

JOB HAZARD ANALYSIS			
General Fieldwork / Environmental Hazards			Date of last update 17 May 2020
Division/Program with primary responsibility for this JHA: <i>Resource and Education</i>		Created/updated by: David Thomas	Reviewed by: Approved by:
Required standards & general notes:	Notes: Make certain to carry water for hydration and food/snacks sufficient to sustain energy. Bring adequate clothing and footwear to provide protection from current and predicted weather and environmental hazards.		
Required personal protective equipment:	Boots with good traction, Sun protection (hat, sunblock, sunglasses), PPE appropriate to specific field tasks.		
Typical tools & equipment:	Communication Device (charged cell phone), Maps, GPS, FirstAid Kit, Personal medication needs, Equipment appropriate to specific field tasks.		
Activity	Potential Hazards	Safe Action or Procedure	
Any Activities in the Field	Exposure to Human Borne Virus (COVID-19) represents a significant human health hazard through exposure to infected individuals as well as contact with infected surfaces.	<p>Until such time as the CDC or other health agency determines risk of exposure to the virus has been significantly reduced or eliminated the following measures must be applied:</p> <p>Adhere to all current* CDC guidance in regards to human behavior and health safety practices. At a minimum, you should:</p> <ul style="list-style-type: none"> • Maintain a social distance of at least 6 feet between you and other individuals. • Wash your hands frequently and for a period of no less than 20 seconds or use a hand sanitizer that contains at least 60% alcohol. • Cover any cough or sneeze with the inside of your elbow or a tissue which you then discard. • Refrain from touching your face, mouth, and eyes until you have thoroughly cleaned your hands. • Clean and sanitize surfaces frequently. • Use paper or cloth face mask when other individuals are present and avoid touching the face mask except when needed to don or doff it. <p>*Note date of this JHA and consider confirming CDC guidance, e.g. at https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html</p>	
Advance Preparation for Fieldwork		<p>Carry cell phone, first aid kit, water and snacks for unanticipated situations.</p> <p>Ensure personnel are trained in basic First Aid and CPR.</p>	

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	Unpreparedness, false sense of safety, lack of caution resulting in a need for emergency services	<p>Prior to conducting fieldwork, anticipated locations and work tasks need to be discussed as a group with the direct supervisor. Task specific PPE should be identified.</p> <p>Maintain situational awareness at all times.</p>
Conducting Fieldwork	Slips, trips and falls.	Wear ankle-high, close-toed hiking boots with traction appropriate for terrain.
		Watch footing and step placement. In unstable areas or uneven terrain, move slowly in small steps and maintain your center of gravity.
		Consider using a stick for support. This may also be used to probe the ground in front of you for other hazards such as stump-holes.
		Guard against overloading yourself with unnecessary equipment. Unnecessarily heavy packs may be hazardous to safe travel in uneven terrain. Strike a balance between adequate preparedness and excess.
	Fall from height.	<p>Avoid steep areas. Find an alternate travel route.</p> <p>Never climb on rocks or cliff faces while on duty.</p>
	Back strain due to heavy gear.	Keep the back conditioned with low-impact exercises. Maintain correct posture.
		Use proper form when lifting any object--Lift with legs.
		Do not strain when lifting—ask for assistance instead.
	Tool Injury	Avoid twisting the body.
		Carry/use tools properly and wear proper PPE.
	Fatigue	Work / hike at a comfortable pace to avoid fatigue.
		If fatigued, stop work, rest, and recover before continuing.
	Excessive Sun Exposure	Prevent sunburn by keeping as much of the body covered as possible.
		Use sunblock on any area of the body that is not covered. Re-apply sunscreen throughout the day.
Heat Illness	Postpone non-essential tasks during heat spells.	
	Schedule heavy work / herbicide application for cooler hours.	
	Wear loose-fitting clothing and maintain proper hydration.	
	Set a moderate work pace. Seek shade to rest. Rest frequently.	
	Splash cold water on body or clothing to induce evaporative cooling.	
	Monitor work partners for any signs of heat stress; take any and all appropriate mitigating actions as necessary, including ceasing fieldwork efforts for the day.	
Dehydration	Carry and consume approximately one gallon (≈3.75 L) of water per full day's work. Drink small amounts frequently.	
Hyponatremia	Maintain electrolytic balance (eat salty snacks).	
	Maintain high caloric intake.	
	Take frequent rest breaks.	
	Know symptoms (fatigue, nausea, apathy, confusion) and cease work to seek help.	

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Conducting Fieldwork (continued)	Hypothermia	Anticipate weather changes. Any condition that cools your body faster than it can warm itself can potentially cause hypothermia.
		Colder temperatures, wet conditions, and wind are all factors to consider. Prepare in advance with proper clothing.
	Allergens	Be prepared to encounter allergens while working in the field. Grass pollen is abundant in late spring and throughout the summer, but present year-round in the southeast. Tree pollen is in the air in spring time. Weed pollen is most active spring through fall.
		Be attuned to the symptoms of allergies. They include sneezing, sinus congestion, coughing, itchy and watery eyes, itchy nose and throat, runny nose with clear discharge.
		If you have a known allergy, prepare in advance by carrying needed medical supplies. All employees should travel with a first aid kit suitable for carrying in a pack that contains some basic medications, including antihistamine for allergic response.
	Poison Ivy	Know how to identify poison ivy. Each leaf is made up of three leaflets, more or less notched at the edges. Two of the leaflets form a pair on opposite sides of the leafstalk, while the third stands by itself at the tip of the leafstalk. Avoid this plant to the extent possible.
		Sensitivity to urushiol (the poisonous sap and active allergen in poison ivy) can develop at any time. Irritation and rash may develop 24-36 hours after a sensitized person is exposed. Usually within 15 minutes of contact, the urushiol binds to skin proteins. If it is washed off with soap and water before that time, a reaction may be prevented.
		Carry tecnu product in the field with you at all times and use it if you have had poison ivy contact. Upon return to the office, wash thoroughly with soap and water.
	Piercing of skin by thorns or brush	Where brush is thick or encroaching on walkways take time when traversing these areas.
		If injured, remove thorns or splinters immediately if possible.
		Apply basic wound care and monitor wound for redness and swelling.
	Ticks	Be aware of ticks and the diseases they carry (Lyme Disease, Rocky Mountain Spotted fever, etc.). Avoid brushing against vegetation more than is necessary for your task.
Consider using insect repellent.		
Inspect your body for ticks. It takes about 12 – 24 hours for the spirochete that causes Lyme Disease to be transmitted from the tick once it burrows into your skin. So, quick identification and removal of ticks is important.		
Conducting Fieldwork (continued)		Remove ticks- grab the tick as close to the skin as possible and slowly pull it out. Do not pull or squeeze too hard—you do not want the head to rip out or fluids from the tick to leak into the wound. Make sure to clean and sterilize the wound as well as wash your hands.

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		Record any tick bites promptly in the tick log upon arrival to the office.
		Know the signs of Lyme Disease—symptoms can occur a few days to a week after exposure to the pathogen and include headache, stiff neck, fever, muscle ache, flu-like symptoms, general malaise, and in many cases, rash or legion. Seek medical attention if these signs are noticed.
	Other Arthropod bites and stings	Watch for bee swarms/hives and avoid contact. Do not wear scents of any kind.
		If working at a particular site for a period of time, assign one member of the group to do a visual sweep for nests or hives and flag these locations for avoidance.
		Be mindful of putting hands in areas that cannot be seen.
		If swarmed, leave the area immediately.
		If stung, oral antihistamines (e.g. Benadryl) may be taken if needed to reduce swelling.
		Personnel with medical history of allergic reactions to bees, wasps, ants or other insect bites must carry appropriate prescribed medical supplies and should inform supervisors and co-workers in case assistance is required.
	Snake Bites	Know how to identify Copperhead snakes. Do not attempt to handle them. Males are most aggressive during the spring and autumn mating seasons. Juveniles can be just as dangerous as adults.
		When taking breaks, especially in shaded areas, investigate seating area and do not move or turn rocks over.
		If bitten, immobilize the bitten area and keep it lower than the heart. Stay calm. DO NOT apply ice or try to suck the poison out.
		Get medical help. Do not attempt to drive yourself.
	Animal Encounters	Do not approach animals.
		Give ground if approached, but do not turn your back.
		If animal is blocking trail, cease travel until animal leaves of its own accord.
		Avoid rodent nests/dead rodents.
	Thunderstorm	Move away from apparently sick and/or injured animals. Call supervisor immediately for guidance in this case. Never handle animal carcasses.
		Check weather forecast prior to conducting fieldwork. Reschedule fieldwork if storms occur or are long-lasting.
		Be aware of your surroundings. Anticipate changes in weather. Leave job site when prudent.
	Lightning strikes	If in a vehicle, pull over to a safe area if rain becomes too severe.
		Observe storm-related road closures. Never go around blockades or attempt to cross flooded areas.
		If you see or hear a thunderstorm coming, go inside a sturdy building or vehicle.
		If you can't get inside and you feel your hair stand on end, lightening is about to strike.

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		<p>Stay away from tall things like trees, towers, fences, telephone lines, and power lines. If caught in higher areas, rapidly descend. Try to avoid large trees.</p> <p>Stay away from water.</p> <p>Crouch down on your pack on the balls of your feet, keeping feet close together. Place your hands on your knees and lower your head. Make yourself the smallest target possible and minimize contact with the ground.</p> <p>If someone is struck, call 911 immediately and also call park dispatch. Be prepared to give detailed information of the victim(s) status, and when and where the accident happened. If necessary, administer first aid and CPR if certified or instructed and willing to do so.</p>
	Becoming Lost or disoriented	If new to the park unit, consult maps and GPS units frequently.
Hiking in hours of low light and darkness.	The above listed hazards with the exception of sunburn are significantly enhanced with travel in low light or darkness.	<p>During hours of darkness all of the above safe actions and procedure are still applicable.</p> <p>Do not attempt to travel on any trails or other terrain during periods of darkness without artificial light sources.</p> <p>Always carry reliable light source and backup batteries.</p>