

Appendix D



Field Safety Guidelines

March 2016

Minnesota Land Trust (“Land Trust”) staff and volunteers visit private and public conservation lands throughout the year. These visits may involve hiking on or off designated roads or trails, within dense vegetation canopy, through small bodies of water, or in the vicinity of wildlife and/or livestock.

While the Land Trust cannot anticipate all field situations, these Field Safety Guidelines address common concerns while working in the field. They are relevant for Land Trust staff and volunteers visiting potential conservation easement projects, active conservation easement projects, or land owned by the Land Trust in fee title.

Much of the information below has been adapted from the Land Trust of Napa County’s *Field Health and Safety Manual* (2013). Other information was gathered from Minnesota Land Trust staff experience and the Minnesota Departments of Public Safety, Health, and Natural Resources.

The Land Trust values staff and volunteer safety above all other considerations. If at any time you feel unsafe, remove yourself from the situation immediately.

Preventing and Preparing for Field Situations

- Schedule sufficient time to complete the visit without rushing.
- Know and accept your physical limits and skills. Don’t exceed them.
- Pace your activities to avoid excessive fatigue. Be alert for signs of fatigue while on the property and driving.
- Schedule frequent rests and water breaks during the day.
- Plan for the terrain and conditions you will encounter. Be prepared for any special or unique conditions of the area.
- Check the weather forecast. Cancel field visits if lightning or other dangerous weather such as flooding or hail is predicted. See the tips on Inclement Weather, below.
- Dress appropriately. Review the tips on Foot Protection and Body Protection, below.
- Know whom to contact in case of emergency. Carry emergency phone numbers (the landowner, your emergency contact, the Land Trust) with you in your vehicle and while on foot.
- Leave a detailed itinerary with your supervisor (staff) or someone at home (volunteers).

Common Concerns

Foot Protection¹

Wear hiking boots; they are constructed to protect the toes from falling objects and other impacts and to protect the sole from nails or sharp objects that could pierce through normal footwear. At minimum, all staff and volunteers must wear closed-toed shoes while monitoring.

Clothing²

Blaze orange or other brightly colored clothing is strongly recommended; wear a blaze orange hat and at least one blaze orange item of clothing above the waist, to increase visibility along roadsides, property boundaries, and during hunting season. Wear long pants and sleeves if hiking through dense vegetation or dealing with fences. This will prevent cuts and abrasions to the body.

Insect Bites

Insect bites and stings can pose both short-term and long-term health issues. Staff and volunteers should be familiar with the types and seasonal occurrences of nuisance insects such as mosquitoes and ticks. Long pants and shirts, hats and the use of repellants are recommended.³

Deer Ticks:⁴

Deer ticks, also known as blacklegged ticks, are just one of thirteen known tick species in Minnesota. They are most common in the east and central areas of the state and are found in hardwood forests and wooded and brushy areas. Deer ticks are potential carriers of disease.

Primarily risks are from mid-May through mid-July when the smaller nymph stage of the deer tick is feeding. Risk is present, but lower, in early spring and again in the fall (late September-October) when the adult stage of the deer tick is active.

Prevention Tips:

- Check and re-check for ticks, especially mid-May through mid-July and late September through October.
- When in deer tick habitat, walk in the center of the trail to avoid picking up ticks from grass and brush.
- Wear some light colored clothing (e.g., pants), in addition to bright colored clothing, so ticks will be more visible.
- Create a barrier to ticks by tucking pants into socks or boots and tuck long sleeved shirt into pants.
- After being outdoors in tick habitat, get out of your clothes immediately, do a complete body check, shower and vigorously towel dry. Wash your clothes immediately as to not spread any ticks around your living area.

¹ *Field Health and Safety Manual*. May, 2013. Land Trust of Napa County.

² *Field Health and Safety Manual*. May, 2013. Land Trust of Napa County.

³ *Field Health and Safety Manual*. May, 2013. Land Trust of Napa County.

⁴ "Deer Ticks." Minnesota Department of Natural Resources. Online. March 4, 2016. <<http://www.dnr.state.mn.us/insects/deerticks/index.html>>.

Venomous Snakes

The majority of Minnesota snakes are harmless. Of the 17 snake species in the state, only two are venomous: the Timber Rattlesnake and the Eastern Massasauga. Both are found only in the southeastern counties of the state and are rarely encountered.⁵ Staff and volunteers should be informed of and familiar with sites at which they may encounter venomous snakes. Long pants and leather boots should be worn at all times on protected properties in this region. It is also recommended that monitors be aware of the closest medical care facility.⁶

Allergens

Everyone has different reactions to plant oils (such as poison ivy), insect stings, and other potential allergens. Be aware of your reaction to potential allergens and take precautions. If you are allergic to bee stings or have other allergies, bring any medication you would need if you encounter these allergens. If you are allergic to poison ivy, understand its preferred habitat (areas of soil and vegetation disturbance and full sun). If exposed to poison ivy, wash exposed body parts with soap and cold water as soon as possible.

Sun Exposure⁷

The incidence of skin cancer due to exposure from the sun's ultra-violet rays is on the rise. When outdoors, staff and volunteers should limit their skin's exposure to the sun by:

- Using sunscreen (SPF 30 or greater), applied liberally, on all exposed skin; and
- Minimizing exposure by wearing long-sleeved shirts, pants, and a hat.

Heat and Cold

When working in extreme heat or extreme cold, staff and volunteers should stay hydrated and wear suitable clothing. In cold weather, dress warmly and stay dry. Avoid walking on thin ice or getting wet.⁸ Judging whether it is safe to walk on ice is difficult. Many factors may be used to assess ice safety: appearance, age, thickness, air temperature, snow coverage, water depth, water body size, water chemistry and currents, distribution of load on the ice, and local climate conditions. General ice thickness guidelines for new, clear ice say that if the ice is 2" thick or less, stay off the ice; if the ice is 4" or more thick, it is safe to walk on.⁹

Inclement Weather¹⁰

Be aware of impending storms and cancel field visits if lightening or other dangerous weather, such as flooding or hail, is expected. If you are working in the field when a storm arrives, stop if you hear thunder. If you hear thunder, lightning is close enough to strike you. Move to a safe

⁵ "Snakes." Minnesota Department of Natural Resources. Online. March 4, 2016. < http://www.dnr.state.mn.us/livingwith_wildlife/snakes/index.html>.

⁶ *Field Health and Safety Manual*. May, 2013. Land Trust of Napa County.

⁷ *Field Health and Safety Manual*. May, 2013. Land Trust of Napa County.

⁸ "Cold Weather." Minnesota Department of Health. Online. March 4, 2016. < <http://www.health.state.mn.us/divs/eh/emergency/natural/cold/>>.

⁹ "Danger – Thin Ice!" Minnesota Department of Natural Resources. < <https://dps.mn.gov/divisions/hsem/weather-awareness-preparedness/Documents/dangerthinice.pdf>>.

¹⁰ "Storms, Hail, and Lightning." Minnesota Department of Public Safety. Online. March 4, 2016. < <https://dps.mn.gov/divisions/hsem/weather-awareness-preparedness/Pages/severe-weather-lightning-hail-storms.aspx>>.

location. Staff and volunteers should feel comfortable leaving the safe location when no thunder or lightening is observed for 30 minutes.

Lightning Safety Tips:

- When you hear thunder, immediately move to a safe location such as a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows up.
- Stay in safe shelter at least 30 minutes after you hear the last sound of thunder.

Last Resort Outdoor Risk Reduction Tips:

If you are caught outside with no safe shelter anywhere nearby the following actions may reduce your risk:

- Immediately get off elevated areas such as hills, mountain ridges or peaks
- Never lie flat on the ground
- Never shelter under an isolated tree
- Never use a cliff or rocky overhang for shelter
- Immediately get out and away from ponds, lakes, and other bodies of water
- Stay away from objects that conduct electricity (barbed wire fences, power lines, windmills, etc.)

Wildlife

When working in the field, the risk of contact with unpredictable and potentially dangerous wildlife is variable across Minnesota. As a general rule, remain at least twenty-five meters from any wildlife.¹¹ It may be a good idea to check in with the landowners of a conservation easement protected properties to better understand the types of wildlife you may see on the property.

Domestic Animals

Domestic livestock can include cattle, horses, mules, llama, sheep, and goats. Generally, these animals are not dangerous, however, the Land Trust recommends always maintaining a respectful distance and stay alert when working around them. Bulls and cows with calves should be given special consideration due to their often hostile and unpredictable temperament. Depending on the season, livestock operators may segregate the bulls from the cows in a separate pasture. Also be aware of any potentially dangerous domestic animals, such as dogs. If the landowner does not accompany you on the visit to the property, be sure to ask him or her about any potentially dangerous domestic animals on the property and how best to avoid them.

Fencing

Some fencing is electrically charged to keep livestock controlled. In addition, be aware of any barbed wire fencing and approach it with caution. If the landowner does not accompany the monitor on a visit to the property, ask him or her if there are any electric fences and, if so, how to navigate the property in a safe manner. It may also be helpful to ask the landowner about gates and how best to open and close them.

¹¹ *Field Health and Safety Manual*. May, 2013. Land Trust of Napa County.

Hunting Activity

Hunting is a popular activity in Minnesota; however, being in natural areas during popular hunting season can pose a risk to monitors. Therefore, during these times of year – especially September through November – staff and volunteers should wear a blaze orange hat and at least one blaze orange item of clothing above the waist.

Prior to visiting a property, check with the landowner about any hunting activity. If there are hunting activities, schedule another time to visit. If the landowner walks with you on the property and a hunter is on the land without permission, allow the landowner to address the situation (unless you feel unsafe, in which case leave the property immediately).

If the landowner is not present and a hunter is observed on the protected property, read the situation. Depending upon the situation, there are different approaches:

1. If you feel safe, identify yourself as with the Minnesota Land Trust and identify the property owner by name. Introduce yourself and ask the hunter's name and how he or she knows the landowner. Do not be confrontational. If you are near a property boundary, be aware that you may have navigated off of the property. (If on a property owned by the Land Trust, be aware of the Land Trust's current policy on hunting on the property and share that with the hunter.)
2. If you do not feel safe, leave the property immediately. Contact the landowner to check in about the activity, as he/she may have forgotten about a friend or family member's plans to hunt the property or he/she would like to know if there is a trespass issue.

Criminal Activity¹²

Illegal methamphetamine labs or marijuana grow sites can be found on remote wild lands in Minnesota. If you encounter suspicious activity:

- Leave immediately. Do not attempt to investigate or take individual action.
- Make as little noise as possible on retreat.
- Note the area or location and mark it as best as possible.
- Call 911 if you feel that you are in immediate danger and communications allow.
- Depending on the situation and your location, contact the local sheriff or police department.
- Contact the Minnesota Land Trust at 651-647-9590 or the Monitoring Program Manager at 651-917-6295.

Navigating in the Field¹³

Some Minnesota Land Trust conservation easement or fee land properties are large and/or are contiguous with large, remote natural areas. Becoming disoriented or lost is a possibility even for the most experienced. Always carry a map of the property (which are provided in monitoring workbooks, if the property is an active conservation project) and a compass. If possible, bring a

¹² *Field Health and Safety Manual*. May, 2013. Land Trust of Napa County.

¹³ *Field Health and Safety Manual*. May, 2013. Land Trust of Napa County.

GPS unit or smartphone along as well. Bring water and wear appropriate clothing, in case more time needs to be spent on the property than was anticipated.

If you become disoriented in the field:

- Stop, sit and rest
- Stay on the established trail, if one exists
- **Wait to be found (this is a lot harder than it sounds)**
- Do not throw anything away, being lost with your gear is better than being lost without it
- Make noise or use a whistle
- If necessary make camp and/or primitive shelter if it looks like you will be out overnight
- If it is cold: Wrap your entire body, including your head, in extra clothing, blankets, or newspapers; Stay awake – you will be less vulnerable to cold-related health problems; As you sit, keep moving your arms and legs to improve your circulation and stay warmer. Do not eat unmelted snow because it will lower your body temperature.¹⁴

Transportation

Staff and volunteers will need to drive to and from field sites, as well as on the properties. When traveling to field sites, follow all traffic rules and adjust your plans to account for bad road conditions. When traveling on site – whether in passenger vehicles, all-terrain vehicles, or other modes of transportation – use roads and trails that are appropriate for your vehicle. Drive at a safe speed. On all-terrain vehicles or other off-road vehicles, do not ride with more people than recommended.¹⁵ If you feel unsafe while traveling as a passenger in a vehicle, share your concerns with the driver immediately.

Boating

Some properties require boating to access or view them. Always wear a personal flotation device (PFD). Check the weather and plan accordingly. Understand your boat and the limitations of your experience and knowledge – and do not exceed them.¹⁶ When paddling, be aware of other watercraft and remain visible. In areas of high motorboat traffic, stay near the shore, and approach waves head-on or at a slight angle to avoid capsizing. Scan ahead for hazards like overhanging trees, rocks, low bridges, or rapids.¹⁷ When transporting canoes and kayaks on your vehicle, firmly strap them down.

Aggressive People

On occasion staff or volunteers may encounter aggressive individuals in the field. These individuals may be from the general public, landowners, trespassers, or others. **If at any time you feel unsafe, immediately leave the property and call 911.**

If you encounter an aggressive individual:

¹⁴ “Cold Weather.” Minnesota Department of Health. Online. March 4, 2016. <http://www.health.state.mn.us/divs/eh/emergency/natural/cold>.

¹⁵ “ATV Safety Institute’s Golden Rules.” ATV Safety Institute. March 23, 2016. Online. <http://www.atvsafety.org>.

¹⁶ Minnesota Boating Guide 2016: A Summary of Laws and Rules. Minnesota Department of Natural Resources. <http://files.dnr.state.mn.us/rlp/regulations/boatwater/boatingguide.pdf>.

¹⁷ “Paddling Safety Tips.” Minnesota Department of Natural Resources. March 23, 2016. Online. http://www.dnr.state.mn.us/watertrails/paddling_safety.html.

1. If you feel comfortable, identify yourself as with the Minnesota Land Trust and ask the person to stop the aggressive behavior or activity immediately
2. If you do not feel comfortable, leave the property immediately
3. Call 911 if necessary
 - Be prepared to provide the police with a statement including any pertinent details
 - In many cases, the individual will have parked a vehicle near the property; record the license plate, make and model of the vehicle if at all possible
 - Try to record the route or location (via GPS or trail markers) for an official report
4. Notify the Land Trust at 651-647-9590 or the Monitoring Program Manager at 651-917-6295 and staff should notify their supervisor

Emergencies and Accidents

Emergencies are situations in which quick action is necessary to get help. These may include needing to locate a lost person, providing emergency medical response, protection from criminal activity, or other situations. Accidents involve property damage, medical care by a professional, and/or attendance of law enforcement officer.

In the case of an emergency or accident:

1. Call 911
2. Notify the Minnesota Land Trust at 651-647-9590 or the Monitoring Program Manager at 651-917-6295, who will then:
 - Gather more information from the caller about the situation
 - Contact emergency contacts as provided in volunteer applications or staff list

Incidents

Incidents may involve property damage, non-emergency medical issues, or near misses. In the case of an incident:

1. Notify the Minnesota Land Trust at 651-647-9590 or the Monitoring Program Manager at 651-917-6295, who will then:
 - Gather more information from the caller about the situation
 - Contact emergency contacts as provided in volunteer applications or staff list