

U.S. Department of Agriculture Forest Service	1. WORK PROJECT/ACTIVITY Adopt-A-Trail Program	2. LOCATION Prescott National Forest	3. UNIT(S) All Districts
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and 12	4. NAME OF ANALYST Jason Williams	5. JOB TITLE Trails/Wilderness Program Coordinator	6. DATE PREPARED 01/5/2016
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE	

General	Untrained Volunteers	<ul style="list-style-type: none"> All Adopt-A-Trail volunteers shall be trained and authorized as directed under the Adopt-A-Trail manual
Required Personal Protective Equipment	Cuts, Scrapes, Bumps, Bruises, Various Traumas	<ul style="list-style-type: none"> PPE: The appropriate Personal Protective Equipment (PPE) for general trail work includes hard hat, work gloves, eye protection, long-sleeved shirt, long pants, and boots with ankle support. Recommended equipment includes a GPS receiver, multi-purpose belt tool, whistle and signal mirror.
Communications	Dead Spots, Dead Batteries, Radio Failure, Unfamiliarity with Device Used	<ul style="list-style-type: none"> Ensure cell phones, radios or Spot devices are working properly and that batteries are charged before going into the field. Always carry backup batteries for radios and Spot devices. Be fully trained in radio and Spot device use to avoid operator errors. Learn the locations of geographic dead spots and find alternative transmission locations. Learn the locations of all repeater stations for radio use. Check in with Prescott Dispatch before you go to the field. Include where you plan to work, where you will park, and what time you will be checking back in.
General Field Work	Dehydration / Over Hydration	<ul style="list-style-type: none"> Drink to thirst, it is no longer advised to drink a specific amount per day or hour. Know how much you need for a specific activity and duration. Maintain blood sugar and electrolyte balances by eating enough food during the day. Avoid beverages with caffeine and alcohol. Drink only water, a sports drink, or diluted fruit juice.

Environmental Factors	Flash Floods During Monsoon Season	<ul style="list-style-type: none"> • Don't enter narrow canyons when heavy monsoon weather threatens. Remember that floods can travel long distances. • Don't attempt to cross a flooded area, particularly if the water is moving. • Don't park in or adjacent to areas prone to flooding, such as washes, streams, or depressions (i.e., areas within and downstream of Doce fire area or any other recently burned area).
	Bee Stings, Hornet Stings, Wasp Stings	<ul style="list-style-type: none"> • Be alert to hives in brush or hollow logs. Regular and Africanized bees can be aggressive. • If allergic to bees carry emergency medication at all times. • If attacked, shield the face and quickly leave the area. • Wear light-colored, long shirts and pants. • Be familiar with proper first aid techniques appropriate to bee stings, including the use of EpiPens. • If stung and having an allergic reaction, administer first aid and seek medical attention immediately.
	Scorpion Stings, Snake Bites, Spider Bites	<ul style="list-style-type: none"> • Do not reach into dark cracks, crevices, or holes. Do not place hands or feet in places out of view. • Use caution when moving rocks or logs (gloves), or when sitting on or stepping over a rock or log. • Be familiar with proper first aid techniques appropriate to scorpion stings and snake and spider bites. • Learn to recognize dangerous species common to northern Arizona. There are several. • If stung/bitten by a dangerous species, or if having a reaction, seek medical attention immediately. • Do not try to move or kill snakes
	Lighting Strikes	<ul style="list-style-type: none"> • Stay informed on predicted weather and design work schedule around possible electrical storms (afternoon monsoon storms). • Do not use radios or other electrical devices during an electrical storm. • Take cover, but avoid the tallest objects. If no cover is available, get down on the ground. • Avoid ridge lines, hill tops, open spaces, rock outcrops, alcoves, small caves and other likely lightning targets. • Discard metal tools, backpacks with metal frames during an electrical storm.

Environmental Factors (cont.)	Hypothermia, Hyperthermia	<ul style="list-style-type: none"> • Dress properly for altitude, weather, and climate of work area. Be prepared for worst-case weather. • Pack wet weather outerwear when there is any chance of rain or snow. • Avoid cotton fabrics in cool, wet conditions. Instead, wear synthetics or wool. • Layer clothing to maintain a comfortable body temperature. Avoid getting too hot or cold. • Avoid higher altitudes during cooler periods, and avoid lower altitudes during warmer periods. • Always keep head and neck protected from the sun and cold. • Learn how heat and cold affect the body and how to regulate body temperature. • Be familiar with proper first aid techniques appropriate to hypothermia and hyperthermia. <p>In dangerous cases of hypothermia or hyperthermia seek medical attention immediately.</p>
	Sunburn / UV exposure	<ul style="list-style-type: none"> • Cover up. Wear a hat and long, light shirts and pants. • Use a strong sunblock, SPF 30 or higher. • Wear high-quality sunglasses that filter out 100% of UV radiation. • Seek cover when exposure is not necessary. Take breaks in the shade.
	Falling Trees	<ul style="list-style-type: none"> • Learn to identify hazardous trees live and dead. • Look for widow makers (dead, detached branches) hung up in live trees in the work area. • Do not take breaks or work under widow makers or hazardous trees. • Do not work in high wind conditions. Be aware of wet soil conditions which can loosen soils around tree roots, causing green trees to fall in windy conditions.

Traveling on Trails	Black Bear Attacks	<ul style="list-style-type: none"> • Avoid contact with bears, especially with cubs. • Learn what to look for and watch for fresh signs, particularly when alone. • Make noise when traveling in bear country. • If encountered, alter your route to avoid a bear in the distance. If in close proximity, stop and back away slowly. Talk in low tones, and try not to intimidate the bear. • Make yourself as large and imposing as possible if the bear continues to approach. Stand upright and wave your arms, jacket or other items. Make loud noises, such as yelling, and whistles. • If the bear behaves aggressively, try to intimidate it by raising arms or a large object over the head. Do not run and never play dead. • Black bears usually avoid people, but if they start to associate people with food they may become aggressive. • On the rare occasion that a black bear becomes aggressive and attacks, fight back with everything in your power – fists, sticks, rocks, and anything available to throw or use for defense.
	Mountain Lion Attacks	<ul style="list-style-type: none"> • Do not approach lions if sighted, give them a way to escape. Stay calm and speak loudly and firmly. • Do not run from a mountain lion. Running may stimulate a mountain lion's instinct to chase. Stand and face the animal. Make eye contact. • Appear larger by raising your arms or opening your jacket if you are wearing one. Throw stones, branches, or whatever you can reach without crouching or turning your back. Wave your arms slowly. The idea is to convince the lion that you are not easy prey and that you may be a danger to it. • Maintain eye contact and slowly back away toward a building, vehicle, or busy area. • Fight back if attacked. Many potential victims have fought back successfully with rocks, sticks, caps, jackets, garden tools, their bare hands, and even mountain bikes. Since a mountain lion usually tries to bite the head or neck, try to remain standing and face the animal.

	<p>Falls, Foot Injuries, Stress and Impact Injuries</p>	<ul style="list-style-type: none"> • Identify and use safe travel routes. Do not exceed physical abilities. • Use pack equipment properly. Carry weight on hips, not back. • Warm up and stretch the appropriate muscle groups before and after hitting the trail. • Test and use secure footing. Move cautiously and deliberately. Never run. • Use footwear appropriate to the terrain and load being carried. • Know how to fall. Roll, protect the head and neck, and do not extend arms to break the fall. • Use extra care at the end of the day, when fatigue is most likely and trail accidents are most common.
	<p>Getting Lost or Disoriented</p>	<ul style="list-style-type: none"> • Carry and know how to use maps and orienteering equipment. • Monitor travel on a map, and note landmarks along the way. • Carry a basic survival kit and enough equipment to survive. • If lost, maintain position, radio or call for assistance. Don't panic, just wait patiently.
<p>Traveling on Trails (cont.)</p>	<p>Fatigue</p>	<ul style="list-style-type: none"> • Take breaks as needed, and get plenty of sleep at night. Avoid over exertion. Stick to the schedule. • Eat and drink well. Maintain high level of physical fitness. • Regulate body temperature. Avoid high heat and extreme cold. • Use extra care at the end of the day, when fatigue is most likely and trail accidents are most common.

<p>Visitor Contact</p>	<p>Assault or Conflict, Random Acts of Violence</p>	<ul style="list-style-type: none"> • Listen for the Alarm. We often receive a subtle, internal warning about an unsafe act before an incident occurs. Tune in to this warning, often manifested as an uneasy feeling or idea that something is wrong. Adopt-A-Trail volunteers are not intended or trained to make public contacts for enforcement purposes. • If you find yourself engaged with a member of the public and you are not comfortable, be intentional in your actions. You may feel intimidated, but act in control. Keep cool. If the person you are speaking to is angry, listen – don't react. • Refer those who disagree with FS policy to your supervisor or the District Ranger. • Make sure radios/cell phones have sufficient battery power. • Inform someone of work plans. Check in with a designated office daily, particularly if working alone. • Quickly and quietly leave the area and seek help if a dangerous situation is suspected. • Learn the warning signs of a potential assault. Avoid dangerous situations and hostile visitors. • Avoid confrontations. Don't antagonize a possible assailant. Know when and how to escape. • Recognize that any unknown visitor could be dangerous. • Watch for suspicious behaviors. If such behavior is noticed, leave the area. Don't take chances. • If working alone pretend that a partner is nearby. If a person approaches and looks angry or threatening use your radio or cell phone to alert Dispatch or local District Office. Even if you're in an area where you cannot transmit, you can give the impression you are in radio contact. • Be particularly watchful when entering and exiting trailhead parking areas or concentrated use areas. Look the area over for unknown persons or disturbances. • Never get into someone else's private vehicle. If you are stranded call/radio for help, stay in your rig until help arrives. • If you meet individuals on isolated roads, stay in your vehicle, let them approach you.
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Trail Work--Carrying Tools	Crushing, Cutting, Punctures, Eye Damage, Various Traumas	<ul style="list-style-type: none"> • Stay alert and carry tools properly. Never carry tools on shoulder. Carry tools in hand on the downhill side on slopes so they can be tossed away if a slip occurs. • Tools must have covers, sheaths or other protective devices in place at all times they are not in use. Place tools and equipment not in use a safe distance beyond the work area, typically above trail, with most dangerous part down (i.e., tines on McLeod)
Trail Work--Brushing/Limbing	Crushing, Cutting, Punctures, Eye Damage, Various Traumas	<ul style="list-style-type: none"> • Ensure safety glasses are worn to prevent getting a stick in the eye. • Cut all brush flush to the ground to prevent leaving spears sticking up • Carefully remove brush off trail and out of view. Ensure you are not throwing brush that could hit trail users or others. • Use caution when starting to cut brush, ensuring there are no animals or insects that could sting or bite. Rattle the brush with a tool before diving in to cut. • Use caution when cutting overhead branches, don't get smacked when it swings down. • Do not fell any large diameter trees with handsaw. Do not cut any trees over 10 feet tall.
Trail Work--Structure Construction or Maintenance	See Above	<ul style="list-style-type: none"> • Wear proper protective equipment (PPE) for trails work. • Use tools only for their designed purpose. For example, do not use a Pulaski as a prybar or chisel, or a McLeod as a pick mattock. • Maintain tools. Inspect before use for signs of wear or breakage. Keep cutting tools sharp. • Do not swing pick mattocks overhead as the head can come down the handle and hit you. • When digging or grubbing be aware of the swing path of the tool, ensure if tool slips it will not hit you in leg. Keep wide stance. • Keep a maintained first aid kit nearby. Keep kit stocked with bandages and disinfectant. • Be aware of surrounding environment: look up, look down and around. Check for falling rocks or hazard trees nearby. Make sure of work surface stability.

<p>Emergency Evacuation Plan</p>	<p>Illness or Injury</p>	<ul style="list-style-type: none"> • All Adopt-A-Trail Volunteers shall receive and maintain current First Aid and CPR training. • Volunteers will carry a personal First aid kit. These kits should be checked periodically to ensure necessary contents are present and in working order. • Volunteers will carry cell phones as emergency communication devices where they are known to work. Radios or Spot devices will be provided for those areas where cell phones do not work. • Serious illness or injury: if cell phone service is available contact Prescott Dispatch @ 928-777-5700 or by radio on Admin or Admin Repeater channel, request EMS. Be prepared to give the information listed below in the emergency evacuation instructions. • Notify your Supervisor as soon as possible of the incident. • Use Blood Borne Pathogen/Body Substance Isolation precautions. • Maintain documentation of incident
<p>10. LINE OFFICER SIGNATURE /s/ Tereas Chase</p>	<p>11. TITLE Forest Supervisor, Prescott N.F.</p>	<p>12. DATE 03/14/2016</p>

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) involved in the process, the date(s) of acknowledgment, and the name of the appropriate line officer approving the JHA. The line officer 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 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 preference:

- 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, and 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 frequencies.
- e) Contact person.
- f) Local hazards to ground vehicles or aviation.
- g) Weather conditions (wind speed & direction, visibility, temperature).
- h) Topography.
- i) Number of individuals to be transported.
- j) Estimated weight of individuals 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 employee/volunteers, acknowledge participation in the development of this JHA (as applicable) and accompanying emergency evacuation procedures. We have thoroughly discussed and understand the provisions of these documents:

SIGNATURE

DATE
