

<b>U.S. Department of Agriculture Forest Service</b>	<b>WORK PROJECT/ACTIVITY General Watercraft Operations</b>	<b>LOCATION Superior National Forest</b>	<b>UNIT SUF – 09</b>
<b>JOB HAZARD ANALYSIS (JHA) References – FSH 6709.11 and -12</b>	<b>NAME OF ANALYST Safety Committe</b>	<b>JOB TITLE</b>	<b>DATE PREPARED 01/28/2004</b>

<b>TASKS/PROCEDURES</b>	<b>HAZARDS</b>	<b>ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE</b>
Transport of Watercraft	Trailing; damage to equipment or personnel injury	Only qualified and authorized personnel are permitted to tow trailers. Personnel will perform a pre-trip safety inspection including wheel bearing play, wheels, lug nuts and tires, wiring and light system, trailer brakes (if equipped), fenders and mud flaps (if equipped), springs and shackles, safety chains. Refer to JHA on trailing and the Health and Safety Handbook.
	Damage to equipment or personnel injury	When utilizing canoe racks make sure all tie downs are secure.
Launching and Loading Boat/Canoe		Insure drain plug is in place, remove tie down traps, tilt outboard before launching, unplug light system. When loading/unloading lift with legs, ask for assistance. Know weight capacity of boat, be sure weight is properly distributed. Make sure safety lock is engaged when operating winch.
PPE	Damage to equipment or personnel injury	PPE required for both power and paddle watercraft include: U.S. Coast Guard approved properly fitted PFD. First aid kit, map, spare paddle, compass, flashlight, bailing device and radio. Additional requirements for power boats include: sound producing signal device, anchor and line, emergency flare kit, one class B- NFPA certified fire extinguisher.
Watercraft Travel	Drowning/ capsizing	During periods of high winds avoid large open water areas, know personal and equipment limitations, don't be afraid to sit out high winds, insure fuel supply is adequate. Know how boat maneuvers, know boat stopping distance, don't make tight, high speed turns.
	Lightning/Storms	Stay off water in electrical storms, wear proper clothing, know current and expected weather conditions.
	Rocks/Reefs /Floating Debris	Have current maps showing safe travel routes and known hazards, travel slow in unfamiliar waters, be aware of fluctuating water levels, use GPS and depth finders, utilize passengers to watch for debris.
	Rapids	No running of rapids, use portages.
	Sunburn/Eye Strain from Glare	Avoid prolonged exposure to bare skin, cover skin or use sunscreen, wear sun glasses and/ or visor.
Watercraft Travel Cont.	Night Travel	All regularly scheduled travel shall terminate at least one hour before sunset. Per state regulations all boats will have approved lighting systems. All motor boats 16 feet in length and over will be equipped with a combination red and green bow light and a white stern light. All other watercraft whether underway or at anchor must carry a white lantern or flashlight.

TASKS/PROCEDURES	HAZARDS	ABATEMENT ACTIONS <b>Engineering Controls * Substitution * Administrative Controls * PPE</b>
	Moving Water (current)	Many landings are located near the upstream or downstream portion of rapids, where considerable currents and hazardous water dynamics may be encountered. Consider this a “heads up” situation and proceed with caution close to the shoreline.
	Stranded	Be sure to secure watercraft at all landings.
Portages	Slippery Surfaces Un-even Terrain	Be aware that slippery surfaces maybe encountered, pay attention to foot placement, watch for exposed roots and rocks, wear appropriate foot wear with non-skid soles or rubber boots if wet, avoid double packing.
	Muscle Strains	Utilize two person canoe lift when possible, Help other crew members with heavy packs, keep pack weights reasonable, do warm up exercises, lift properly with legs. Don't over exert yourself.
	Hypothermia	Dress in layers, carry appropriate rain gear. Recognize signs of hypothermia: continual shivering, poor coordination, numb hands and feet, hallucinations. Hypothermia can be very life threatening, treat ASAP. Treatment requires the body core temperature be raised to a normal level, aided by outside sources of heat. Suggestions include: stripping victim then placing them in sleeping bag along with others, get dry clothes on victim, use fire or combination of all, administer hot non-alcoholic drinks.

<b>LINE OFFICER SIGNATURE</b>	<b>TITLE</b>	<b>DATE</b>
-------------------------------	--------------	-------------

**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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_