

<b>1. WORK PROJECT/ACTIVITY</b> National Wilderness Stewardship Training Field Trips	<b>2. LOCATION</b> Multiple Field Locations	<b>3. UNIT(S)</b> Arthur Carhart National Wilderness Training Center (WO)
<b>4. NAME OF ANALYST</b>	<b>5. JOB TITLE</b>	<b>6. DATE PREPARED</b>

7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE
Backcountry Travel <b>Part 1</b>	Poisonous Plant Contact <b>(Poison Ivy)</b>	<ul style="list-style-type: none"> <li>Learn to identify and avoid physical contact with Western poison ivy and objects exposed to it: <ul style="list-style-type: none"> <li>Growth forms vary, but typically a low shrub with 3-part compound leaves – “Leaves of 3.”</li> </ul> </li> <li>Wear long shirts and pants. Use a barrier cream, if particularly sensitive to exposure.</li> <li>Isolate and avoid handling contaminated clothing or tools. Clean tools with solvent.</li> <li>Do not burn poisonous plants – the smoke may cause severe respiratory problems.</li> <li>Be familiar with first aid techniques appropriate to poisonous plants. If exposed: <ul style="list-style-type: none"> <li>Immediately wash exposed skin with soap and lots of water or rinse with solvent. Hydrocortisone crème and/or an antihistimine may relieve itch.</li> <li>If the victim has breathing difficulty or the rash is on the face or genitals, seek medical attention.</li> </ul> </li> </ul>
	Tick Bites <b>(Tick-Borne Diseases)</b>	<ul style="list-style-type: none"> <li>Treat clothing and/or skin with a strong insect repellent, particularly those with DEET or Permethrin.</li> <li>Be aware of ticks when walking through tall grass or heavy brush, particularly off-trail.</li> <li>Wear light-colored, long shirts and pants that fit snugly at the wrists, ankles, and waist.</li> <li>Search the body regularly, especially hairy regions and under clothing.</li> <li>Be familiar with first aid techniques appropriate to tick bites. If bitten: <ul style="list-style-type: none"> <li>Firmly grasp the tick as close as possible to the point of contact with tweezers, and gently pull it straight out, being careful not to break off the mouth parts. Wash the area with soap and water.</li> <li>If a tick cannot be removed or mouth parts are left in the wound, seek prompt medical attention.</li> <li>Watch for signs of illness, such as: fever, headache, joint and muscle pain, severe fatigue, paralysis, or rash or spots on the skin. Seek medical attention promptly upon exhibiting symptoms.</li> </ul> </li> </ul>
	Bee, Hornet, & Wasp Stings	<ul style="list-style-type: none"> <li>Be alert to hives in brush or hollow logs. Watch for swarms or lines of bees traveling one direction.</li> <li>Inform supervisor of bee allergies and carry self-administered emergency medication at all times.</li> <li>Avoid heavy or perfumed scents.</li> <li>If attacked by a swarm, shield the face and quickly leave the area.</li> <li>Wear light-colored, long shirts and pants. Avoid wearing bright colors and metal objects.</li> <li>Be familiar with proper first aid techniques appropriate to stings. If stung: <ul style="list-style-type: none"> <li>Remove the stinger by scraping it off with a flat object; do not squeeze with fingers or tweezers. Hydrocortisone crème, antihistimine, or a cold pack may relief itch. Wash with soap and water.</li> <li>If allergic, self-administer epinephrine (EpiPen), if available, and seek prompt medical attention.</li> </ul> </li> </ul>
	Mosquito Bites (West Nile Virus)	<ul style="list-style-type: none"> <li>Wear light-colored, long shirts and pants.</li> <li>Use a head-net in extremely “buggy” conditions. Sleep in a tent or enclosed bivy sack.</li> <li>Avoid heavy or perfumed scents.</li> <li>Avoid camping near wetlands or bodies of water. Seek dry, breezy campsites.</li> <li>Use insect repellent containing DEET.</li> <li>Be familiar with proper first aid techniques appropriate to mosquito bites. If bitten: <ul style="list-style-type: none"> <li>Wash with soap and water. Hydrocortisone, calamine, or another anti-itch crème may relieve itch.</li> <li>Watch for signs of illness, such as: high fever, disorientation, muscle weakness, or stiff neck. Seek medical attention promptly upon exhibiting symptoms.</li> </ul> </li> </ul>

7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE
Backcountry Travel <b>Part 2</b>	Venomous Snake & Spider Bites	<ul style="list-style-type: none"> <li>• Do not reach into dark cracks, crevices, or holes. Do not place hands or feet in places out of view.</li> <li>• Use caution when moving rocks or logs (gloves), or when sitting on or stepping over a rock or log.</li> <li>• Use caution when walking through tall grass or heavy brush, particularly off-trail.</li> <li>• Sleep in a tent or enclosed bivy sack.</li> <li>• Carefully move and shake out boots and equipment before putting them on or away in the morning.</li> <li>• Learn to identify and avoid venomous snakes and spiders found in MT: <ul style="list-style-type: none"> <li>• <i>Prarie rattlesnakes</i>, MT's only venomous snake, are easily identified by the "buzz" of their rattle.</li> <li>• Female <i>black widow spiders</i> are distinguished by their shiny, bulbous abdomen.</li> <li>• <i>Brown recluse spiders</i> have a distinct violin-shaped mark on their cephalothorax.</li> <li>• <i>Hobo spiders</i> are difficult to identify but usually have a chevron pattern on the top of the abdomen.</li> </ul> </li> <li>• If bitten by a venomous species, or if having a reaction to any bite, seek medical attention immediately. Apply suction to a snake bite, if equipped and trained to use a snake bite kit, but do not incise the wound. Keep the wound lower than the heart and keep the victim as calm and immobile as possible until help arrives. Do not apply a tourniquet or cold.</li> </ul>
	Hantavirus, Plague, & Rabies Exposure	<ul style="list-style-type: none"> <li>• Do not approach or handle any animal, and avoid rodent nesting areas and bat roosting sites.</li> <li>• Avoid any animal that appears to have lost its fear of humans or behaves abnormally.</li> <li>• Keep food preparation and eating areas clean and keep food unavailable to animals.</li> <li>• Avoid entering or using vacant buildings and outbuildings that have not been properly cleaned.</li> <li>• If such entry is necessary, ventilate the building, wear appropriate PPE, and avoid stirring up dust.</li> <li>• If exposure is suspected, watch for signs of illness, such as: muscle spasms, difficulty swallowing, disorientation, paralysis, agitation, hallucinations, fever, nausea, headache, deep muscle aches, dry cough, and respiratory problems. Seek medical attention immediately upon exhibiting symptoms.</li> </ul>
	Water-Borne Illnesses	<ul style="list-style-type: none"> <li>• Drink bottled water or water obtained from a municipal source of potable water.</li> <li>• Boil water well or chemically treat it, following instructions provided.</li> <li>• Use a water purifier, if viruses may be present, or a microfilter designed for backcountry applications.</li> </ul>
	Bear Encounters	<p>All Bears:</p> <ul style="list-style-type: none"> <li>• Avoid contact with bears, especially with cubs. Watch for fresh bear signs, particularly when alone.</li> <li>• Make noise when traveling in bear country. Avoid surprising a bear. Talk or carry noise-makers.</li> <li>• Carry bear spray, if permitted by LE&amp;I. Carrying firearms requires additional authorization.</li> <li>• Travel in numbers, when possible, in bear country.</li> <li>• Keep a clean camp. Clean dishes and seal up and properly hang all food, garbage, and toiletries.</li> <li>• Do not keep food or toiletries, or clothing or equipment smelling of these, in a tent.</li> <li>• Prepare food and cook well away from sleeping areas. Avoid using campfires to cook.</li> <li>• Do not pack foods with strong odors. Store food in airtight containers, such as plastic bags or jars.</li> <li>• If encountered, stop and back away slowly. Talk in low tones, and try not to intimidate the bear.</li> <li>• Learn to recognize the physical and behavioral differences between black bears and brown bears.</li> </ul> <p>Black Bears:</p> <ul style="list-style-type: none"> <li>• If the bear behaves aggressively, try to intimidate it by raising arms or a large object over the head.</li> <li>• If charged, throw rocks, branches, or other objects at the bear. Be threatening. Do not run.</li> <li>• If attacked, fight back! Shout loudly and try to remain standing. Protect head and neck if possible.</li> </ul> <p>Brown Bears:</p> <ul style="list-style-type: none"> <li>• If the bear behaves aggressively, remain calm and do not intimidate the bear. Deploy bear spray.</li> <li>• If charged, lay flat on your stomach and "play dead." Protect your head and neck with your arms.</li> <li>• If attacked, remain on your stomach and still if possible. Don't get up until the bear has left the area.</li> </ul>

7. TASKS/PROCEDURES	8. HAZARDS	<p>If attacked by a stalking bear or while in camp, fight back! This may be aberrant predatory behavior.</p> <p>9. ABATEMENT ACTIONS</p> <p>Engineering Controls * Substitution * Administrative Controls * PPE</p>
Backcountry Travel Part 3	Mountain Lion Encounters	<ul style="list-style-type: none"> <li>• Avoid contact with lions. Watch for fresh lion signs, particularly when alone.</li> <li>• Learn to understand lion behavior.</li> <li>• Travel in numbers, when possible, in lion country.</li> <li>• If a lion is encountered, stop and back away slowly. Do not crouch, hide, or turn away.</li> <li>• If the lion behaves aggressively, try to intimidate it by raising arms or a large object over the head.</li> <li>• If charged, throw rocks, branches, or other objects at the lion. Be threatening, and do not run!</li> <li>• If attacked, fight back! Shout loudly and try to remain standing. Protect head and neck, if possible.</li> </ul>
	Mountain Sickness (AMS, HAPE, HACE)	<ul style="list-style-type: none"> <li>• Until acclimated, ascend slowly, rest often, do not over exert, eat carbohydrates, and drink lots of water.</li> <li>• Be familiar with the symptoms of mountain sickness, including: fatigue, shortness of breath, nausea, headache, dizziness, and sleep difficulties. Stop, rest, hydrate, and eat. If symptoms persist or are severe, descend at least 2,000 feet immediately.</li> </ul>
	Lightning Strikes	<ul style="list-style-type: none"> <li>• Do not use radios or other electrical devices during an electrical storm.</li> <li>• Take cover, but avoid the tallest objects. If no cover is available, get down on the ground.</li> <li>• Avoid ridge lines, hill tops, open spaces, rock outcrops, stock, and other likely lightning targets.</li> <li>• Discard metal tools, backpacks with metal frames, and electrical devices during an electrical storm.</li> </ul>
	Falling Trees	<ul style="list-style-type: none"> <li>• Learn to identify hazard trees, such as those that are dead or dying, diseased/infested, or damaged.</li> <li>• Wear a hardhat if traveling through particularly hazardous areas (bugkill, burned out areas, etc).</li> <li>• Do not camp or take breaks within 1.5 tree lengths of a hazard tree. Be watchful in windy conditions.</li> </ul>
	Disorientation	<ul style="list-style-type: none"> <li>• Carry and know how to use maps and orienteering equipment. Take an orienteering course.</li> <li>• Monitor travel on a map, and note landmarks along the way.</li> <li>• Carry a basic survival kit and enough equipment and supplies to survive. Take a survival course.</li> <li>• If lost, maintain position, radio for assistance, and make camp. Do not panic; just wait patiently.</li> <li>• Do not attempt to walk out unless position or situation is unsafe or there is little chance of being located.</li> </ul>
	Falls & Foot Injuries Stress & Impact Injuries	<ul style="list-style-type: none"> <li>• Identify and use safe travel routes. Do not exceed physical abilities or equipment design.</li> <li>• Use pack equipment properly. Carry weight on the hips, not on the back.</li> <li>• Warm up and stretch the appropriate muscle groups before and after hitting the trail.</li> <li>• Test and use secure footing. Move cautiously and deliberately. Never run.</li> <li>• In heavy undergrowth, particularly off-trail, slow down and watch carefully.</li> <li>• When traveling across a slope, carry tools on the downhill side.</li> <li>• Wear boots with good support and non-skid soles that are tall enough to support ankles.</li> <li>• Know basic first aid. Completion of a basic first aid course or greater is required.</li> <li>• Use footwear appropriate to the terrain and load being carried.</li> <li>• Wear clean, thick synthetic or wool socks that fit properly and offer additional cushioning.</li> <li>• Protect hotspots before blisters form, and treat blisters promptly if they do form.</li> <li>• Know how to fall. Roll, protect the head and neck, and do not extend arms to break the fall.</li> </ul>
	Dehydration	<ul style="list-style-type: none"> <li>• Drink frequently throughout the day, consuming at least one gallon per day.</li> <li>• Maintain blood sugar and electrolyte balances.</li> <li>• Drink as much as possible at meals, and drink to replace fluids throughout the evening.</li> <li>• Carry enough water to meet hydration needs between reliable water sources. Never run out.</li> <li>• Avoid beverages with caffeine and alcohol. Drink only water, a sports drink, or diluted fruit juice.</li> </ul>
	Flash Floods	<ul style="list-style-type: none"> <li>• Do not enter narrow canyons when weather threatens. Remember, floods can travel long distances.</li> <li>• Do not attempt to cross a flooded area, particularly if the water is moving.</li> <li>• Do not park or camp in or adjacent to areas prone to flooding, such as washes, streams, or depressions</li> </ul>

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Backcountry Travel Part 4	Hypothermia	<ul style="list-style-type: none"> <li>• Dress properly for the altitude, weather, and climate of work area. Be prepared for worst-case weather.</li> <li>• Pack wet weather outerwear (waterproof). Stay dry.</li> <li>• Avoid cotton fabrics in cool, wet conditions. Instead, wear synthetics or wool.</li> <li>• Layer clothing to maintain a comfortable body temperature. Avoid getting too hot or cold.</li> <li>• Stay fit, drink lots of water, eat high-energy foods, get adequate rest, and take time to acclimate.</li> <li>• Avoid higher altitudes during cooler periods, and avoid lower altitudes during warmer periods.</li> <li>• Always keep head and neck protected from the sun and cold.</li> <li>• Learn how heat and cold affect the body and how to regulate body temperature.</li> <li>• Be familiar with proper first aid techniques appropriate to hypothermia and hyperthermia.</li> <li>• In dangerous cases of hypothermia or hyperthermia, when safe, seek medical attention immediately.</li> </ul>
	UV Exposure	<ul style="list-style-type: none"> <li>• Cover up. Wear a hat or bandanna and long, lightweight shirts and pants.</li> <li>• Use a strong, long-wearing sunblock, SPF 30 or better.</li> <li>• Wear high-quality sunglasses that filter out 100% of UVA/UVB radiation and block reflected light.</li> <li>• Seek cover when exposure is not necessary. Work in shade, when possible. Take breaks in the shade.</li> </ul>
	Fatigue	<ul style="list-style-type: none"> <li>• Take breaks, as needed, and get plenty of sleep at night. Avoid over exertion. Stick to the schedule.</li> <li>• Eat and drink well, particularly at high altitude.</li> <li>• Regulate body temperature. Avoid high heat and extreme cold.</li> <li>• Use extra care at the end of the day, when fatigue is most likely and trail accidents are most common.</li> </ul>
	Stream Crossings	<ul style="list-style-type: none"> <li>• Do not attempt to cross deep, fast water, particularly during spring snowmelt or flash floods.</li> <li>• Use extreme care if crossing on rocks or logs, as falls with injuries are very common.</li> <li>• Cross early in the day, if possible, as waters often rise in the afternoon during snowmelt.</li> <li>• Use a long stick or trekking pole to probe for deep spots and aid in balance.</li> <li>• Cross at a 45-degree angle, moving and facing upstream.</li> <li>• Unbuckle backpack waist belts so they can be ditched quickly in the event of a fall.</li> <li>• Do not cross barefoot. Wear river sandals, athletic shoes, or boots. Use great care placing feet.</li> <li>• If possible, be sure the ford has firm footing before attempting to cross.</li> <li>• If on horseback, be mindful of the depth and speed of the water. Horses have limits too!</li> <li>• Use well-conditioned stock that are accustomed to water. They are instinctively afraid of it.</li> <li>• Horseback riders should approach crossings slowly and allow the horse to investigate the water.</li> <li>• Horseback riders should be prepared to quickly slip out of stirrups, in case the horse goes down.</li> <li>• Do not allow horses to stand and paw at the water, as this indicates they are about to lay down in it!</li> <li>• Walk horses into the water and slowly and calmly, but deliberately, move them across the stream.</li> <li>• Do not allow horses to jump water or plunge forward through it. Some may have to be led across.</li> </ul>
	Stock Use Low-Hanging Obstacles Falling Off or Being Thrown Trailer Accidents Entanglement Injuries Being Kicked or Stepped On	<ul style="list-style-type: none"> <li>• Wear appropriate PPE, including long pants and riding boots or shoes that will not hang up in stirrups.</li> <li>• Always carry a cutting tool, such as a multi-purpose tool.</li> <li>• Never ride livestock into a trailer, and never lead livestock into a trailer with no forward door.</li> <li>• Speak to livestock when approaching. Do not approach from blind spots behind or in front.</li> <li>• Pass stock very closely with a hand on the animal or out of kick range.</li> <li>• Watch for and avoid low-hanging branches and other obstacles when riding.</li> <li>• Do not use bridle reins to tie livestock or wrap the reins around hands.</li> <li>• Do not wrap the lead rope around hands or pass under the lead rope of a tied animal.</li> </ul> <p>Lead livestock around for a few minutes after being saddled and before being mounted or packed.</p>

10. LINE OFFICER SIGNATURE	11. TITLE	12. DATE
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**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 employees, 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**
