Contents

Introduction

A safe day on the trail begins before you arrive for trail work, continues while traveling to the work site, during your tasks, and after you leave. Your safety, the safety of coworkers, and the safety of the public is your highest priority. It is your responsibility to work safely, be aware of your surroundings, the risks involved, and any unsafe situations should they arise.

This document provides the groundwork for a safe day on the trail working with the New York-New Jersey Trail Conference (TC). The following also applies to training, working, and staying at Trail Conference provided housing.

1. General Worksite Safety Responsibilities

1. Knowing
   a. The responsibilities set forth in this document
   b. Emergency Response Plans located in Safety
   c. Escape routes
   d. The location of first aid kits
   e. Environmental Protection Responsibilities (p.2)
   f. Leave No Trace Principles (p.2)
2. Identifying
   a. Unsafe conditions as per Job Hazard Analysis
   b. The presence of the general public passing into a work site
3. Reporting/announcing
   a. Unsafe conditions
   b. The presence of the general public passing into a work site
4. Recording
   a. Job Hazard Analysis (JHA), Risk Assessment Worksheet
   b. Accidents
   c. Injuries
   d. Near Misses
   e. Incident report
   f. Refusal of Care Form
   g. All required information in all required safety documents
5. Maintaining and Inspecting
   a. Job site
   b. First aid kits
   c. Tools (hand tools, power tools, machinery, and rigging equipment)
   d. Personal Protective Equipment

Worksite safety is EVERYONES responsibility. At ANY time ANYONE may stop an unsafe act or situation.

Field Safety Officer Responsibilities:

1. Enforce all safety policies and procedures on site
2. Know Emergency Response Plan and take lead in an Emergency situation
3. Compliance with TC and host agency environmental, health, and safety policy
4. Lead Tailgate Safety Meetings and complete Tailgate Safety Meeting Worksheet
5. Conduct Day's End safety follow up meeting

6. Ensure first aid kits are stocked
7. Know the location of First Aid kit at all times
8. Know the location of the day's Volunteer Rosters at all times
9. Coordinate compliance of the Environmental Protection Responsibilities (p.2)
10. Be aware of special medical issues such as allergies, asthma hypo/hyperglycemia heart conditions etc. of volunteers and location of emergency medicine (inhaler/epi pen, injectors or nitro pills etc.) and know how to assist in self-administering them.
11. Ensuring all incident documentation is completed and following up with the volunteer
12. Knowing where cell service work on worksite

2. Environmental Protection Responsibilities:

1. Ensure that project partners have all the required environmental permits
2. Identify and note sensitive and/or endangered species
3. Identify and note historic structures or areas
4. Follow protocol detailed in project specs for working near wetlands
5. Machinery:
    a. Every machine is required to have a fire extinguisher mounted to it when possible or a centrally located one that is easily accessible.
    b. Use vegetable oil based grease whenever possible
    c. Spill kits are required to accompany hydraulic-based heavy machinery and should be located centrally to use of machine
        i. Notify project partner if petroleum products enter the environment
6. No pets allowed on the worksite
7. **Leave No Trace** responsibilities (see more at: http://lnt.org/):
    a. Observe wildlife from a distance. Do not follow or approach them.
    b. Minimize the impact you make while working
    c. Keep the worksite clean and tidy
    d. Do NOT feed wildlife
    e. Store food and trash securely
    f. Do NOT touch cultural or historic structures and artifacts
    g. Avoid introducing or trans locating non-native or invasive species
    h. Pack out what you pack in
    i. Wash yourself or dishes 200 feet away from streams or lakes
        1. Use small amounts of biodegradable soap
        2. Scatter strained dishwater
    j. **Pooping in the Woods**
        1. Move 200 feet from a trail, campsite, worksite, or body of water (80 adult paces). **Do not poop near possible quarry locations.**
        2. Dig a cat hole 6 to 8 inches deep to deposit human waste
        3. Cover and disguise the cat hole when finished

3. Daily General Worksite Safety Protocol

1. Arrive alert and well rested and ON TIME
2. Meet and greet*— before walking to the work site discuss the following:
    a. Scope of the day's work incorporating:
        i. Tailgate Safety Meeting Worksheet

   ii. Host agency protocols and expectations
   b. Note Emergency Response Plan procedure and location
   c. Privately note any volunteer medical issues or accommodations
   * Late arrivals must be debriefed on any of the missed portions above
3. Paperwork– before walking to the work site complete the following:
   a. Tailgate Safety Meeting Worksheet must be filled out and signed
   b. Volunteers **must**** complete:
      i. OPRHP Lands: Volunteer Service Agreement
      ii. Catskills: Volunteer Application
   c. Minors (under 18) (for more detail refer to NYNJTC youth policy)
      i. Must complete the Parental Permission Form
   d. **All must sign in on Roster**
      i. ensuring all info is filled in and legible especially emergency contact
      ii. **If a volunteer refuses to complete paperwork, they **cannot** participate– no exceptions.
4. Walk to worksite (see p.7: Getting tools to worksite)
5. "Suit-up" with Personal Protective Equipment (PPE- see p. 5)
6. Identify and report any new or changes in safety concerns at the site
7. If needed, reiterate or define the scope of the day's work
8. Begin work
9. Breaks
   a. Volunteers– Any time they feel they need a break they may do so
   b. Employees and Corps Members– Any time they feel they need a break they may do so, within reason
   c. In heat at or above the extreme caution zone (see NOAA Heat Index p.10) a 45/15 minute work rest cycle is mandatory
10. Meals
   a. A mandatory 30 minute meal break from 12:00-12:30 for shifts of more than 6 hours.
11. Dismissal– Leave enough time to:
   a. Clean up worksite and leave it in a safe manner
   b. Perform daily tool maintenance
   c. Neatly put tools away
   d. Safely arrive back at vehicles
   e. Conduct a Day's End Safety Follow Up Meeting discussing any issues that arose like near misses, and/or any pertinent details for the next work event. This is to be immediately annotated on the Tailgate Safety Meeting Worksheet

4. Non-emergency Situations

1. Field Safety Officer should be the first to respond
2. No calls need to be made until the situation is under control
3. Provide First Aid Treatment within your abilities.
4. If needed, take individual to nearest medical facility.
5. As soon as is reasonable:
   a. Call Supervisor
      i. Supervisor will report incident to host agency
      ii. Supervisor will advise the group on how to proceed

6. Fill out Incident Report Form and, if needed, Refusal of Care Form
7. Follow up with injured individual to ensure they are receiving care needed and are assisted with the volunteer workers comp process

5. Emergency Situations

Emergency Situations include, but are not limited to:

i. Life-threatening medical emergencies
ii. Hostage situations
iii. Dangerous strangers
iv. Severe weather
v. Wildlife encounters

1. The Field Safety Officer should be the first to respond and will remain in charge of the scene until relieved by staff or emergency personnel
2. Secure the Scene by ensuring no non-essential personnel are interfering or creating a hazard, directing care and flow of information and personnel.
3. Call 911
4. No other calls need to be made until the situation is under control
5. If life-threatening proceed to administer the necessary first aid or CPR
6. Once Advanced Life Support or other appropriate officials arrive
   a. Call Supervisor
      i. Supervisor will report incident to host agency
      ii. Supervisor will advise the group on how to proceed
   b. Fill out Incident Report Form and, if needed, Refusal of Care Form
7. Follow up with injured individual to ensure they are receiving care needed and are assisted with the volunteer workers comp process

6. Working Alone Procedure

1. No worker shall work alone on a work site or project
2. When working beyond ear shot of normal conversational voice, check in with the Crew Leader so they know your whereabouts. Crew leaders are responsible for crew members and equipment and must know whereabouts of all when on worksite. Leader must periodically check on anyone working out of earshot or eyesight.

7. River Project Procedures

1. OSHA safety guidelines (1926.106):
   a. Must use U.S. Coast Guard-approved life jacket or buoyant work vests
   b. Ring buoys with at least 90 feet of line shall be provided and readily available for emergency rescue operations. Distance between ring buoys shall not exceed 200 feet
   c. At least one lifesaving skiff shall be immediately available at locations where people are working over or adjacent to water
2. A Water Safety point person must be designated and assess each individual's capabilities in or on the water
3. The Water Safety point person will keep workers within eyesight if possible and within earshot at all times

8. Drugs and Alcohol

1. Use or possession of prescription drugs consistent with a physician's directions are not considered a violation of this policy.
2. Use of drugs, and/or alcohol on the project site is prohibited.
3. If use is suspected, the Supervisor has the right to suspend the worker(s) unconditionally until investigation is complete. Crew Leaders and/or members MUST NOTIFY STAFF IMEDIATELY.
4. The use, purchase, transfer, distribution, manufacture or possession of alcohol, controlled substances, unauthorized drugs, intoxicants, drug paraphernalia, or any combination on the work premises is prohibited. It is prohibited to manufacture, possess or use any controlled substance in housing provided by TCCC, or to supply anyone under 21 with alcohol In accordance with applicable New York and New Jersey state laws.

9. Personal Protective Equipment- PPE

Trail work will be performed under OSHA Standards for the Construction Industry (29 CFR 1926.)

1. **WORN AT ALL TIMES: PPE Item (OSHA Standard)**
   a. **Clothing (1926.95(a):** Long pants and a shirt (long sleeves preferable, but not required)
   b. **Footwear (1926.96):** Full coverage leather boots (or durable leather alternatives). Steel toes optional
   c. **Hard Hats (1926.100):** see hardhat section below for details.
   d. **Eye Protection (1926.102):** Safety glasses, marked ANSI Z87.1-2010
   e. **Hand Protection (1910.138): see glove table below**
2. **WORN AS NEEDED:**
   a. **Hearing Conservation (1926.101):** Whenever noise reduction cannot be achieved below those specified in OSHA Regulation 1926.52 (see ear protection table below)
   b. **Respirator (1910.134 does not apply):** A dust mask (or NIOSH-certified respirator) must be worn while drilling or sawing stone and lumber
   c. **Fall Protection:** see p.3 of Rigging Handbook, #15 Setting Spar Blocks

Gloves

Material	Trail Task
Leather	Any
Leather/canvas	No chainsaws
Canvas	No high lines, no saws
Cotton	No high lines, no saws
Cotton/rubber coated	No high lines, no saws
Neoprene	Only: hydraulic fluids, gasoline, alcohols, organic acids, and alkalis
Nitrile	chlorinated solvents such as trichloroethylene and perchloroethylene
Latex or rubber	sandblasting, grinding, and polishing and protect workers' hands from most water solutions of acids, alkalis, salts, and ketones

Ear Protection

OSHA Regulation 1926.52 - Occupational noise exposure

OSHA TABLE D-2 - PERMISSIBLE NOISE EXPOSURES			
Duration (hours)	Sound (decibels-dBA)	Protection	Examples
8	90	None needed	Above 90 regularly can damage ears
6	92	None needed	Chainsaw-idle
4	95	None needed	
3	97	None needed	Drill-wood
2	100	None needed	Canycom, Lawn mower
1 1/2	102	None needed	
1	105	None needed	Chainsaw
1/2	110	None needed	Close to train
1/4 or less	115	None needed	Leaf blower
0	120	Required	Hammer on wood, Rock concert
0	125	Required	Circular saw, Small aircraft
0	130 Immediate ear damage-Threshold of pain	Required	Pneumatic Rock Drill, jackhammer
0	140	Required	Blasting, Gunshot

Hardhats

1. Shell
    a. Affixed to the interior of the shell should be a label indicating, at a minimum, the *American National Standards Institute* (ANSI) Z89.1 Type I or Type II, Class C, E, or G depending on the work being performed. Do not remove this label.
    b. Shells may not be made of metal and cannot have metal parts or clips
    c. The use of stickers must be limited so that cracks can be spotted
    d. Shells that have become stiff, brittle, faded, dull, flake, exhibit a chalky appearance or begin to delaminate must be replaced
    e. Hardhats must be replaced if they have any physical damage that would potentially reduce the strength of the hardhat: dents, holes, penetrations, cracks, deep gouges, nicks, scrapes, or abrasions
2. Suspension
    a. The main purpose of the suspension system is to help absorb the shock of an impact so this system must be kept in good condition at all times.
    b. Suspensions must be inspected closely for cracks, frayed or cut crown straps, torn headband, or size adjustment slot defects, and pliability loss

Hardhat Inspection

1. Inspect prior to initial issue and monthly thereafter
2. Compress the shell inward from the sides about 1 inch with both hands and then release the pressure.
    a. The shell should return to its original shape quickly, exhibiting elasticity
    b. If the shell does not quickly return to its original shape, or IF it cracks, it must be replaced immediately

3. When the hardhat is placed into service, the date will be annotated on the inside of the hardhat using a permanent marker. (The serviceability life of a hardhat begins when the hardhat is placed into service, not when it was manufactured or purchased)

Hardhat Maintenance

1. Hardhat life (2-5 years) can be extended by cleaning both the shell and the suspension
   a. Remove dirt and stains from the shell and suspension with a mild detergent
   b. Rinse thoroughly with clean, warm water, not to exceed 120 degrees Fahrenheit
   c. Wipe dry and once again carefully inspect for any signs of damage
   d. Ensure hardhat and suspension are fully dry before storing in an enclosed space to prevent mold growth.
2. Most hardhats contain ultraviolet inhibitors to reduce susceptibility to ultraviolet damage related to light exposure, temperature extremes, and chemical degradation, but its life and strength is extended by avoiding direct sunlight.
3. Whenever possible, hardhat storage areas should be in climate controlled environments protected from direct sunlight, extreme temperatures, or chemical exposure.
4. Never carry items inside your hardhat (one dust mask or a bandanna is permissible)
5. Do not sit on your hardhat

Fitness

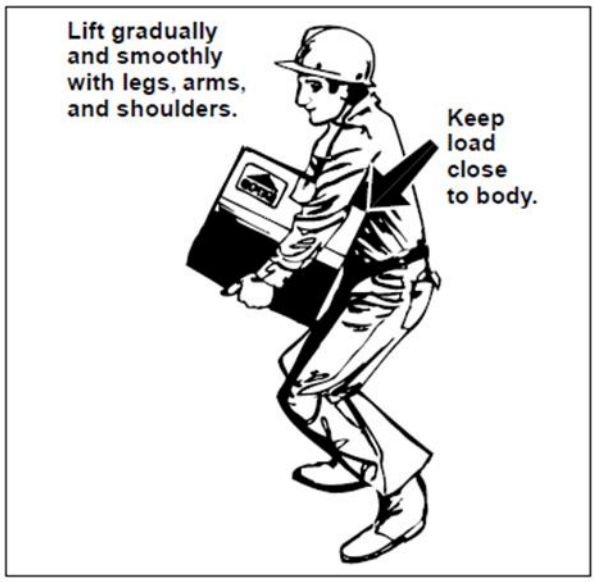
Although not PPE, to protect your person, and others, report to trail work sites in a condition that will allow mental and physical acuity. Come prepared. If you are too tired or see signs of fatigue displayed by fellow crew members it is safest to resume work on another day. Having adequate food and water to maintain alertness is also important (No less than two liters, a lunch time meal and snacks).

10. General Worksite Considerations

Getting Tools to the Worksite

1. Avoid carrying more than you can safely handle
2. Put tools down and take breaks as needed
3. Avoid carrying tools over your shoulder
4. Carry tools with arms fully extended at your waist, sharp ends downward
5. So tools don't roll down the back slope to hit you when you trip and fall, when possible carry tools on the downhill side so you can throw them downhill, NOT UPHILL

Manual Lifting Procedure



1. Do not attempt to lift more than you can handle
   a. Rocks are approximately 200 lbs./ft^3
   b. Wood weight varies with dryness, when wet 40-65 lbs./ft^3
2. Keeping your back straight bend at the knees
3. Grip firmly
4. Lift straight up by straightening your legs
5. Center the weight over your feet
6. Avoid twisting as you turn with a load
7. Don't try to lift something above waist level in one motion
8. Follow the lifting procedure - in reverse - to put the object down
9. When two or more are carrying a load decide on your destination, identify hazards before lifting, and communicate

Hand and Power Tools

1. All workers are required to take the Tool Use and Safety course. All course information should be adhered to while doing trail work.
2. OSHA 1926.300(a): All hand and power tools and similar equipment, whether furnished by the employer or the employee, shall be maintained in a safe condition [and visually inspected]
3. Removing guards is prohibited 1926.300(b)(1) and(2)
4. 1926.300(c): Employees using hand and power tools and exposed to the hazard of falling, flying, abrasive, and splashing objects, or exposed to harmful dusts, fumes, mists, vapors, or gases. . . [**must use**] the particular personal protective equipment necessary to protect them from the hazard
5. 1926.300(d)(3): All other hand-held powered tools, such as circular saws, chain saws, and percussion tools without positive accessory holding means, shall be equipped with a constant pressure switch that will shut off the power when the pressure is released. (does not apply to concrete vibrators, concrete breakers, powered tampers, jack hammers, rock drills, and similar hand operated power tools. 1926.300(d)(5))

Powered Machinery

OSHA safety guidelines (1926 Subpart P- Excavations) will be adhered to for:

1. Canycom or Power wheel barrow
2. Walk behind/ride on mini track loader
3. Excavator, front end loader, or Bobcat

Chainsaws

Hazard trees and limbing and bucking will only be removed by a USFS Certified B Sawyer accompanied by a swamper or a USFS Certified A Sawyer accompanied by a USFS Certified B Sawyer.

The following safety items must be worn:

1. Hard Hat
2. Eye and ear protection
3. Leather gloves
4. Safety chaps
5. Leather work boots with steel toes
6. Long pants and long sleeve shirt
7. Other safety equipment as necessary

Vehicle and Trailer Safety

1. In addition to OSHA safety guidelines (1926 subpart O,) the following are basic safety vehicle requirements:
   a. All passengers must wear a seat belt when riding in the vehicle
   b. Vehicles must be driven at a speed that permits full control, allowing for all factors such as roads, weather, and traffic conditions NEVER EXCEED POSTED SPEED LIMITS or the speed recommendations on equipment
   c. Vehicles must be backed into parking areas to allow for expeditious and safe departure in case of an emergency
   d. Drivers must complete a full vehicle walk around to ensure safe departure (Daily checks for leaks, breaks, rot, tire tread, signal lights breaks etc. checklist forthcoming)
   e. Before trailers are used drivers must prove their ability to hook up a trailer, and drive and maneuver it safely.
   f. Only hands-free cell phone use is permitted while driving.
   g. Transportation of hazardous materials (chemical, radioactive, biohazards) in work related vehicles is not permitted. All U.S. Department of Transportation regulations must be met.
2. When transporting equipment, DOT § 393.130 (a) applies to 4,536 kg (10,000 lb.) or more. Vehicles, equipment and machinery which is lighter than 4,536 kg (10,000 lb.) may also be secured in accordance with the provisions of this section, with §393.128, or in accordance with the provisions of §§393.100 through 393.114.

Rigging

SEE the NYNJTC Rigging Handbook for your rigging responsibilities.

OSHA safety guidelines (1926.251.) will be adhered to for:

1. 3/4 ton, 1 ton, and 2 ton Grip Hoist winches
2. Drag-lines
3. High-lines
4. Belay-lines

Food and drink

		~Quarts (.95 Liters)/Hour at Temperatures:	
Activity	Example	Less than 80 °F (26 °C)	More than 80 °F (26 °C)
Moderate	Hiking	0.5	1
Heavy	Heavy Strenuous work	1	2

Proper hydration: urine should be slightly yellow to clear. If sweating try to incorporate a sports drink (in addition to water) with sodium and potassium to replace salts. Drinking excess water blocks vasopressin (anti-diuretic hormone) causing urination, and can cause a non-homeostatic electrolyte balance (dilutional hyponatremia–water intoxication). In heat, meals/snacking are very important to ensure electrolyte levels.

Weather Hazards Procedures

Anytime a crew "calls it" due to weather, they must notify their supervisor. Use best judgement in determining crew safety and morale based on weather. When a day is "called" due to weather, hours will need to be made up at a later date in accordance to hour make up policy – see member handbook.

Temperature Procedure

Set a work pace appropriate for the weather conditions. For any portion of the day in the Extreme Caution category or greater, a **MANDATORY** 45/15 Min work/rest cycle should be utilized. In order to ensure work progress, the cycle is on a rotational basis (one crew member will rest while the others work per cycle then the next etc.)

Any day or portion of the day that resides in the Extreme Danger category should be "called" due to weather.

NOAA's National Weather Service

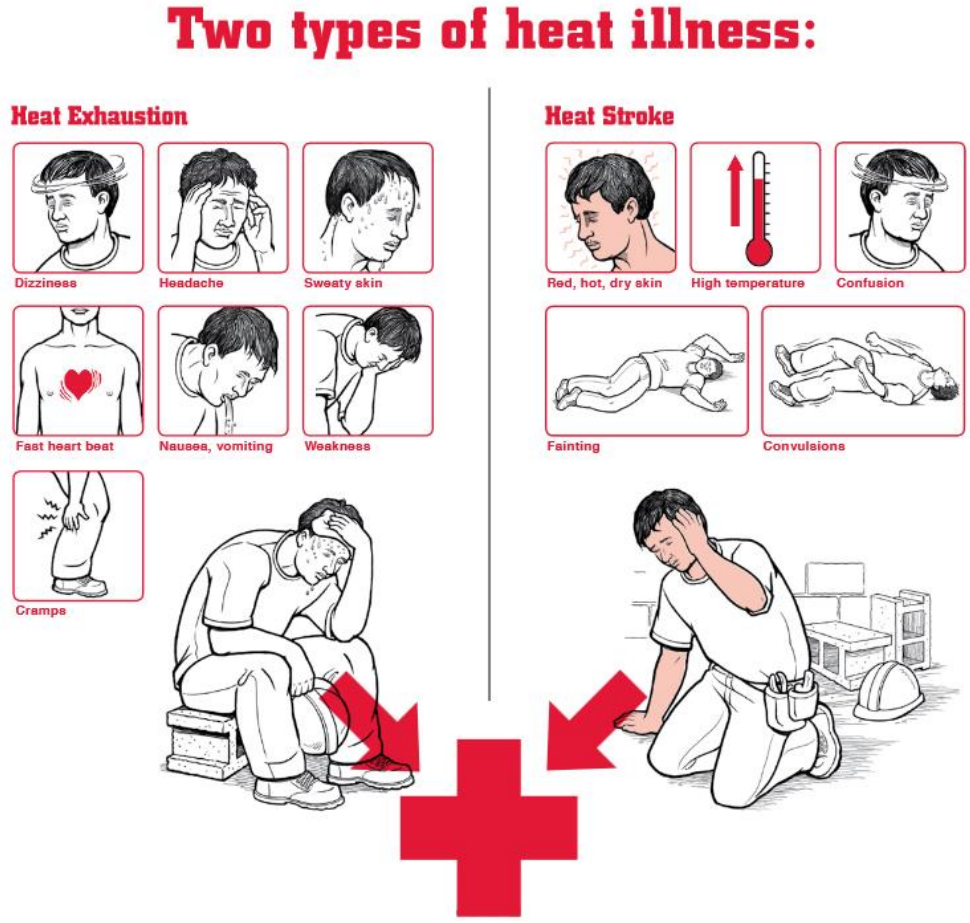
Heat Index

Temperature (°F)

Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution | Extreme Caution | Danger | Extreme Danger



High Winds Procedure

- Wooded areas during or after high winds can be very hazardous
- Use your best judgment as to when to terminate work when high winds arise
- Check for over-head hazards during and after high winds

Lightning Procedure

Occurrence of lightning is cause for "calling" it due to weather. As much of the day as possible should be utilized. If there is lightning for 15 minutes in the morning, the crew should not take off the entire day. Use best judgement.

Be ready to immediately evacuate the worksite at the first signs of lightning

1. Evacuate when lightning/thunder approaches to a distance that will not allow you to pack up and evacuate. In some instances, when approaching fast, you may have leave tools where they are
2. Know how far a safe place like your car is from the work site
    a. 1 mile = 5 seconds from flash to boom
    b. KNOW: 1) How long it takes escape the work site. 2) How fast the lighting is approaching. 3) Give yourself an extra 3 minutes to reach safety.
    c. There are lightning apps for smart phones such as Spark from Weatherbug to help with #2.
3. Keep away from metal tools and open water

4. Avoid large or lone trees
5. Avoid the tops of ridges, hilltops, wide-open spaces, ledges, outcrops of rocks
6. Avoid ungrounded sheds or shelters in exposed locations
7. If caught in open country, assume a low crouching position with feet together
8. If caught in forested areas, seek shelter in:
    a. a dense grove of trees
    b. a stand of young growth
    c. a depression in the ground
    d. a deep valley
    e. Myths and facts:
        i. Myth: Lightning never strikes twice in the same place
        ii. Fact: Lightning can strike the same place twice or more
        iii. Myth: Cars are the safest place to be to escape lightning
        iv. Fact: Cars are not 100% safe places to escape the dangers of lightning though they maybe the best alternative while at the jobsite

Heavy Rain Storm Procedure

If damage is occurring from walking or working in wet conditions resume work after it dries to an acceptable level. If working in a static location, install a tarp canopy to keep worksite dry and continue working.

First aid kits

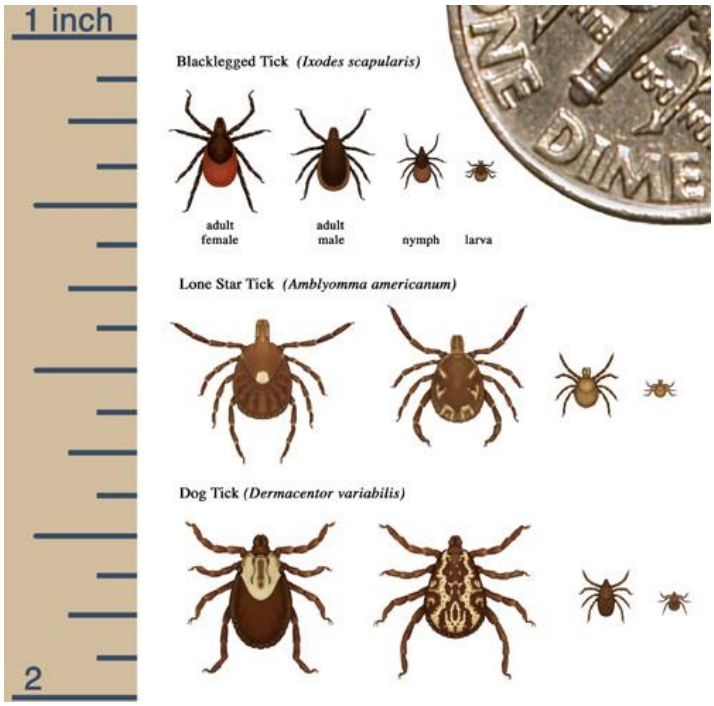
See Appendix for First Aid Inventory checklist

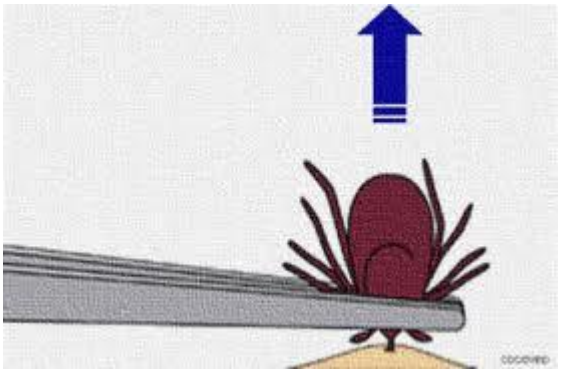
Insects

Ticks

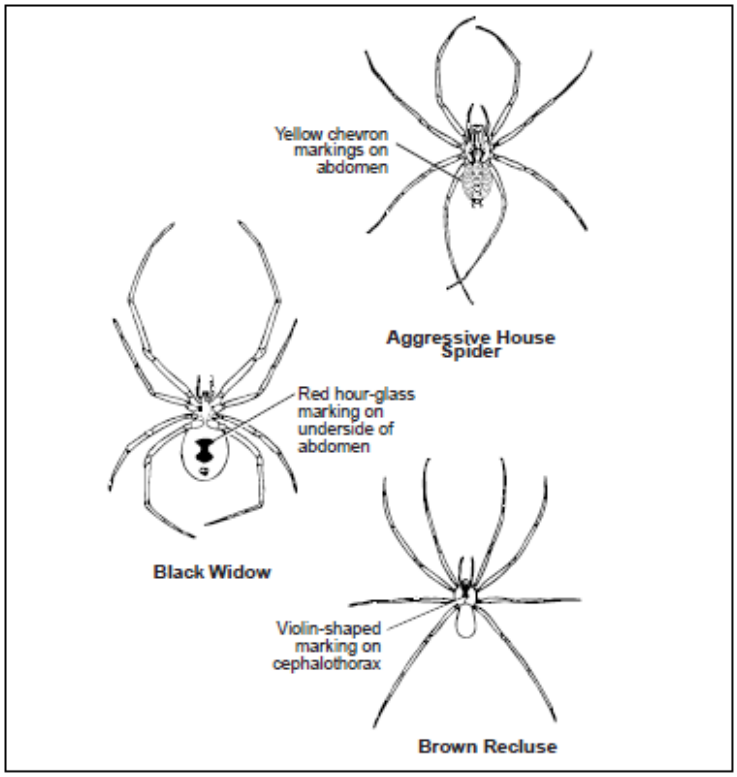
1. Ticks can harbor:
    a. Lyme disease bacteria(Borrelia burgdorferi), from Ixodes species including deer ticks (Ixodes scapularis)
    b. Less common:
        i. Babesiosis protozoa(Babesia), from Ixodes scapularis
        ii. Ehrlichiosis bacteria(Ehrlichia chaffeensis and Ehrlichia ewingii bacterial), from Lone Star ticks (Amblyomma americanum)
        iii. Anaplasmosis bacteria(Rickettsia), from Ixodes species
        iv. Southern tick-associated rash illness (STARI), infectious agent not yet identified by the U.S. Centers for Disease Control and Prevention (CDC), from Amblyomma americanum or Lone Star tick
2. After a tick bite, individuals may develop any of these symptoms:
    a. flu-like symptoms, fever, rash, pain and swelling in joints and nausea and vomiting
    b. If you exhibit any of these symptoms follow Non-Emergency procedure #4 above.
3. Most tick bites are probably harmless and may cause no problems. The earlier a tick is removed, the less the likelihood that the tick transmitted any disease. If there isn't any immediate skin rash reaction to a tick bite and if the tick is removed quickly, most individuals recover quickly.
4. Wear light color clothing so ticks are easier to spot

5. Ticks are active at 40 degrees or above
6. Check after EVERY day
    a. Deer tick (*Ixodes scapularis*) nymphs and larvae are as small at this period.
    b. Lone star ticks (*Amblyomma americanum*) are smaller, and look like red dust
    c. Deer ticks will hang on grass or plants along the edge of the trail to grab whatever passes by
    d. Lone Star ticks, sometimes called Chiggers, can track you down from up to 30 feet away and will make a bee-line to when stopped
    e. Ladies nylons can help with Lone Star. Gaiters can help prevent them from running/tearing.
7. If removed within 24 hours you are less likely to contract diseases
    a. Do not smother or burn ticks
    b. Use tweezers to pull where it is attached to your skin
    c. Save the tick in a bag to save in case your doctor wants it
    d. NOT everyone will see a bulls eye or rash after a bite
    e. Lone Star ticks will usually leave an itchy red dot
8. Do not spray your skin with Permethrin! Do NOT use Deet on children.
9. Don't rely on DEET alone, permethrin is more effective against ticks, but neither guarantee you won't contract any tick-borne diseases
10. Permethrin infused clothing by Insect Shield or other brands lasts longer than spays. Ticks need to travel across at least 6-8" of treated area before death occurs.
11. See http://tickencounter.org





Spiders



Bees, wasps, hornets

1. Know who has sting allergies
2. Be aware of bee/wasp/hornet activity and warn others
3. Nest sites. . . ANYWHERE: ground, logs, downed trees, under rocks, crevasses

Snakes

Be aware of snakes at ALL times
They can be ANYWHERE: ground, logs, downed trees, under rocks, crevasses

Venomous Snakes in New York: Distribution and Identification

1. There are only three species of venomous snakes living in New York. **The Northern Water Snake is included in this list due to its anticoagulant and tendency toward multiple bites.*

a. Northern Copperhead. The copperhead is mainly found along the lower Hudson Valley south of Kingston and scattered through the Catskills. Copperheads lack the rattle, but will vibrate their tail when annoyed. In dry leaves, this vibration can sound like a rattle. The copperhead can be identified by its coppery-red head and by the distinct bands along its body which are widest at the sides and narrowest across the back.

b. Timber Rattlesnake, The timber rattlesnake (listed as "Threatened" by the New York State Department of Environmental Conservation) enjoys the widest range; it is found mainly in the southeastern part of the state, except Long Island and New York City, with scattered populations as far north as Lake George and also along the Southern Tier in western New York. The Timber Rattlesnake can attain lengths of up to six feet. A timber rattler's head is much

wider than a Massasauga's and there are numerous small scales on the crown of its head

c. ***The Northern Water Snake,** though **not** venomous they have a mild anticoagulant and they can deliver a nasty bite and are likely to bite repeatedly these bites would require medical attention. The snake has quite a heavy body and has quite a large head which is in proportion with the body of the snake. The Northern Water Snake can be found in a variety of colors, but the majority will have bands of brown, black and dark green, although they can also have a sandy or reddish color on the body. As the snakes get older their color will darken, and the older adult snakes will have a body that is almost entirely black.

d. **Massasauga** (erroneously called "pygmy rattler"), The Massasauga (listed as "Endangered") occurs in only two locations, both large wetlands. One is located northeast of Syracuse and the other is west of Rochester. The Massasauga barely reaches three feet. The Massasauga has nine larger scales on the crown.

These snakes are relatively uncommon though the Copperhead and timber rattle snake have been spotted in the Parks on or near our work sites. The water snake is likely to be found near beaver dams with lots of groundcover. Venomous snakes are best left alone. None of these species are particularly aggressive animals, but they will attempt to bite when threatened or handled.

For more information:
http://www.esf.edu/pubprog/brochure/snakes/snakes.htm

1. **Northern Copperhead** - Agkistrodon contortrix mokasen

2. **Timber Rattlesnake** - Crotalus horridus

3. ***Northern water snakes** are not venomous, but they have a mild anticoagulant

4. **Eastern Massasauga** - Sistrurus catenatus catenatus

Black Bears

Most encounters do NOT lead to aggressive behavior and attacks are rare there are two types of bear attacks: Aggressive/Predatory and Defensive.

1. Be noisy
2. Travel in groups
3. Give them space
4. Do not take a selfie with a bear
5. If they act aggressive, you are probably too close, or in the wrong location
6. Occasionally, a bear will approach you in a non-defensive manner. It may just be curious or a young adult testing its dominance. Or it is food conditioned and/or habituated. Very rarely, it may see you as potential prey
    a. Talk to the bear in a firm voice
    b. Get out of its way if you can, which may be all it wants
    c. If the bear follows you and its attention is clearly directed at you:
        i. stand your ground and prepare to use your deterrent
        ii. A bear that is initially curious or testing you may become predatory if you do not stand up to it
        iii. Act aggressively. Look it straight in the eyes and let it know you will fight if attacked. Shout!
        iv. Make yourself look as big as possible. Stamp your feet and take a step or two toward the bear
        v. Threaten the bear with whatever is handy (stick, pole, bear spray)

vi. The more the bear persists, the more aggressive your response should be
vii. If the bear attacks, use your deterrent and fight for your life. Kick, punch or hit the bear with whatever weapon is available
viii. Concentrate your attack on the face, eyes and nose. Fight any bear that attacks you in your building or tent

7. If the encounter is a surprise or you aren't carrying bear spray, and the bear makes physical contact:
    a. Fall to the ground and "play dead"
    b. Roll over onto your stomach and cover your neck and the back of your head with your hands
    c. Keep your legs and elbows wide so the bear can't flip you over
    d. When the attack stops, remain still and wait for the bear to leave
    e. Do NOT get up until you are absolutely certain the bear is no longer in the area - even if you have to wait 30 minutes or longer
8. If an attack is prolonged or the bear starts eating you, it is no longer being defensive and it is time to fight back
9. **Mother Bears**: A female gives birth to her litter of 1-6 (average 2) young in January or February in the winter den. **While cubs reside with their mother (the first year of their lives), the female is intolerant of intruders, and may defend her cubs with ferocious, aggressive behavior if cubs are spotted, extreme caution must be exercised.**
10. **Defensive Display or Dominance** Bears exhibiting dominance or defensive displays are usually good candidates for aversion techniques. Bears may exhibit any of the following behaviors in any order of sequence
    a. **Frontal orientation:** bear's body is directly facing the person
    b. **Jaw popping or teeth clacking**: moving its jaw rapidly to click or pop its teeth
    c. **Snorting or Woofing**: blowing air through the nose or mouth
    d. **Huffing**: inhaling and exhaling air rapidly
    e. **Staring**: maintaining direct eye contact
    f. **Standing its ground:** rather than moving away, the bear stands still, usually facing the person
    g. **Paw swatting:** slapping the ground or surrounding vegetation
    h. **Lunging:** one or two quick steps toward a person; often ending with a slap to the ground
    i. **Bluff or false charge:** the bear runs straight at a person but veers off or stops before making physical contact; this is almost always accompanied by other ritualized displays, like huffing, jaw popping or slapping the ground. The vast majority of charges by bears are bluff charges and only rarely lead to contact or human injury.
    **Note: A bear that stands upright on its back legs is not exhibiting defensive or aggressive behavior. Usually a bear rises up on its hind legs out of curiosity. Standing up allows the bear to get a better view or to better catch the scent of something in order to identify it.*
11. **Offensive Aggressive Behavior** By definition, aggression is actual or symbolic attack (threats), often ritualized, to settle conflict or establish dominance between two individuals. When a bear feels threatened it often uses threats to suggest it may attack if the disturbance continues. However, physical attack in such defensive

situations is rare in bears interacting with humans – and particularly rare in human-use areas where bears are likely to be feeling a certain level of uneasiness because they know they are out of their element. Offensive aggression is the most difficult to determine. Offensive aggression may include

a. **Intentness:** particularly intense and continuously maintained direct eye contact, where the bear's focus on you is unrelenting.
b. **Ears:** laid back against the head, but in some cases, as in potentially predatory behavior, the ears may be forward the whole time (as a predatory bear may not feel threatened); ears may also be turned backward to listen in that direction; look for more than one sign to determine aggression.
c. **Loud guttural vocalizations:** Grunts, growls or other vocal sounds typically much louder than a defensive vocalization.
***Note: Bears exhibiting offensive aggression could have predatory intent be prepared to fight if needed, back away slowly DO NOT TURN AND RUN!**

Coyotes and Bobcats
Encounters should be handled as with bears.

Opossums, Squirrels and Skunks are likely to be problems only if rabid. Escape. Avoid killing if at all possible. Only kill if they are persistent in perusing you.

Emergency Response Plans

1. Provides local emergency medical phone numbers
2. Provides directions to the nearest medical facilities
3. In the event of an injury, an incident report will be completed by the injured party and reviewed by the Field Safety Officer.
4. All incident reports will remain on file for future reference and review, and will be forwarded to the host agency partner when requested.

Appendix

It is your responsibility to become familiar with and use these forms as discussed in this handbook.

1. Emergency Response Plan
2. Tailgate Safety Meeting Worksheet
3. Job Hazard Analysis
4. Work Trip/Crew Roster and Release
5. OPRHP Volunteer Service Agreement/ DEC Volunteer Application
6. Parental Consent Form
7. Incident Report
8. Refusal of Care
9. First Aid Inventory
10. **OTHER** responsibilities:
    a. Tool Use and Safety, as per handouts and training
    b. Rigging Safety, as per handbook and training