alert for hives in brush or in hollow logs. Watch for insects travelling in and out of one location. Flag the location of any known nests and inform other crewmembers.</p> <p>If you or anyone you are working with is known to have allergic reactions to bee stings, tell the rest of the crew and your supervisor. Make sure you carry emergency medication with you at all times. Advise packing an inhaler and Benadryl or Epi-pen if you are prone to severe allergic reaction.</p> <p>Watch for respiratory problems. Notify dispatcher and get person to a doctor immediately if there is trouble breathing, tissue swelling or a drop in blood pressure.</p> <p>Gently scrape stinger off if one is present. Do not use tweezers as this squeezes the venom sack, worsening the injury. Apply analgesic swab and a cold pack if possible, and watch for infection.</p>
	Poison Ivy, Poison Oak, Greenbriar, multi-flora rose, blackberry, Hawthorne, nettles	<p>Wear long sleeved shirts and gloves to protect from hazardous plants and thorns. Wash any body parts affected by poisonous plants thoroughly. Use a product such as "TechNu Ivy" when available and follow instructions on the label.</p>
ENVIRONMENTAL HEALTH CONSIDERATIONS	Fire	<p>If you see a fire, alert other crew members, leave the scene quickly, alert dispatch.</p> <p>Check fire conditions daily, be aware of changing conditions (e.g. changes in restrictions, closures, lightning, high winds, smoke in the area, etc.) especially in areas with one-way out</p>

		<p>access (Mesa Golondrina, Cat Mesa, Guaje area, etc.) - leave the area without hesitation if conditions are unsafe and there is a safe way out.</p> <p>Scope out safe areas (e.g. open meadows, areas with little or no fuels, areas with water, etc.) in the vicinity that could be accessed easily in the event of a fire.</p> <p>Report any smokes/fires to the Ranger District or Fire Dispatch.</p> <p>Be more aware of increased traffic should crews be dispatched to the fire</p>
	Dehydration and/or low blood sugar	Drink plenty of water. Consume fruit and liquids (in addition to regular meals) that replace the loss of carbohydrates and maintain blood sugar levels to normal limits.
	Severe Environmental Heat Loads	<p>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.</p> <p>Tailor the work schedule to fit the climate, the physical condition of employees, and mission requirements.</p> <p>a. A reduction of work load markedly decreases total heat stress.</p> <p>b. Lessen work load and/or duration of physical exertion the first days of heat exposure to allow gradual acclimatization.</p> <p>c. Alternate work and rest periods. More severe conditions may require longer rest periods and electrolyte fluid replacement.</p>
	Sunburn	<p>Wear clothing appropriate to weather conditions.</p> <p>Use sunscreen of SPF 15 or greater and follow label directions.</p>
EMERGENCY SITUATION PROCEDURE	Serious illness/injuries	<p>Report any injuries, however minor, to the supervisor.</p> <p>Keep calm and determine seriousness of situation/injury.</p> <p>Keep a First-aid Kit at hand for minor injury treatment.</p> <p>In case of major injury or death, make contact with Dispatch and request medical response.</p> <p>Provide information on type of injury, location, access, number of patients. Alternately call 911.</p>
COMMUNICATION	Safety, crew unity	Talk to each other. Let other crewmembers know when you see a hazard. Avoid working near known hazard trees. Always know the whereabouts of fellow crewmembers.
UNPREDICTABLE OR VIOLENT PEOPLE		Avoid contact with people in the field when acting as a site steward; if contact is made be friendly but excuse yourself and leave the area as soon as conditions permit; if threatened try not to escalate the situation and remove yourself as soon as conditions permit; handle all contacts tactfully; if threatened retain as much information about the situation as you can and report the situation as soon as you can to law enforcement.
10. LINE OFFICER'S SIGNATURE	11. TITLE	12. DATE
<i>Maria T. Garcia</i> <i>ME</i>	Forest Supervisor	6/3/2016

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**

Heritage Program Manager
