	RK PROJECT/ACTIVITY rk Capacity Test	2. LOCATION	3. UNIT		
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse) 4. NAME OF ANALYST		5. JOB TITLE	6. DATE PREPARED		
7. TASKS/PROCEDURES	8. HAZARDS		EMENT ACTIONS itution * Administrative Controls * PPE		
Firefighter Work Capacity Pre-Test	Test Administration &	Review that all candidates have completed all necessary medical documentation appropriate for their WCT level prior to testing.			
IOTE: Each District, Forest and Region may have additional equirements/guidelines for local conditions.	Site Preparation	Required at a minumum: an Emergency Responder/Emergency Medical Responder	cy Medical Technician (EMT) or Medical Firsonder (EMR) with Automatic External		
EVERY WCT ADMINISTRATOR SHOULD CONDUCT A THOROUGH PRE-WCT JHA!		Defibrillator (AED) on site for the duration of testing. Other equipment (airways, B and oxygen) is recommended but not required. Consider the proximity to medical care in making this decision. Having local fire department/EMS personnel on stand by may be appropriate. Test adminstaror should ensure a means of communication exists (cell phone, radio, etc)			
		Be aware of the local weather forecast impact WCT.	t. Ensure inclement weather doesn't advers		
		Ensure all candidates and WCT assist weather conditions.	ants are dressed appropriately for expected		
		Ensure the course is: flat, free of tripping/slipping hazards, well marked (and well I in darkness/24 hour day zone).			
		Preferrably, select a course route without motor vehicle conflicts.			
		If necessary, arrange for traffic control hazards (e.g., road guards).	to eliminate or abate recognized traffic		
		Have sufficent fluids on hand to hydrat during and after the test. Refrain from	te personnel particpating in the WCT before caffinated/"energy" drinks.		
irefighter Work Capacity Testing	Post Test	Remove all course markings (e.g., flagging, cones, road closure signs) and refuse generated by the WCT.			
Valking on flat surface in measured distances of:	Physical Exertion				
➤ 1 Mile ("Light or Walk" @ no lbs)	Physical Exertion	Physical Exertion Warm-up and stretch muscles before starting the test. Begin p slow warm-up and gradually increase intensity. This may take more depending upon local conditions.			
➤ 2 Miles ("Moderate or Field" @ 25 lbs)		Monitors along course shall provide flu			
➤ 3 Miles ("Arduous or Pack" @ 45 lbs)		Monthors along course shall provide ilulus.			

		Immediately notify the WCT Administrator, Course Monitor, Timer or EMT/EMR, if ill or injured. Advise your supervisor. If the test cannot becompleted by an individual, for whatever reason, see WCT Adminstrator.
		Cool down properly and stretch after the test. Replenish fluids.
	Walking	Do not exceed a walking pace. If subject doesn't satisfactorily complete the test for any reason, consult with the WCT adminstrator for further direction.
Firefighter Work Capacity Testing	Heart Attack	Signs and symptoms include:
		 Chest discomfort. Most heart attacks involve discomfort in the center of the chest that lasts more than a few minutes, or that goes away and comes back. It can feel like uncomfortable pressure, squeezing, fullness or pain. Discomfort in other areas of the upper body. Symptoms can include pain or discomfort in one or both arms, the back, neck,jaw or stomach. Shortness of breath with or without chest discomfort. Other signs may include breaking out in a cold sweat, nausea or lightheadedness and pain in other areas of the body. Sudden loss of responsiveness (no response to tapping on shoulders). Absent of normal breathing (the victim does not take a normal breath when you tilt the head up and check for at least five seconds).
		Emergency Treatment includes:
		 Activate the EMS system (Call 911 — even if EMT present). Cease physical exertion. Place in shaded, cool area. Have patient lay down. Provide oxygen, if available (at high flow) Remove/loosen restrictive clothing. Elevate lower extremities (legs) 12"-18"
Firefighter Work Capacity Testing	Knee and Back Pain	Use proper lifting technique or a partner when putting on or taking off the pack.
		Have pack/vest adjusted to fit before starting the test. If while taking the test the pack/vest moves or is not sitting right, STOP , (you have plenty of time) make the adjustments and then continue on with the test.
		Contact site medical personnel and your supervisor.
		Stop the test if feeling faint, dizzy, or nauseated. Call for assistance.
Firefighter Work Capacity Testing	Overexertion	Stay hydrated, keep a proper diet, and get plenty of rest. Mitigate with good pre-test physical preparation.
		Contact site medical personnel and your supervisor.
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Firefighter Work Capacity Testing	Muscle Cramps	If possible, plan to take the test at a time of day when temperatures are less likely to cause heat related issues such as muscle cramps, usually in the morning.
		Cool down when the test is completed.
		Contact site medical personnel and supervisor.
Firefighter Work Capacity Testing	Blisters	Properly fitted pack/vest and footwear should be used. If while taking the WCT the pack/vest or footwear becomes uncomfortable, STOP , make the adjustments and then continue on with the test. If pain is too great to continue, seek medical attention. Advise WCT Adminstrator and your supervisor.
		Properly fitted socks/footwear.
		Double layer or "dry wick" socks, powder, or moleskin as needed.
		Treat "hot-spots" as soon as detected to prevent blisters from forming. Consult with the site medical personnel and notify your supervisor.
Firefighter Work Capacity Testing	Shin Splints/Bone Bruises	Ensure footwear is properly fitted, broken in and provides adequate protection and support.
		Walk on smooth, level surfaces when possible.
		Contact site medical personnel and your supervisor.
Firefighter Work Capacity Testing	Strains and Sprains	Time intervals at posted distances will be given for subjects to adjust walking pace, if needed.
		Wear comfortable footwear and socks that provide adequate support and protection to the feet and ankles.
		Do not exceed a walking pace, one foot on the ground at all times. Do not run or jog with the weighted pack/vest. Be careful lifting and removing the weighted pack/vest.
		Contact site medical personnel and your supervisor.
Firefighter Work Capacity Testing	Heat Related Illness	Heat stress occurs when the body's core temperature rises beyond safe limits.
	and Dehydration	Evaporation of sweat is the body's main defense against heat. When fluids are not replaced, the body can no longer regulate its' temperature.
		Have an adequate supply of water available and that persons are drinking enough water (approximately 1 liter per hour).
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	1) Heat Exh
	2) Heat Stro
Firefighter Work Capacity Testing	Compartme
	Compartme Syndrome

Heat Exhaustion

Signs and symptoms of heat exhaustion include: fatigue, weakness and collapse. The skin becomes pale, cold, and clammy with associated nausea, vomiting, dizziness, headache, problems breathing, and diarrhea.

Treatment inloudes:

- 1. Place the victim in a cool, shady place, lying down with feet raised 8-12 inches above the head.
- 2. Loosen clothing and apply cool compresses/wet cloths to skin.
- 3. Transport the victim to a hospital for care as soon as possible.

Heat Stroke

Heat stroke is a true medical emergency.

Symptoms include: confusion, high body temperature (up to 106F), hot (red) and often dry skin, rapid pulse, convulsions, loss of consciousness, and coma. Death is possible without prompt treatment. Lack of sweating is one possible sign of imminent heatstroke. Do not delay treatment, it must be immediate!

Emergancy treatment includes:

- 1. Activate the EMS system (Call 911)
- 2. Cool the body guickly with cool compresses and cool, wet cloths. Place ice packs in arm pits and groin area, if available.
- 3. Move the victim into a cool, shady area. If possible move person into an air conditioned vehicle or fan subject. Prevent further exposure to heat.
 - 4. If conscious, administer small sips of cool fluids.
 - 5. Transport the victim to a medical facility as quickly as possible.

ompartment

Compartment syndrome has been mistaken for shin splints. The hallmark symptom of compartment syndrome is pain that does not go away after taking medication, ice, or elevating the limb. The symptoms of acute compartment syndrome will usually be progressive and unrelenting.

Symptoms include: Muscle may feel tight or full (tenseness of the limb compartment). Pain is intense and out of proportion with the injury or activity and does not subside with medications and/or rest. Stretching muscle creates more pain, numbness or muscle paralysis (can't move muscle), difficulty moving foot, tightness, visible bulging of the muscle, cramping, aching or burning sensation in affected limb. usually lower leg. Foot drop if nerves are affected (severe cases only) or weakness of the affected limb.

Treatment includes:

- 1. Transport the victim to a medical facility as quickly as possible.
- 2. Apply cold packs, not directly on skin.
- Administer oral water.
- At medical facility, patient liasion should notify physician that compartment syndrome and/or rhadbomyolysis has occurred after taking the WCT.

Firefighter Work Capacity Testing	General Course Conditions	A physician handout on Compartment Syndrome and R on the USFS F&AM WCT Website: http://www.fs.fed.us/fire/safety/wct/wct_index.html Locate and mark a suitable test course route with a walki recognized hazards.		
	(e.g. rocks, logs, gravel, potholes, ice, snow or mud and hard pack surfaces)	All participants should wear properly fitting and broken-in Anyone taking the WCT should wear a properly fitted bac worn with proper weight for the test fitness level.		
Firefighter Work Capacity Testing	Traffic	Watch footing on all course surfaces. Postpone testing until a suitable safe route/time can be designated.		
		Select a course route without motor vehicle conflicts. Cor If necessary, arrange for traffic control to eliminate or aba hazards.		
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.
- Substitution. For example, switching to high flash point, non-toxic solvents. Work Leader
- 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		SIG	NATURE	DATE	
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