

Introduction:

Workers within the Department of Environmental Conservation face the risk of exposure to many potential hazards in the field, including poisonous plants, and tick-borne illnesses. In many cases, avoidance, early identification, and preventative practices allow for optimal safety outcomes.

Procedure/General Requirements (Pertinent Requirements and Prohibitions):

Poisonous Plants



Poisonous plants such as poison ivy, poison oak, poison sumac and wild parsnip, are some of the more common poisonous plants that field personnel may encounter. They can be evident in larger brush areas, by water, roadsides, and may also be chopped up and spread by farmers or mowing operations making them difficult to identify. When in contact with skin, the sap oil (urushiol) of poison ivy, poison oak or poison sumac, can cause an allergic reaction. The sap oils (furocoumarins) of wild parsnip can cause severe burns, because of a chemical reaction, created by exposure to the ultraviolet rays from the sun. **DO NOT GET THE SAP FROM WILD PARSNIP IN YOUR EYES**, it may cause permanent blindness. **DO NOT BURN THESE PLANTS** as effects from inhalation of volatized oils can occur.

Workers may become exposed to these harmful elements of the poisonous plants through:

- **Direct contact** with the plant
- **Indirect contact**, such as touching tools and/or clothing that have harmful sap on them
- **Inhalation of particles** containing the harmful sap components from burning plants

Symptoms of Skin Contact:

- Red rash within a few days of contact
- Swelling
- Itching
- Burning
- Possible bumps, patches, streaking or weeping blisters. NOTE: Blister fluids are not contagious

First Aid if Exposed to a Poisonous Plant:

Poison Ivy, Oak, Sumac

- a. Immediately rinse skin with rubbing alcohol, poison plant wash, or degreasing soap (such as dishwashing soap) or detergent, and lots of cold (preferred) water.
 - Rinse frequently so that wash solutions do not dry on the skin and further spread the oil.
- b. Scrub under nails with a brush.
- c. Apply wet compresses, calamine lotion, or hydrocortisone cream to the skin to reduce itching and blistering (not provided by the Department of Environmental Conservation).
 - Oatmeal baths may relieve itching.
 - An antihistamine may help relieve itching. NOTE: Drowsiness may occur.
- d. In severe cases or if the rash is on the face or genitals, seek professional medical attention.

- e. Call 911 or go to a hospital emergency room if you have a severe allergic reaction, such as swelling or difficulty breathing, or have had a severe reaction in the past.
- f. Report exposures that require medical attention or first aid to your supervisor and fill out a First Report of Injury or illness.

Wild Parsnip

- a. Immediately rinse skin with rubbing alcohol, poison plant wash, or degreasing soap (such as dishwashing soap) or detergent, and lots of cold (preferred) water.
 - Rinse frequently so that wash solutions do not dry on the skin and further spread the oil.
- b. Scrub under nails with a brush if exposed on hands.
- c. Keep the exposed area covered for 48 hrs to prevent exposure to the sun and potential reactions.
- d. If burns occur, let blisters reduce naturally and then treat with antibiotic ointment if an open wound is present.
- e. In severe cases or if the blisters are on the face or genitals, seek professional medical attention.
- f. Call 911 or go to a hospital emergency room if you have a severe allergic reaction, such as swelling or difficulty breathing, or have had a severe reaction in the past.
- g. Report exposures that require medical attention or first aid to your supervisor and fill out a First Report of Injury or illness.

Protection

- a. Wear long sleeves, long pants, boots, and gloves.
 - Wash exposed clothing separately in hot water with detergent.
- b. Barrier skin creams, such as lotion containing bentoquatam, may offer some protection.
- c. After use, clean tools with rubbing alcohol or soap and lots of water. Wear disposable gloves during this process as harmful sap oils can remain active on the surface of objects for up to 5 years.
- d. Do not burn plants or brush piles that may contain poison ivy, poison oak, or poison sumac. Inhaling smoke from burning plants can cause severe allergic respiratory problems.

Tick-borne Illness

Tick Identification

The most common ticks found include:

- Blacklegged (Deer) Tick
- Lone Star Tick
- American Dog Tick
- Woodchuck tick



Lyme Disease

Most commonly reported tick-borne disease in Vermont. It is caused by bacteria called *Borrelia burgdorferi* that are spread by the bite of a blacklegged tick. It's a bacterial infection that affects certain parts of the body such as face muscles, arms

and legs, body temperature, nervous system, joints.

SIGNS AND SYMPTOMS

- Symptoms could begin 3-30 days after the bite.
- Red ring-like (bullseye) expanding rash may be present.
- Flu-like symptoms: headache, fever, chills, swollen lymph nodes, muscle pain, weakness.

CARE

- Seek treatment under guidance of a healthcare provider.

Anaplasmosis

The second most commonly reported tick-borne disease in Vermont. Like Lyme disease, anaplasmosis is spread to humans by the bite of a blacklegged tick.

SIGNS AND SYMPTOMS

- Early signs and symptoms (days 1-5) are usually mild or moderate and may include:
 - Fever, chills
 - Severe headache
 - Muscle aches
 - Nausea, vomiting, diarrhea, loss of appetite

CARE

- Seek treatment under guidance of a healthcare provider.

Babesiosis

Babesiosis is rare, however, it is reported to be the third most common tick-borne disease in Vermont. It is spread to humans by the bite of a blacklegged tick.

SIGNS AND SYMPTOMS

- Flu-like symptoms- headache, fever, chills, swollen lymph nodes, muscle pain, weakness.
- Deadly to those with severe pre-existing serious health problems.

CARE-

- Seek treatment under guidance of a healthcare provider.

Powassan

Powassan is even more rare and is spread to humans by the bite of six known species of ticks.

SIGNS AND SYMPTOMS

- Flu-like symptoms- headache, fever, chills, swollen lymph nodes, muscle pain, weakness.
- Severe symptoms- confusion, loss of coordination, difficulty speaking, seizures. Approximately 1 out of 10 with severe disease die.

CARE

- Seek treatment under guidance of a healthcare provider.

Preventative Clothing (optional)

- Wear long pants and long-sleeved shirts.
- Tuck your pants into your socks to keep ticks off skin.
- Wear light-colored clothing so you can easily spot ticks.
- Avoid tall grass if possible.



Repellents

- **DEET**- one of the few insect sprays that works to repel bugs.
 - Repellents containing a minimum of 30% DEET is recommended to repel ticks.
- **Permethrin**-Treated clothing kills ticks and other insects as they travel across the fabric.
 - Up to 10 times more effective than skin repellents
 - Last longer on clothing (up to 6 washes)
 - Care is needed during application, consult your healthcare provider with questions.

Tick Removal

1. Use fine-tipped tweezers, or one of the many available tick removal tools and firmly grasp the tick as close to the skin as possible.
2. With a steady motion, pull straight up until all parts of the tick are removed. Do not twist or jerk the tick.
3. Take a photo of the tick or keep it (see #4 below) in case it's needed for identification purposes.
4. Dispose of a live tick by putting it in alcohol, placing it in a sealed bag/container, wrapping it tightly in tape or flushing it down the toilet.
 - a. Do not worry if part of the tick stays embedded, it will die and work its way out.
5. Clean your hands and the bite area with rubbing alcohol or soap and water.

After A Tick Bite or Removal

- Notify your supervisor as soon as possible. Take note of the date and time for reporting and potential treatment or concerns. File a First Report of Injury (FRI) ASAP following removal. See First Report of Injury Instructions below.
- Consult with a health care provider to see if they recommend Lyme disease prophylaxis after a tick bite. The Centers for Disease Control and Prevention recommends all the following conditions be met for a provider to consider prescribing prophylaxis:
 - The bite occurred in Vermont (or other area with high incidence of Lyme disease);
 - The tick is removed within 72 hours;
 - The tick is engorged (i.e., has been attached for 36 hours or more);
 - The tick is a blacklegged tick (*Ixodes scapularis*), if known; and
 - Doxycycline is safe for the patient.
- Watch for symptoms of tick-borne illness for 30 days after a tick bite.
- Contact your health care provider if you develop fever, chills, rash, headache, joint pain, muscle aches, or fatigue. Tell them about your recent tick bite and when the bite occurred.

First Report of Injury Instructions

- As soon as possible following removal of the tick (same day is recommended), contact a Telehealth Nurse and file a First Report of Injury following the instructions posted on the [DEC H&S SharePoint site](#) or the laminated card in the DEC Fleet vehicle or with your field gear.

Training Requirements:

Training Level	Description of training	Who needs to attend	Refresher frequency
<p>Awareness: A new employee/trainee with little to no previous experience in the subject area and performs his or her activities under direct supervision.</p>	<p>If you are an employee with Awareness level training regarding Field Safety, you do not frequently work in areas that present these hazards, but in the event you do, you can identify possible hazards. This PAD acts as awareness level training.</p>	<p>Everyone</p>	<p>Upon hire</p>

Field Safety (Poisonous Plants, Ticks) - Program Advisory Document

5/30/2023 Version: 1

<p>Qualified: Understands and demonstrates skills in one or more areas of the entry level and performs specific tasks under general supervision.</p>	<p>Employees regularly performing any type of field activity must complete the following trainings:</p> <ol style="list-style-type: none"> 1) Hazardous Wildlife: Poisonous Plants - 8mins 2) Hazardous Wildlife: Bugs and Snakes - 12mins 	<p>All field staff</p>	<p>Annual</p>
---	--	------------------------	---------------

Reference Documents:

This Safety Program Advisory Document acts as a quick reference guide. A full Field Safety program is under development and will be located on the Safety Department website.

[DEC H&S SharePoint Tick Information](#)

[Prevent Tick Bites & Tickborne Diseases | Vermont Department of Health \(healthvermont.gov\)](#)

[Dept of Health and Risk Management tick guidance 2022.pdf \(vermont.gov\)](#)

Definitions:

Bentoquatam: Used to prevent skin rash or irritation caused by coming into contact with poison ivy, poison oak, or poison sumac. It should not be applied to a skin rash caused by a poisonous plant.

Furocoumarins: A class of organic chemical compounds produced by a variety of plants.

Urushiol: An oily liquid responsible for the irritant properties of poison ivy, oak, and sumac.