

U.S. Department of Agriculture Forest Service	1. WORK PROJECT/ACTIVITY <b>Moose Browse Surveys</b>	2. LOCATION <b>Chugach National Forest</b>	3. UNIT <b>04</b>
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)	4. NAME OF ANALYST <b>Bridget Brown</b>	5. JOB TITLE <b>Wildlife Technician</b>	6. DATE PREPARED <b>3/30/06</b>
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE	
<p><b>General Vehicle Travel</b></p> <p><b>HSCH References:</b> <b>12.0 Motorized vehicles</b> <b>Glacier Ranger District Health and Safety Plan</b></p> <p><b>Defensive Driving Class</b> <b>4 hours every 4 years.</b></p>	<p><b>Speeding</b></p> <p><b>Bad Roads</b></p> <p><b>Reckless Drivers</b></p> <p><b>Getting Tired or Inattentive</b></p> <p><b>Mechanical Failure</b></p> <p><b>Securing Loads</b></p>	<p>Never drive faster than the road conditions, traffic, and state laws dictate.</p> <p>Be aware of others who are speeding. Assess the road conditions, slow down and drive accordingly. Know your vehicle. Anticipate other drivers actions. Keep alert and watch for reckless, illegal and clumsy behavior of other drivers. Always drive defensively.</p> <p>Refrain from driving if you are a hazard. Watch out for warning signs of tiredness. Employees shall not operate an official motor vehicle while under the influence of alcohol, drugs, or while sick or suffering from undue fatigue or emotional stress.</p> <p>Check vehicle daily by walking around it and looking at lights, tires, damage, etc. Also check brakes, steering, windshield wipers, horn, and exhaust system. Do not use a vehicle found unsafe. When failure happens while driving, pull well off of the road, put on hazard lights, and place warning devices out. Raise the hood. Do not leave vehicle until help arrives. If you must get out of the vehicle, do so from the side opposite the traffic flow.</p> <p>Remember that large, heavy trucks take a longer distance to stop.</p> <p>While driving the load in the back may shift if not properly secured.</p>	
<p><b>Jetboat Operations</b></p>	<p><b>Slippery Footing</b></p> <p><b>Load Distribution and Limmits</b></p> <p><b>Safety Briefing</b></p> <p><b>Overdue</b></p>	<p>Be cautious while loading gear on mudflats, wading shoes or hip boots to be worn while in boat.</p> <p>Load in accordance with USCG weight limits, balance loads properly.</p> <p>Conduct departure briefing to new passengers on location of safety devices. All passengers are required to wear float coats.</p> <p>Carry radio/cell phone on board, signal devices. File float plan with</p>	

	<p><b>Capsizing/Man Overboard</b></p> <p><b>Collision with Floating or Submerged Objects</b></p>	<p>district office, check in when departing launch site and arriving at destination.</p> <p>Float with feet facing downstream, swim with current to shore. Practice recovery techniques. Remain seated at all times while underway.</p> <p>Use proper speed for river conditions and watch for debris and shallow areas. Be observant of other boat traffic, yield to downstream traffic.</p>
<p><b>Airboat Travel</b></p> <p><b>HSCH References:</b>  <b>15.11 Qualifications</b>  <b>15.14 Water Craft Less than 26'</b>  <b>Glacier Ranger District Health and Safety Plan</b>  <b>Glacier Ranger District Small Boat Operators Task Book</b></p>	<p><b>Operator inexperience</b></p> <p><b>Equipment Failure</b></p> <p><b>Operating boat on dry land and over instream obstacles (logs, beaver dams, gravel bars)</b></p> <p><b>Anchorage</b></p> <p><b>Slippery footing, unstable, close conditions</b></p>	<p>All boat operators must meet the licensing requirements for the type of boat and area in which they are operating.</p> <p>Operators, as well as passengers , should familiarize themselves with the Boat Operations Safety Plan in affect for the area(s) in which they are traveling.</p> <p>Perform pre trip check</p> <ul style="list-style-type: none"> <li>a. file trip itinerary plan with district.</li> <li>b. inspect boat seaworthiness and mechanical reliability.</li> <li>c. secure all safety and survival gear. At a minimum carry: tools required to change spark plugs, and purge fuel system of pollutants. Carry extra spark plugs, fuel filters, flares, 1/3 more fuel than required, anchor, 200 ft. rope, winch, charts, oars, fire extinguisher, compass, batteries, flashlight, and 1st aid kit.</li> <li>d. all personal must wear a personal flotation device and hearing protection.</li> <li>e. plan the trip with all due consideration of weather restrictions</li> </ul> <p>Do not attempt unless absolutely necessary to proceed or in an emergency situation. Scout the terrain prior to leaving waterway to look for deep holes or trenches that can entrap the vessel. Overcome obstacles at the lowest speed necessary to clear the barrier.</p> <p>Use proper scope (let anchor line out 2 to 3 times that of the water depth), be aware of tides.</p> <p>Use non skid surfaces, be aware, move slowly. Wear appropriate footwear. Stow gear neatly and out of the way, distribute weight evenly.</p>

	<p><b>Engine Noise</b></p> <p><b>Hypothermia</b></p>	<p>Ventilate stored fuel, carry fire extinguisher. Never stand in front of airboat when the engine is running. Never stand behind airboat when engine is running.</p> <p>Use headphones or ear plugs, stop when attempting radio communication.</p> <p>Receive training in hypothermia.</p>
<p><b>Field Camping</b></p> <p><b>HSCH References: 22.33 Administration of Undeveloped Areas 53.71 Bears</b></p>	<p><b>Bear encounters in field camps</b></p> <p><b>Electric Fence for Bears (electrocution and/or malfunction)</b></p> <p><b>Gear and/or equipment</b></p> <p><b>Emergencies</b></p> <p><b>Hazards of being in the field</b></p>	<p>To prevent attracting bears to field camps make sure food is stored in bear proof containers. Dispose of garbage properly. Don't camp in areas where bear use is evident. Don't camp along a bear trail. Know where fire arm is at all times when in camp. Cook away from sleeping camp. Do not cook or eat around sleeping tents. Be careful not to spill food. Store food away from sleeping camp. Use the buddy system when leaving the immediate camp area. Practice senarios with co-workers; know who/where firearm, bear spray, deterrents are located.</p> <p>Follow manufacture instructions. Keep fence clear of all debris, check every day. When turning unit on be sure to listen for click to indicate that the batteries are operating. Changes batteries every month. Fence will be turned off during normal camp operations and turned on when all personel are away from camp and at night. Notify all personell when fence is turned on.</p> <p>Have adequate camping gear. Good tents, sleeping bags,etc. Have enough food in case you get stuck in camp longer than expected. Have a radio and/or cell/sat. phone and keep in contact with home unit. Take an adequate supply of fresh water or take a water purifier. Boil water before using if other options are not available. Know how to operate cooking stoves safely.</p> <p>Check-in's are MANDATORY. Check-in's are required once per day at a predetermined time of day. If an emergency happens, use first-aid to deal with immediate life threatening situations and radio/call for help. Remain calm and use your best judgement in dealing with emrgencies. When in doubt if a person needs medical attention...get them out of the field where medical attention is readily available. Home office should have your itinerary, where you plan to go and when you plan on returning, as well as you route of travel.</p> <p>Choose campsites free of unsound trees or limbs, danger of falling rocks, dangers of flash flooding, and well above high tide levels.</p>

		Keep a clean camp. Always wash hands before preparing and eating food (hand sanitizer will be available at camp at all times). Use Leave No Trace principles. Do not leave garbage or other refuse when leaving camp.
<b>Working in Bear Country</b>	<b>Bear Attack</b>	Be prepared! Read the brochure, "Bears and You" written cooperatively by ADF&G & USFS. Attend USFS training session on bear encounters. Use common sense: identify feeding areas, trails, and day beds; advertise your presence continually in high use areas (ie.. bear bells, talk, whistle etc.); walk in open areas. If you hear or see a bear in the work area, do not surprise it. Instead, make noise to alert it & move out of the area if the bear chooses to remain. If you encounter a sow with cubs, move out of the area immediately and give them space. DO NOT RUN from bears, they will chase you. Best to play dead (assume cannonball position) if a tree is not available to climb and bear decides to attack. When moving away from a bear, back away if possible. If a bear charges, shout (don't scream) at it. If the bear doesn't charge or menace you, speak to it in firm even tones and back away slowly.
<b>Use of Firearms</b> <b>HSCH References:</b> <b>51.2 Firearms for non law enforcement personnel</b> <b>51.21 Authorization for firearms</b> <b>51.22 Firearms training</b>	<b>Training</b>  <b>Use</b>	<p>All District employees will have documentation of yearly firearms training in their personnel file. The classroom training is MANDATORY every 3 years, and weapons refresher training is MANDATORY to attend yearly for all field going personnel. Additional range practice is highly recommended to ensure familiarity and comfort with the firearm. All gun carrying FS employees must undergo drug screening prior seasonal hire. A firearm is MANDATORY crew field gear on Glacier RD. Transporting firearms in aircraft, boats, and vehicles will be accomplished with the firearm's bolt removed. Never permit loaded firearms in buildings, vehicles, or boats.</p> <p>Point firearms only at things you intend to shoot. NEVER point a gun at anyone... even if you know it is unloaded. Field condition is a full magazine with no ammo in the chamber and the safety "on". Never engage in horseplay or practical jokes while handling firearms. Do not shoot at any sound or movement in the brush and be absolutely sure no one is in your line of fire. When there is potential for foreign material getting into the muzzle, place a piece of tape over the muzzle to prevent obstructions. Remove the tape when storing firearm. When carrying a firearm in the field, always keep it loaded. Usually the person carrying the firearm should go first when traveling through an area following one another. For one, the person carrying the gun will then be the first to encounter trouble (bears usually), and the person without the gun will not be between the bear and the person with firearm. Keep the safety "on" while traveling in the field. Make sure to use proper ammo that is free from rust.</p>

<b>Bear Spray</b>	<b>Care</b>	<p>Keep firearms clean and in working order. Firearms should be cleaned often, everyday if possible, especially in rainy weather. Continually check to ensure that firearms are in working condition.</p>
	<b>Storage</b>	<p>Always store firearms clean. When firearms are brought back to the office kept in secure locked storage. A check-in checkout system must be part of the storage arrangement. All firearms must be unloaded at all times while on administrative sites.</p>
	<b>Use/Storage</b>	<p>Bear Spray may be used as a bear deterrent, but it is not always effective. Only products specific for bears will be used. Check expiration date. Properly discard of expired cans. Red-card for disposal if previously discharged or if the safety tab is lost. It must be transported in the floats of a floatplane or in an ammunition box on a wheeled plane. Never point Bray Spray at anyone in jest, it should be treated like a firearm...VERY CAREFULLY!!! Bear Spray training will be taken inconjunction with District Bear Awareness Training.</p>
<b>Working in streams</b>	<b>Crossing streams</b>	<p>Rocks in and near streams and waterfalls can be very slippery. A thin coat of algae can be almost invisible.</p> <p>When crossing a small stream, look for dry rocks sticking out of the water. Otherwise, use extreme caution when stepping on wet rocks. It doesn't hurt to crouch down a bit to lower your center of gravity. Use a walking stick or trekking pole to balance and feel for deeper water or rocks.</p> <p>For crossing larger streams, face up river. If you have a partner, interlock arms and move across together.</p> <p>Try to use small steps, and slide your feet along as much as possible. A strong current can sweep you off your feet quickly.</p>
	<b>Getting Swept or knocked over</b>	<p>Look downstream before entering the stream evaluating any exit routes that may be present. Do not attempt stream crossings above gorges or rapids were exit from the stream would be difficult or impossible.</p> <p>Plan ahead. Have a rope or stick available if a person falls in for retrieval.</p>

## Walking and Working in the Field

### **Falling down, twisted ankles and knees, poor footing**

Always carry fully stocked first aid kit. Always watch your footing. Slow down and use extra caution around logs, rocks, animal holes, and during wet and slippery conditions. Extreme steep slopes (>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 soles for ankle support and traction.

### **Damage to Eyes**

Watch where you walk, especially around trees and brush with limbs sticking out. 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.

### **Bee and Wasp stings**

Notify crew members of any allergies to insect bites. Watch for respiratory problems. Notify dispatcher and get person to a doctor immediately if there is trouble breathing. Gently scrape stinger off if one is present. Apply analgesic swab and cold pack if possible, and watch for infection. Flag location of any know nests and inform other crew mwmbers. Advise packing an inhaler and Benadryl or Epi-pen if you are prone to severe allergic reactions. Wear head nets when biting flies and mosquitos are bad.

### **Weather extremes**

Dress in layers with wicking garments (thoses that carry moisture away from the body) and always have raingear. Take off layers as you heat up; put them on as you cool down. Carry head protection that provides adequate insulation and protects the ears. 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. Maintain adequate water/fluid intake to avoid dehydration.

### **Bear Encounters**

Be prepared! Use common sense: identify and avoid feeding areas, trails, and day beds. Advertise you presence continually in high use areas (ie.. bear bells, talk, whistle etc.); walk in open areas. DO NOT RUN from bears... they will chase you. When moving away from a bear, back away if possible. If a bear charges, shout (don't scream) at it. If the bear dosen't charge or menace you, speak to it in firm even tones and back away slowly. Best to play dead (assume cannonball position) if bear decides to attack.

### **Moose encounters**

Make noise to avoid encounter. If you do encounter a moose, put a lot of room between you and the animal by walking around him/her if

**Emergency Evacuation**

**Medical emergency  
and evacuation**

necessary. Do not look it in the eye. If charged, run away or climb a tree.

See the EEP (Medical Emergency and Evacuation Plan) at the front of the project JHA folder for communication and evacuation procedures.

10. LINE OFFICER SIGNATURE

11. TITLE

12. DATE

**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 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, 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 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**

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