

<p>United States Department of Agriculture FOREST SERVICE</p> <p>JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and .12 (Instructions on Reverse)</p>	<p>1. WORK PROJECT/ACTIVITY Duties related to Trail Maintenance</p>	<p>2. LOCATION CHATTAHOOCHEE-OCONEE NF NATIONAL FORESTS IN NORTH CAROLINA</p>	<p>3. UNIT Blue Ridge District Chattooga District Tusquittee District</p>
	<p>4. NAME OF ANALYST Towdy Tipton</p>	<p>5. JOB TITLE ORA</p>	<p>6. DATE PREPARED / REVIEWED 1/23/2020</p>
<p>7. TASKS/PROCEDURES</p>	<p>8. HAZARDS</p>	<p>9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE</p>	
<p>Field Work</p>	<p>Working in Remote Areas</p>	<ul style="list-style-type: none"> • Maintain visual, voice or radio contact with crew members. • Insure portable and vehicle radios and phones are charged and functional. • Carry extra batteries as capacity is reduced in cold weather. • Monitor NOAA weather channel and be prepared to cease field activities if conditions deteriorate. • Adhere to communication procedures outlined in the Emergency Evaluation Instructions at the end of the JHA. • Always sign out with work location and expected time of return. • Notify front desk and supervisor if delayed. Supervisor to determine if search is to be initiated. • Be aware of animals and conditions. 	
	<p>Working Alone</p>	<ul style="list-style-type: none"> • Sign out at district office and notify personnel of time of departure, work location, and estimated time of arrival. • If possible, carry and use SPOT devices, and maintain standard operating procedures with monitoring staff. • Always carry a portable radio or cell/satellite phone and make routine check-ins with district or crewmembers. • Be aware of surroundings and hazards that may cause injury. • Manage time and allow for adequate time to return to camp or district. 	
	<p>Field Safety</p>	<ul style="list-style-type: none"> • Be visible to the public. • Maintain radio contact with each other and ranger district at all times. • Be aware of other seasonal traffic on forest roads: Berry pickers, hunters, log trucks and/or wildlife watchers. • Let others know of traffic conditions/hazards. • Never work in the timber during high winds where blow down is likely to occur. 	
	<p>Long Work Hours/Fatigue</p>	<ul style="list-style-type: none"> • Take breaks as necessary. 	
	<p>Erosion</p>	<ul style="list-style-type: none"> • If there has been recent moisture, be extra careful when driving. • Roads may be slick as a result of mud. • Shoulders may be extra soft. • A lack of shrubs and grasses may cause roads to wash out, inhibiting motor travel. • Watch footing when walking on wet ground, particularly in fire areas. 	

Field Work (cont.)	Encounters with the Public	<ul style="list-style-type: none"> • If the public becomes aggressive or physically threatening, leave the area immediately via foot or vehicle. Move a safe distance away and write down any pertinent information (including vehicle description, license number and identify if known, <i>report it immediately</i>). • (Public Concern) have the citizen explain the concern fully, assess the situation and take appropriate action. Do not argue, be as polite as possible. • If you do not know the answer take their name and contact information. Be honest and inform them that you will try and get the answer for them. Don't make something up, be a good host. • Maintain radio contact with the district at all times. • Travel in pairs whenever possible. • Be cognizant of your surroundings and anything that may appear unusual. • If possible, avoid areas of known conflict. • Wear appropriate clothing.
	Snags/Green Tree Hazards	<ul style="list-style-type: none"> • Be observant of surroundings (i.e. Snags that have already fallen or trees that appear to be leaning severely). • Do not take breaks in hazard tree areas (standing, sitting, etc). • Be aware of increasing winds or a forecast of increasing winds. • Identify high-risk tree species. • Seek shelter in a less dangerous or protected area (i.e. clear-cut or meadow, face into wind and prepare to avoid falling material).
	Overhead Branches	<ul style="list-style-type: none"> • Wear proper PPE -hard hat, safety glasses, gloves, long sleeve shirts, long pants, etc). • Maintain safe walking distance between people – at least 10 feet. • Be cognizant of broken tops or branches that may be lodged in live or dead limbs.
	Cuts and Scrapes	<ul style="list-style-type: none"> • Wear gloves and long sleeve shirts.
Drinking Water	Illness	<ul style="list-style-type: none"> • Take plenty of water with you. • Know the location of available drinking water. • Treat water sources (filter, boil, chemical).
Base Camp and individual camp site area.	Camping Areas	<ul style="list-style-type: none"> • Using Back-country travel and camping techniques following leave no trace principles as a reference and FSH 6709.11 (Sec.11.2;11.22 #2 a-e and 13).
	Risk Assessment For Hazard Tree	<ul style="list-style-type: none"> • Thoroughly check and look for dead trees. missing treetops, widow-makers, & snags within your surrounding Base Camp and individual camp site area. (DO NOT CAMP THERE).

<p>Base Camp and individual camp site area. (cont.)</p> <p>Weather Related</p>	<p>Camp Site</p> <p>Harsh Weather</p>	<ul style="list-style-type: none"> • Use safe camp site selection policy in the Health and Safety Code Handbook 6709.11. The following will be considered when determining a camp site for employees: • Snags and other overhead hazards. • Leaning green trees in unstable or saturated soils. • Danger from rolling rocks and slides. • Danger of flooding. • Known animal problems. • Dress appropriate for current weather conditions. • Be prepared for changing weather conditions. • Drink plenty of fluids when perspiring. • Watch for signs of hypothermia and/or heat exhaustion.
<p>Weather Related (cont.)</p>	<p>Lightning Strikes</p>	<ul style="list-style-type: none"> • Seek indoor shelter immediately. • If outdoors get into a hard- topped vehicle. Stay away from trees, machinery, fences and other groups of people. • Turn off all radios and electronic equipment. • If you feel a tingling sensation on your hair or your hair stands on end, immediately crouch and cover your head. DO NOT lie down or place hands on the ground.
<p>Communications in the backcountry</p>	<p>Dead spots where radio contact is not possible</p>	<ul style="list-style-type: none"> • Wear proper clothing for the weather conditions. • Drink plenty of fluids. • Be physically fit. • Carry dry spare clothing. • Check in with the District (or dispatch) once a day giving your location. • Take extra clam shells and batteries for your portable radio. • If an accident occurs in an area where there is no radio communication, have one member of the crew climb to a high point and radio for assistance. If communication is still not possible, have a crew member go for help while other members perform first aid.
<p>Foot Travel</p>	<p>After Hours</p> <p>Sore feet, blisters and strains</p>	<ul style="list-style-type: none"> • Radio the District Office to notify them and your supervisor. • If the District Office is closed, radio fire desk and have them contact your supervisor. • Wear comfortable lace-up work boots with a Vibram non-skid sole at least 8" high. • Wear snug fitting cotton wool socks to provide cushioning, sweat absorption, insulation and comfort. • Take appropriate action to protect hot spots, blisters or any other foot tenderness. • Use proper body positioning, firm grip, lift with legs and get assistance if needed.

Foot Travel (cont.)	Slips, Trips and Falls	<ul style="list-style-type: none"> • Do not lean into a hill when contouring; loosens footing. • Plan a head, select safe routes, and watch for changes in ground surface, slick spots or other unusual hazards. • Don't get in a hurry and always be sure footing is firm, particularly when crossing creeks. • Select each stepping spot carefully and do not shift body weight until you are sure footing is solid. • Know how to fall. Keep flexible with knees slightly bent. Do not stick out arm to break your fall. Roll with the fall. • In heavy undergrowth, lift knees high to clear obstacles. • Avoid walking on logs, step OVER them, not ON them. • While walking downhill, on slippery ground or loose footing, keep your weight on your heels, take shorter strides, keep knees bent, lean slightly backwards and use as much of the inside of your feet as possible. • Wear appropriate clothing.
	Loose Rocks/Bad Footing	<ul style="list-style-type: none"> • Maintain safe walking distance between people – at least 10 feet. • Avoid walking up a steep slope directly under another person. • Avoid kicking out loose rocks. • Avoid stepping on blow-down. • Communicate with co-workers.
Hand Tools & Equipment	Injury	<ul style="list-style-type: none"> • Check hand tools for sound handles prior to use. • Replace/repair all tool handles that have splits, cracks or loose handles. • Always use a tool sheath when not in use. • Keep tools sharp • Learn and utilize the proper techniques for tool use and sharpening • Use the right tool for the job. • Always wear proper PPE for the tools being used (safety glasses, hard hat, gloves, saw chaps, ear protection, 8" non-skid leather boots, long sleeve shirt and jeans). • Carry tools on the downhill side or the trail, and sharp side down. • Know and utilize proper saw techniques. • Always carry saws sheathed. • Do not carry tools over the shoulder. • Always secure tools and never carry in same compartment as personnel. • Avoid glancing blows. • Avoid contact with sharp edges and nail end of logger's tape. • When shoveling, support your upper body by bracing the forearm closest to your body against your thigh as you pivot the blade sideways. • Maintain a safe working distance (10' minimum). • Always be sure what's around you and check the area often • For Chain saws, please refer to the JHA on chainsaws.

Sharpening tools using hand file	Cuts to body (hands) Metal slivers in hands	<ul style="list-style-type: none"> • Always wear gloves and goggles when sharpening tools • Prior to filing, fit the file with a handle and knuckle guard. • When sharpening an axe or Pulaski blade, with a stone, work the stone in small circles across and “into” the blade. • Follow sharpening guides carefully. • Never sharpen cutting edges all the way to the footplate.
Sharpening Tools Using Electric Grinder	Abrasive disc flying apart	<ul style="list-style-type: none"> • Inspect the disc at the beginning and periodically while using the grinder. • Replace when discs are torn or excessively worn. • Always wear the proper PPE (long sleeve shirt, safety glasses, gloves, eye and ear protection, leather gloves). • Always use cord connected power-operated hand tools in accordance with the manufacturer’s operating, safety and maintenance instructions.
	Electric Shock	<ul style="list-style-type: none"> • Inspect power cord for frays, cracks and splits paying close attention to the plug. • Do not use if cords are not safe and serviceable. • Inspect the on/off switch to make sure it works properly.
Painting Tool Heads	Respiratory Injury	<ul style="list-style-type: none"> • Consult SDS for paint/linseed products. • Wear gloves. • Wear respirator when painting and ensure adequate ventilation is present. <p>NOTE: Employees designated to use respirators shall be enrolled in the Forest Service Respiratory Protection Program as defined in 29 CFR 1910.134, Respiratory protection. Exception: Employers are not required to include in a written respiratory protection program those employees whose only use of respirators involves voluntary use of filtering face pieces (dust masks). Employees requesting to wear respirators must have a fit test and a medical evaluation by a physician as required by OSHA.</p>

Avoiding / Treating Tick Bites	Lyme Disease/Rocky Mountain Spotted Fever	<ul style="list-style-type: none"> • Spray clothing with insect repellent as a barrier. • Wear light colored clothing that fits tightly at the wrists, ankles, and waist. • Each outer garment should overlap the one above it. • Cover trouser legs with high socks or boots. • Tuck in shirt tails. • Search the body on a regular basis, especially hair and clothing; ticks generally do not attach for the first couple of hours. • If a tick becomes attached, pull it by grasping it as close as possible to the point of attachment and pull straight out with gentle pressure. Wash skin with soap and water then cleanse with rubbing alcohol. Place the tick in an empty container for later identification, if the victim should have a reaction. Record dates of exposure and removal. • Do not try to remove the tick by burning with a match or covering it with chemical agents. • If you cannot remove the tick, or the head detaches, seek prompt medical help. • Watch for warning signs of illness: a large red spot on the bite area, fever, chills, headache, joint and muscle ache, significant fatigue, and facial paralysis are reactions that may appear within two weeks of the attack. Symptoms specific to Lyme disease can include: confusion, short-term memory loss, and disorientation.
Avoiding / Treating Bee Stings	Allergic reactions/stings	<ul style="list-style-type: none"> • Be aware of hives in brush or in hollow logs. Watch for insects travelling in and out of one location. • 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. • Wear long sleeve shirts and trousers; tuck in shirt. Bright colors and metal objects may attract bees. • If you are stung, cold compresses may bring relief. • If a stinger is left behind, scrape it off the skin. Do not use a tweezers as this squeezes the venom sack, worsening the injury. • If the victim develops hives, asthmatic breathing, tissue swelling, or experiences a drop in their blood pressure, seek medical help immediately. Give victim antihistamine, (Benadryl, Chlo-Amine tabs).
Avoiding / Treating Mosquito Bites	Skin irritation/encephalitis	<ul style="list-style-type: none"> • Wear long sleeves and trousers. • Avoid heavy scents. • Use insect repellents. If using DEET, do not apply directly to skin, apply to clothing only. • Carry after-bite medication to reduce skin irritation.

Horse Etiquette & Stock Safety	Injury to you and/or the animal	<ul style="list-style-type: none"> • Communicate with the rider or handler to ensure all parties are aware of each other. • Always touch and reassure the horse when moving around it and walking behind it. • Never move in a jerky or loud fashion around a horse. • Stay away from the front of the horse and do not let the horse step on your feet. • When tying a horse, use a short lead rope so the horse cannot step on the rope. • Pack a good pack, evenly balanced with no loops of rope that could hook on branches.
Working in Bear Country	Encounter of a Bear	<ul style="list-style-type: none"> • DO NOT RUN: When you run you may look like prey to the bear. • Do not threaten the bear and force it fight back. • Allow the bear a way out with dignity. • Talk to the bear in low, soft tones and slowly back away. • Pretend you are not afraid. • The secret with bears is to avoid surprises. • Be aware of wind direction. If the wind is in your face the bear may not smell you. • Use noise makers such as a spoon tied loosely to a pan, talk loudly to your companion, whistle while you work.
	Cubs	<ul style="list-style-type: none"> • Avoid sows with cubs when at all possible. • 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. • Continue to avoid the area.
Working in Bear Country (cont.)	Bear food cache – smell or see rotted carcass	<ul style="list-style-type: none"> • Backtrack immediately and quickly. Do not investigate. • Do not force a bear to defend its meals from you. • Avoid the area.
	Bears in Camp	<ul style="list-style-type: none"> • Keep camp clean and organized. • Do not ever allow bears to get to your food. • Cut down on attractive odors. Think about the types of food you carry. • Cook away from your tent/sleep area. • Clean dishes after every meal and be aware of food scrapes. • Keep all food out of your tent. • Hang food in trees well away from camp and out of reach of bears • Remember: black bears are good climbers so string the food between trees. • Double plastic wrap all food items to reduce odor.
	Odors that Attract Bears	<ul style="list-style-type: none"> • Food, cooking and eating utensils, grills, fire pits used for cooking, stoves, fishing tackle, ice chests/coolers, trash, wash basins, cosmetics, toiletries, beverage containers, perfumes, soaps.

	Bear Repellant Spray	<ul style="list-style-type: none"> • If you are going to carry bear repellant spray, you must have attended a Forest approved training. • Crew should have a bear repellant spray safety session. • 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. 	
Accident Documentation and Procedures	Injury	<ul style="list-style-type: none"> • In cases of emergency, depending on severity and sound judgment, contact supervisor and follow the Emergency Evacuation Instructions (Reference FSH 6709.11) listed at the end of the JHA. • Know your location, and emergency route numbers. • Report all vehicle damage or personal injuries to your supervisor, even minor incidents. Document all damage or injuries via E-Safety. A CA-1 may be required to document work related injuries. • Forms SF-91, digital photos, repair estimates, and AD-112 will be required for all vehicle damage. 	
Safety Responsibilities		<ul style="list-style-type: none"> • Trail crewmembers will be responsible for covering, understanding and complying with this JHA as well as the Chattahoochee-Oconee National Forest and National Forests in North Carolina policies. • Each crewmember will sign the master copy of this JHA on completion of a formal overview. • Pertinent updates will be added to this JHA as they arise through crew interaction and weekly tailgate safety sessions. 	
10. LINE OFFICER SIGNATURE		11. TITLE Blue Ridge District Ranger Chattooga District Ranger Tusquittee District Ranger	12. DATE

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 crewmembers 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 crewmembers, 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

Work Leader
