National Park Service
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Northeast Temperate Network
Inventory & Monitoring Division

Safety Plan for the Northeast Temperate Inventory and Monitoring Network's Water Quality and Quantity Protocol



ON THE COVER
Brian Schuetz monitors a stream in MABI. NPS photo.

Safety Plan for the Northeast Temperate Inventory and Monitoring Network's Water Quality and Quantity Protocol

This is a self-published supplement to the Northeast Temperate Network's Water Quality and Quantity Protocol. The current protocol, standard operating procedures, data, and other information can be found online on the IRMA Data Store at https://irma.nps.gov/DataStore/Reference/Profile/2190885

For more information on NETN's Water Quality and Quantity Program visit NETN's websites at https://www.nps.gov/im/netn/water-quality-quantity-monitoring.htm

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Executive Summary

This safety plan documents the procedures used by the Northeast Temperate Network for activities related to the implementation of monitoring as described in NETN's Water Quality and Quantity protocol (https://irma.nps.gov/DataStore/Reference/Profile/2229872).

Revision History Log

Version #	Date	Revised by	Changes	Justification
N/A	N/A	N/A	Prior to version 3.00, the narrative and SOPs for a given year all had the same version number. Beginning with version 3.00, SOP version numbers are allowed to vary from each other, and are only updated when there are changes to the SOP. Entries in this table prior to 3.00 reflect changes specific to this SOP; if numbers are missing, there were no changes between the original procedures and version 3.00.	Convert version numbering to NETN standard
1.00	2006	N/A	Initial version. Originally numbered SOP 5	
3.00	December 2011	Bill Gawley	Reformatted using NRPS-NRR template. Re-numbered as SOP 3 to increase prominence. Added and adapted much of Safety SOP from NETN Forest Monitoring and Landbird Monitoring Protocols. Expanded sections on water-based activity safety. Added Appendices containing JHA and GAR	Aquatic Protocol v2.02 safety SOP inadequate.
3.01	December 2012	B. Mitchell	Minor edits for clarity New directions and info for hospital near MIMA, per Lou Sideris (MIMA)	Internal review
3.02	August 2013	E. Sharron	Minor grammatical and edits Renumbered as SOP 1 for consistency with other NETN protocols.	NETN standards
3.10	March 2022	A. Weed	Version 3.02 modified to standalone Safety Plan document; updated tick bite reporting and claims process; updates to Vehicle Safety section.	Internal review

Definitions of Personnel Roles (alphabetical)

Designated Office Staff (DOS): Refers to the individual who is designated to remain in the office and available to provide daily field work plans and emergency response services for field teams. The default DOS for the ACAD field team is the protocol lead. The DOS for the Lower NETN field team is the NETN Data Manager.

Crew member: Refers to a member of the water monitoring team who, along with the crew leader, conduct the majority of the field work for this protocol.

Crew leader: Refers to the field team leader for the water monitoring crew. The field crew leader is responsible for planning and making changes to the daily field work plans, communicating those changes to the DOS, and following daily check-in procedures.

Field team: Refers to the 2-3 person group of water monitoring staff who are working together at a sampling location. The Lower NETN field team monitors all non-ACAD, Lower NETN parks (MABI, MIMA, MORR, SAGA, SAIR, SARA, ROVA, WEFA) included in the protocol.

Monitoring staff: Refers to all personnel engaged in field activities related to this protocol. This includes National Park Service (NPS) employees, contractors, and volunteers either actively participating in or observing monitoring activities. Volunteers are required to have read and signed a Volunteer Agreement and all monitoring staff must read and sign the Job Safety Analysis before participating in any surveys.

NETN Data Manager: Refers to the National Park Service individual responsible for overseeing data management systems and associated applications for this monitoring protocol for the Northeast Temperate Network (NETN). Also serves as the DOS and primary supervisory for the Lower NETN field team.

NETN Program Manager: Refers to the National Park Service individual responsible for all design, implementation, and safety aspects of this monitoring protocol for the Northeast Temperate Network (NETN).

Protocol lead (NETN Water Monitoring Coordinator): Refers to the individual responsible for coordinating implementation of the water protocol. The Protocol lead is responsible for ensuring monitoring staff are properly trained in NPS Safety procedures and is the default Designated Office Staff (DOS) for the ACAD field team.

Overview

The Northeast Temperate Network (NETN) considers the occupational health and safety of its employees, cooperators, contractors and volunteers to be of utmost importance, and is committed to ensuring that all monitoring staff receive adequate training on National Park Service (NPS) safety procedures, incident reporting, and emergency response prior to field work. This Safety Plan and supporting appendices were designed to provide a summary of safety issues and general hazards for field sampling, as well as hazards that are unique to water monitoring, and to serve as a first reference in case of an incident.

Topics covered include physical hazards common around water and biological hazards, emergency procedures, incident reporting, field preparation, safe field procedures, vehicle safety, and workers compensation procedures. A Job Safety Analysis (JSA), which documents hazards associated with this protocol and recommends approaches to mitigate these hazards, is included as an appendix (Appendix S1.A) to this SOP. A Green, Amber, Red risk assessment (GAR) has been conducted for this protocol and is included as an appendix (Appendix S1.B). The JSA must be read and signed by all monitoring staff who conduct field work for this protocol, including volunteer assistants who help out occasionally. In addition, Appendix S1.C identifies the nearest hospital facilities to each NETN park and contains maps and written directions for the most direct route from the park to the hospital. This SOP does not cover first aid.

All safety procedures included in this SOP that are related specifically to working in and around water and water-quality sampling are adapted from Chapter A9 of the USGS National Field Manual. Staff performing hydrologic field work must familiarize themselves with that document found at: http://water.usgs.gov/owq/FieldManual/Chap9/content.html.

All staff performing hydrologic field work at Acadia NP should also familiarize themselves with the park's relevant Job Hazard Analyses (JHA). Contact the Acadia Air and Water Program Manager for access to the park's latest JHA documents.

Responding to an Incident

Life-Threatening Medical Emergency

- **Call 9-1-1 or park emergency number. If in NETN, use park radios to contact dispatch.** Uninjured, assisting personnel: Administer first aid to the best of your knowledge, ability and training. If appropriate, transport to emergency room. Directions to the nearest hospital from each park are in Appendix S1.C and emergency numbers are provided during training.
- Uninjured, assisting personnel: As soon as it is safe and practical to do so, inform the Protocol Lead and the park's emergency contact (provided during training) of the incident.
- For injured NPS employees and NPS volunteers, complete Worker's Compensation paperwork (Appendix S1.D). For other, non-NPS Monitoring Staff (i.e., contractors and cooperators), follow your organization's procedures for documenting accidents.

Non-Emergency Incidents

1. For a non-emergency incident that may require medical attention, injured monitoring staff must contact the protocol lead immediately after incident.
2. For injured NPS staff and NPS volunteers, complete Worker's Compensation paperwork (must be done within 48 hours of incident, Appendix S1.D).
3. Injured monitoring staff should seek medical attention, if needed.

NOTE: Never discard original paperwork related to workers compensation claims (including information from doctor's visits, CA-1, CA-2, CA-16 or CA-17 forms).

Field Preparation

All monitoring staff are responsible for maintaining a safe work environment for themselves and their coworkers.

Job Safety

An important tool used to promote safe conduct is the Job Safety Analysis (JSA; sometimes called a Job Hazard Analysis or JHA). This approach is consistent with NPS Directors Order 50 and Reference Manual 50B for Occupational Health and Safety. The JSA process is to (1) identify hazards associated with field and laboratory settings, and (2) as appropriate, develop approaches to mitigate those hazards. All monitoring staff for this protocol must read and sign the JSA in Appendix S1.A. In addition, water monitoring crew leaders and crew members must read the entire Safety SOP during training week.

First Aid Kits and Training

Every NETN vehicle should have a first aid kit that is to remain with the vehicle at all times. In addition to the vehicle first aid kit, a backpacking first aid kit should be with the monitoring crew at all times while in the field. An inventory of first aid kits should be performed by the crew leader prior to each field season to ensure that all medical supplies are in sufficient quantity and haven't expired. Each first aid kit will have an inventory list of the supplies it should contain. Items in first aid kits that are used should be promptly replaced.

At the beginning of every field season the water monitoring team will receive basic first aid and CPR training if they do not already have current certifications. Having a team member with Wilderness First Aid or Wilderness First Responder certification is strongly encouraged.

Daily Communication and Planning

Field teams are expected to carry a functioning primary and secondary mode of communication at all times while in the field. Unless they are waterproof, these items should be stored in a water resistant or waterproof container (e.g. Ziploc bag). At ACAD, monitoring staff will have a radio as the primary mode of communication, and a cell phone as the secondary communication device (cell phones, however, are not reliable in many sections of the park). For Lower NETN parks, monitoring staff will have a cell phone, and a personal locator beacon (PLB) if attending park staff does not have another communication device or when alone, since cell reception and radio usage vary significantly across the parks.

Field sampling requires planning that anticipates the risks and dangers to monitoring staff so that precautions can be taken to limit threats to human safety as much as possible. As a result, field teams must produce a trip plan, or float plan (in the case of monitoring from watercraft) before conducting field work. A thorough review and familiarity with the trip plan is required of all monitoring staff and a copy of the plan for ready reference always accompanies the field team to the field (Penoyer 2003).

Always check weather conditions before departure, and leave itinerary copy of the trip plan with the protocol lead. If the protocol lead will be in the field, or otherwise unavailable, another designated office staff (DOS) should receive a copy of the trip plan. The protocol lead or DOS must be made cognizant of the absolute necessity of checking in with the team. If the field team fails to check in on or before the planned check-in time for completion of field work, the protocol lead or DOS will immediately try to reach the team by all available methods. If the field team has not been reached within 30 minutes, the protocol lead or designee must notify emergency services and initiate a search. The trip/float plan includes at a minimum, the following:

1. Date and purpose of trip
2. Name of all people on trip
3. Vehicle license plate number(s) and parking location(s)
4. Destination and route
5. Time of departure and estimated time of return
6. Check-in time for completion of field work
7. Radio frequency or cell phone number
8. Type of watercraft, if applicable

If the trip is cancelled or if the plan changes while in the field, the field team must notify the protocol lead or DOS immediately. At the end of the day, field teams must notify the protocol lead or DOS that they have returned from the field.

All field teams are responsible for being aware of the time and ensuring that end of day check-ins occur on schedule; the protocol lead or DOS will call emergency services if the field team misses their check-in and cannot be located within 30 minutes of the check-in time.

Personal Gear

Each person is responsible for ensuring he/she is wearing field appropriate clothing and footwear such as long pants, a hat and hiking boots. Depending on the weather, rain gear or warm clothing should be taken into the field and it is recommended that an extra set of clothing be kept in the vehicle. Monitoring staff should take care to avoid over exposure to the sun by wearing sunscreen and/or protective clothing. Monitoring staff should always carry ample water (2-3 liters) and food when working in the field. Dehydration is a serious condition that can lead to more serious conditions if untreated, and should be avoided. It is important to drink liquid frequently to maintain hydration on a warm day, even before thirst sets in.

Environmental Conditions

Field work often is necessary under adverse atmospheric and other environmental conditions. Prepare for extreme temperature conditions. Before leaving for the field, check the weather forecast. Be familiar with temperature-related conditions such as hypothermia and sun exposure including how to recognize and treat them.

Weather

Weather conditions in the eastern U.S. can be hazardous and can change quickly. The field team is responsible for planning their day according to the local weather forecast and for being aware of their surroundings and changing conditions.

Rain can fall at a rate of several inches per hour and rapidly create dangerous flash flood conditions. Use local weather forecasts to plan activities and to ensure safety. Always be aware of rapidly rising stages in rivers and creeks. Beware of dry creek beds that can become raging rivers in a short period of time.

Working on ice requires experience, training, and knowledge of the waterbody over which the ice has formed. No monitoring staff for this protocol should work on ice.

Thunderstorms

Thunderstorms, which can be accompanied by hail, are common throughout the United States. Some are predicted by weather forecasters. Others can move into an area with almost no advance warning. Storms that produce strong winds and lightning are dangerous and should be avoided in the field.

If monitoring in a boat, watch the sky for signs of thunderstorms, and seek shelter by heading to shore before the weather deteriorates. If caught in a lightning storm ashore, seek shelter in a building or car as soon as possible. If no shelter is available, spread out and move to an open space. Squat low to the ground on the balls of your feet with your hands on your knees (do NOT lie flat on the ground). Avoid high elevations, conductive materials, and tall structures such as trees or telephone poles. If you are in the open and feel your hair stand on end (indicating lightning is about to strike), immediately make yourself the smallest target possible and minimize contact with the ground.

NOTE: A person struck by lightning can often be revived by prompt administration of CPR and oxygen.

Excessive Heat and Sun

Over exposure to heat and sun can cause dehydration, heat exhaustion, or heat stroke. All are serious conditions that can be life threatening, and should be avoided. When working in hot weather, be sure to drink plenty of water and eat foods that can replace electrolytes. Wear loose and light colored clothing, including a hat to block the sun's rays. It may help to shift the field schedule to avoid working outside during the hottest part of the day.

WARNING: Signs of heat stroke include hot, red or spotted (usually dry) skin, and the sufferer may be mentally confused, delirious, having convulsions, or unconscious. If heat stroke is suspected, seek immediate medical attention!

Poor Air Quality

Summer ozone and particulate matter levels occasionally exceed federal health standards. Young children, seniors, and those suffering from asthma, chronic bronchitis, chronic obstructive pulmonary disease or heart problems are especially sensitive to poor air quality and should minimize outdoor activity when poor air quality warnings are posted. The risks of occasional exposure to ozone and fine particulate matter are minimal for healthy individuals.

When poor air quality warnings occur, it is advisable for monitoring staff to avoid overly strenuous activity during the hottest part of the day (pollution levels tend to be lowest early in the morning), and to stick to lower elevations under a forest canopy.

To check local air quality forecasts, or learn more about health risks of air pollution, visit the AIRNow intergovernmental agency website: http://www.airnow.gov/.

Surface-water Activities

Safety of monitoring staff is always the first concern in conducting a sampling program and in the selection of sampling sites. The desired sampling frequency for most monitoring exposes monitoring staff to a variety of potentially hazardous field conditions across all seasons and climatic conditions, in addition to unforeseen, potentially catastrophic, short-term natural events (e.g., floods and storms) that can occur during the field effort.

Wading

Examine the section of a stream or river to be waded through. Check any available site notes for information relating to safety, including maximum depths in relation to stage, wading-section anomalies such as slippery conditions and drop-offs or holes (a wading rod can be used to help assess streambed conditions), and velocity curves for determining wadable stages. **Do not attempt to wade a stream for which values of depth multiplied by velocity equal or exceed 10 ft^2/s.** For example, a stream only 2 ft deep but with velocities of 5 ft/s or more can be dangerous to wade.

1. Always wear an approved personal floatation device (PFD) when wading in streams. The PFD must fit properly, be properly rated for weight, be in good condition, and be kept dry and indoors between trips. Whenever chest waders are worn, a PFD also must be worn.
2. Wear hip boots or chest waders. Boots and waders provide protection from cold and pollutants, as well as from underwater objects. Be aware of the possibility of slipping and going underwater (feet up, head down) while wearing them. Practice wearing hip boots and waders in a controlled, group-training situation that includes immersion in a swimming pool before using for field work. Avoid hip boots with tight ankles or chest waders that are tight fitting at the top. These are difficult to remove in an emergency situation. Hip boots and chest waders with a strap that is pulled closed reduce water coming into the boot.

Watch for debris floating downstream, such as logs, aquatic vegetation, or "rafts" of animals seeking higher ground. Watch for sand channels that can shift under foot and become quicksand. Watch the stream stage, especially when it could rise rapidly. When wading below a dam or control structure, contact the park resource manager or gate operator before entering the stream.

Working from Boats

All boats must carry equipment as required by the U.S. Coast Guard (USCG). Checklists are useful for ensuring that all the proper equipment is in place. Safety regulations for the various types of boats used by the NPS when obtaining water-quality samples are comprised of USCG and Occupational Safety and Health Administration (OSHA) rules.

Before working from a boat, obtain the appropriate training for the vessel being used. NPS staff operating motorized watercraft must complete the DOI Motorboat Operator Certification Course (MOCC) and keep their certification current. This training will cover all the specifics regarding boat operation as per USCG regulations. Before taking a boat on the water, ensure that the vessel is in operating condition. Boats are to be inspected annually. If a vehicle is being used to trailer the boat to the site, the vehicle and trailer are to be included in the preliminary inspection. Equip the boat with all items that the protocol lead deems appropriate for emergencies or equipment failures.

General Field Safety

Teamwork

Monitoring staff should work in teams (usually pairs) when conducting monitoring activities. When using a boat, working in a team is mandatory. Working in a team ensures that if one person is injured or incapacitated, another person will be available to respond to the incident. In some situations, it is expected that Lower NETN parks will not always be able to provide a second person to assist the crew leader at stream sites; in this case the crew leader must use his or her best judgment, and only proceed with sampling if the work can be done safely.

Slip, Trip, Fall Prevention

Uneven terrain, slippery rocks, dense brush, and fatigue are all hazards that could result in a slip, trip, or fall. The following guidelines should be obeyed by monitoring staff to avoid injury from slips, trips, or falls:

- Always wear appropriate footwear such as sturdy hiking boots
- Pay attention to where you are going, and remain alert of potential hazards
- Walk at an appropriate pace and adjust pace for changes in terrain (e.g., slow down and take smaller steps on slippery surfaces)
- When hiking long distances, take breaks to avoid fatigue
- When navigating to a location off trail, choose the safest route (this may not be the shortest route). Avoid river crossings, excessively steep terrain and sudden drop-offs. Always be careful when navigating over piles of scree, and alert others of falling rocks.

Proper use of Backpacks

Monitoring staff may occasionally be expected to carry ≥ 35 pound packs over uneven terrain, and it is important for monitoring staff to understand appropriate ways to pack, lift and carry a heavy backpack to avoid serious back, neck and shoulder injuries. Monitoring staff must follow these guidelines:

- All monitoring staff are expected to use a sturdy field pack with padded and adjustable hip and shoulder straps. Packs will be provided for each field team member.
- Pack heavy items in the center of the pack and close to your back.
- Make sure weight is evenly distributed from side to side.
- Once equipment is packed, tighten the compression straps to minimize movement inside the pack during travel.
- When picking up a heavy pack, use your legs to do the lifting, and use slow, smooth movements. Keep your back straight, and keep the pack close to your body. Do not twist or bend at the waist, and do not swing the pack quickly over one shoulder.
- Always carry a pack with both shoulder straps and with the hip belt and chest straps secured.
- The pack should be positioned near the center of the back, and most of the weight should rest on your hips.
- Keep your pack organized, and only carry the necessary equipment, food and water to reduce weight.

Carrying Other Gear

In addition to backpacks, some gear will be hand-carried (e.g., Hilti drill, wading rod). Whenever possible, put heavier items (e.g., drill batteries) into backpacks. If you must hand-carry heavy items, remember to slow down and rest frequently to avoid hand and arm fatigue. Any person hand-carrying a heavy item should always have one hand free for balance, and so that the item can be shifted between hands. If carrying a long item like a wading rod, be careful not to allow it to extend upwards and behind you, where it could injure a colleague.

Deer ticks and Tick-borne Diseases

Several species of ticks are commonly encountered in eastern U.S. parks while working in the field (Figure 1). This includes the deer (or black-legged) tick (*Ixodes scapularis*), which is a known vector of Lyme disease and Ehrlichiosis. Ticks are present in many parks visited for this protocol.

Monitoring staff should consider taking the following precautions to minimize the chances of having an embedded tick that could lead to illness:

- Clothes treated with tick and insect repellents have been found to be fairly effective tick repellant. Monitoring staff are strongly encouraged to treat their clothing with permethrin prior to conducting monitoring. Monitoring staff should carefully follow the application instructions on the spray bottles to ensure their safety – Permethrin should NOT be applied directly to clothing that is on a person's body. Permethrin will remain active for several weeks and through several washings. DEET-containing insecticides and other natural essential oil – based insecticides that have been approved by EPA can also be effective at repelling ticks for a short time when applied directly to clothes or skin.
- Monitoring staff should take additional precautions to protect themselves from ticks, including tucking pants in socks and tucking in shirts. Long sleeves and gaiters (especially

when treated with permethrin) have been found to help. Monitoring staff may consider other barrier devices, such as RynoSkin™, Under Armor®, elastic bands, and duct tape, when they are an option.

- Check clothes and skin for ticks at the end of every field day. Ticks typically need to be embedded for at least 24 hours for disease transmission to occur; therefore, the earlier ticks are found and removed, the lower your chances are of acquiring a tick-borne illness.

Monitoring staff should take the following steps if an embedded tick is detected:

- It is recommended that monitoring staff obtain a specialized tick remover spoon and use it to remove embedded ticks. If a spoon is unavailable, use fine-tipped tweezers to firmly grasp the tick close to your skin. Slowly and steadily pull the tick's body away from your skin. Be careful not to crush the tick's body to minimize the chances of it regurgitating fluids into the wound. Clean the bite area once the tick is removed with soap and water.
- If a tick is suspected of biting any NPS staff or volunteers during monitoring, and the tick is not removed, the affected person should (1) contact a medical professional to consider treatment, and (2) notify your direct supervisor to start a worker's compensation CA-1 claim to get a CA-16 (see Appendix S1.D.). It is recommended that the tick be saved for potential disease testing.
- Keep an eye out for any early symptoms of tick-borne diseases. If you start to notice symptoms, inform your supervisor so that a CA-16 can be processed to seek medical attention.
- Be sure to tell the doctor that you had an embedded tick, and that you regularly encounter ticks at work. Bring the tick with you if you saved it.
- The employee is required to record the tick bite incident into the Safety Management Information System (https://www.smis.doi.gov/ [only while on VPN)) within 48 hours and completed within 6 days or have their supervisor enter the incident if they are unable to. Monitoring staff will inform their supervisor of any treatment and diagnosis provided so that the appropriate worker's compensation claim in made if necessary.

Signs and symptoms of tick-borne diseases:

- **Lyme disease** symptoms may include a characteristic "bull's-eye" rash that develops a few days or weeks after the tick bite. At the same time, flu-like symptoms such as fever, malaise, fatigue, headache, muscle and joint aches appear. Other symptoms may include tingling or numbness in extremities, a spotted rash on extremities, bad headaches, high fever, joint aches, stiff neck, fatigue, or swollen glands. *Ixodes* ticks are most likely to transmit infection after feeding in skin for 2 or more days.
- **Rocky Mtn. Spotted Fever** symptoms include sudden onset of fever, headache, and muscle pain, followed by development of spotted rash at wrists or ankles.

- **Ehrlichiosis s**ymptoms are like Lyme disease but differ with a rapid on-set of fever and severe headache and the absence of the rash around the tick bite.
- **Babesiosis:** Most infected people have no symptoms. For those that do, there is a gradual on-set of not feeling well and loss of appetite and fatigue.
- **Red Meat Allergy** symptoms may include an initial painful, itchy lesion greater than 50mm that lasts at least a week after the tick bite. Within 6 months a severe anaphylactic reaction may occur as much as 3-6 hours after eating beef, pork, or lamb.

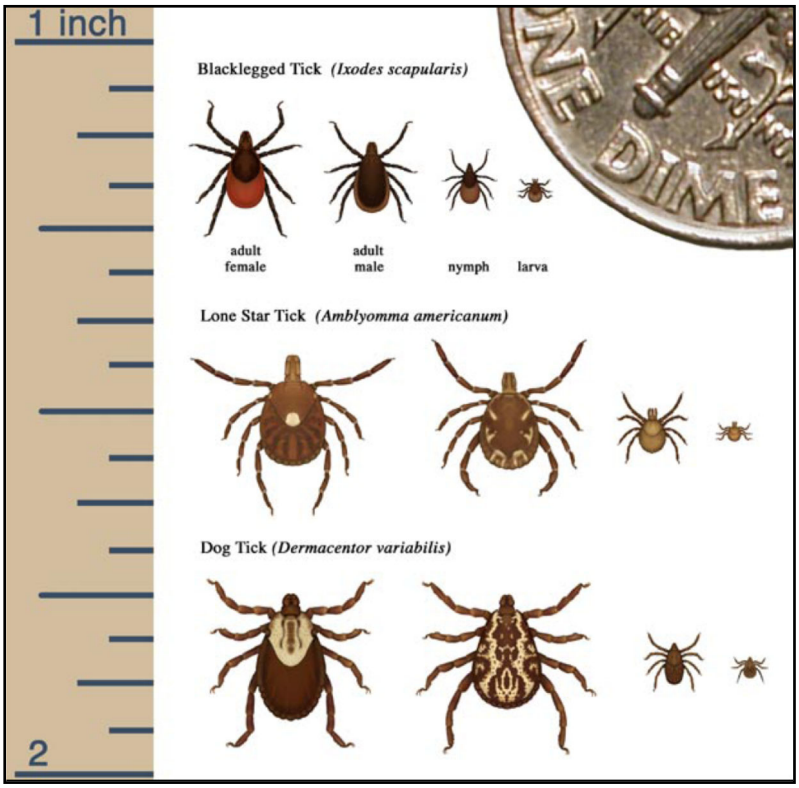


Figure 1 Tick species found in the eastern US.

Considerations for using repellents containing DEET:

- DEET products have been widely used for many years; these products have occasionally been associated with some adverse reactions. Frequently, reported reactions are about skin or eye irritation. There have been reports of central nervous system problems.
- By using products with lower concentrations of DEET and by applying as little of the product as needed for your outdoor work, you can reduce your expose to DEET.
- Products with about 20 - 30% DEET are considered effective for most insects, but do not seem to be effective against the black-legged or deer tick (*Ixodes scapularis*)
- Generally, products with about 20 - 30% DEET are considered safe for adults (except for those with allergies to DEET products) when applied as directed.

Considerations for using repellents containing permethrin:

- Products containing permethrin are for use on **clothing only – not for use on skin**. If permethrin is used improperly (e.g., sprayed directly on the skin), it can have negative health effects.
- Permethrin kills ticks that come in contact with treated clothing and one application lasts 2 weeks or more. Do not treat the clothing more than once every 2 weeks.
- Carefully read and follow manufacturer's instructions for application and refer to the MSDS sheet if you have questions.
- Do not apply while clothing is being worn.
- Apply to clothing item in a well-ventilated outdoor area, protected from wind.
- Lightly moisten the fabric with permethrin – do not saturate the fabric.
- Allow clothing item to dry outdoors for at least two hours before wearing (4 hours in humid conditions).
- Keep treated clothes in a separate bag for storage and transport.
- Launder treated clothing, separately from other clothing.

More information on permethrin:
http://www.epa.gov/oppsrrd1/REDs/factsheets/permethrin_fs.htm
http://drugsafetysite.com/permethrin/

Prophylactic (preventative) use of antibiotics:
In addition to treating early stages of Lyme and other tick-borne diseases, a new approach involves administering antibiotics to prevent Lyme disease transmission from the deer tick. While evidence is still preliminary, a single dose of antibiotics may reduce chances of Lyme transmission following a deer tick bite if 1) the tick was attached for 24 or more hours, 2) the bite occurred in an area where Lyme disease is common, AND 3) antibiotics can be started with 72 hours (3 days) of the time the tick was removed. It is only after symptoms of Lyme develop that a longer duration of antibiotics should be administered.

A few things to keep in mind about antibiotic therapy:
According to the US Public Health Service, Centers for Disease Control:

- Every time a person takes antibiotics, sensitive bacteria are killed, but resistant germs may be left to grow and multiply. Repeated and improper uses of antibiotics are primary causes of the increase in drug-resistant bacteria.
- Misuse of antibiotics jeopardizes the usefulness of essential drugs. Decreasing inappropriate antibiotic use is the best way to control resistance.
- Antibiotic resistance can cause significant danger and suffering for people who have common infections that once were easily treatable with antibiotics. When antibiotics fail to work, the

consequences are longer-lasting illnesses; more doctor visits or extended hospital stays; and the need for more expensive and toxic medications.

More information on Lyme Disease and Ticks:

Center for Disease Control:
http://www.cdc.gov/lyme/
(also a free webinar on tickborne diseases)

American Lyme Disease Foundation:
http://www.aldf.com/

Tick Management Handbook:
http://www.ct.gov/caes/lib/caes/documents/publications/bulletins/b1010.pdf

Poisonous Plants and Animals

Both for safety and protection of park resources, it is never advisable for monitoring staff to eat wild plants while working in a National Park, regardless of their confidence in plant identification. Monitoring staff should also keep a safe distance from wildlife.

Poison Ivy

Poison ivy (*Toxicodendron* spp.) is present in most NETN parks and can be very abundant in localized areas. Abundance of poison ivy is not a justification for excluding a sample site. However, if anyone is susceptible to extreme allergic reactions to poison ivy, this person should avoid working in areas infested with poison ivy, and all gear that has been near poison ivy needs to be carefully cleaned. When working in areas with poison ivy, it is advisable that monitoring staff take precautions to avoid skin contact with any part of the poison ivy plant. Using a pre-exposure cream and wearing long sleeves and long pants, hats, and work or rubber gloves can help reduce amount of skin contact with the plant, and if needed, use poison ivy wipes after contact. Monitoring staff should be careful not to rub their faces when working around poison ivy. After working in an area with abundant poison ivy, monitoring staff should gently wash exposed skin in cool water with the specially provided poison ivy soap, and should change into fresh field clothes. At the end of a field day, monitoring staff should also wash (with cool soapy water) potentially contaminated equipment. If someone has a minor allergic reaction, use the provided cream. If a severe allergic reaction occurs, the person should seek medical attention, notify the protocol lead as soon as possible, and if an NPS employee or NPS volunteer, file a workers compensation claim.

Venomous Snakes

The following species of venomous snakes may occur in some NETN parks: copperhead (*Agkistrodon contortrix*), and timber rattlesnake (*Crotalus horridus*). The best course of action is to avoid all snakes by keeping them at a safe distance. When in venomous snake country, pay attention to where you put your hands and feet, and be aware around rock piles and bedrock outcrops. Note that many snake bites are purely defensive and contain no venom. Bites from immature snakes are much more likely to contain a more dangerous amount of venom than bites from adult snakes. Should you receive a snake bite from a potentially venomous snake, follow the procedure below:

- Treat all bites as if envenomation has occurred.
    - Time is of the essence
    - The field team should assign one person to use the radio or cell phone to call for assistance. This person should identify the call as a snakebite incident and identify the victim's location and the closest possible point of access for responders.
    - In treating the victim, quickly remove rings, watches, shoes etc., before swelling begins.
    - Immobilize the bitten limb firmly with a splinted elastic (Ace) bandage and get the victim out of the woods and to a hospital as quickly as possible.
    - **Do not** use thin circulation restrictive cords, pack with ice for long periods (more than five minutes) or attempt to cut open or otherwise enlarge the fang punctures.
- Reassure the victim that they will be OK and try to remain calm both for the victim and for all others involved.
    - In a field team situation, begin leading the victim slowly out of the woods as soon as the bitten limb has been immobilized. **Move as slow as necessary to maintain a normal heart rate for the victim.** Waiting for assistance will only prolong the process of getting proper medical treatment.
    - In a solitary situation, establish radio contact and relay the necessary information as you walk slowly out of the woods. Focus on remaining calm and maintaining a normal heart rate.
- It is better to spend your time getting to proper medical treatment facilities than it is to attempt field therapy or wait for assistance to reach you.

The range of the copperhead covers the following NETN parks: Morristown NHP (MORR), Roosevelt Vanderbilt NHS (ROVA), Saratoga NHP (SARA) and Weir Farm NHS (WEFA). The likelihood of encountering a copperhead is low in NETN parks. Copperhead bites are not typically considered life threatening, and in most cases antivenom is not administered.

The range of the timber rattlesnake covers all NETN parks except Acadia NP (ACAD). This species is listed by NatureServe as "critically imperiled" (S1: New Hampshire, Vermont, Massachusetts, and Connecticut) or "vulnerable" (S3: New York, Pennsylvania) throughout NETN, and the likelihood of encountering a timber rattlesnake in NETN parks is very low. Adult timber rattlesnakes can deliver a lethal dose of venom.

Bees, Wasps, and Yellow Jackets

If any monitoring staff are allergic to bee stings, they should alert the protocol lead and crew leader, and make sure to carry appropriate medications. If they carry an epinephrine injector and are working in a team, they should make sure all members of their field team know where it is carried. Be alert to potential hive and nest locations while hiking to plots and working on plots. Look for insects

travelling in and out of one location (e.g., brush, ground holes, and hollow logs). If someone is stung, Benadryl and a cold compress may bring relief. If stinger is left behind, scrape it off the skin. Do not use tweezers as this squeezes the venom sack, worsening the injury. If the victim develops hives, asthmatic breathing, tissue swelling or a drop in blood pressure, seek medical help immediately.

Black Bears

Black bears range throughout the Northeast, but an encounter with a bear in the field is not likely since bears generally avoid people. Nevertheless, be alert for bears near dawn or dusk, and be especially aware of mother bears with cubs. Never approach cubs or come between a mother bear and her cubs. If a bear is encountered, face the animal and continually make noise – do not freeze or remain silent. Appear larger by standing tall, waving arms or jacket over your head, and slowly back away. Never run from a black bear; if charged or attacked, throw objects, shout loudly, and fight back aggressively.

Chemicals

Monitoring staff may be routinely exposed to chemicals during the water-quality sampling process. Chemicals—as solids, liquids, or gases—range from dilute salt solutions to strong acids, bases, dyes, and organic compounds. Virtually all the chemicals used in this protocol are not hazardous. However, field measurements and the processing of sample water can cause chemical reactions that generate dangerous fumes and by-products. Crew leaders will identify to members of the field team any substances that require special care and handling prior to their use and will explain and demonstrate precautionary measures.

Be cognizant of the regulations that govern the use, transportation, and disposal of chemicals and wastes. Because regulations vary greatly from state to state, contact your safety officer or state agency for the proper procedures in your locality. Use proper personal protective equipment and apply common sense when working with dangerous substances. Adhere to the following safety guidelines:

- Avoid unnecessary exposures and spills. Never place chemical containers where they can be knocked over.
- Clean up chemical residues or spills immediately and appropriately. Keep chemical spill kits near the work area.
- Work with adequate ventilation or under a hood when working with hazardous or reactive chemicals and gases.
- Keep eye wash kits readily accessible while working with chemicals.
- Handle and mix chemicals and compounds appropriately (check the MSDS). For example: when transferring flammable liquids, all metal containers must be grounded to eliminate igniting the liquid with an electrical spark. When preparing a hydrochloric or nitric acid cleaning solution, the sequence is to put water in the vessel first and then add the acid.
- Open chemical containers slowly and carefully, wearing proper personal protective equipment. Open frozen or encrusted lids with caution. For example, to open fused-glass

ampules, break the ampule at the base of neck, in a direction away from you and others. Use an ampule breaker if it is safer for you, and wear latex gloves. Check containers and ampules for contents lodged near the container top or neck. Dislodge trapped material by gently tapping the container at the top.

- Properly dispose of all wastes. Do not let any wastes accumulate in your vehicle or work area – they can produce corrosive and/or potentially explosive fumes. Do not discard any wastes into the environment.

Vehicle Safety

Responsibilities of NPS Vehicle Operators

Field teams are responsible for inspecting their vehicles before every use to ensure the vehicles are in safe working condition. This includes visually checking tire pressure, adjusting mirrors, and making sure equipment is secure. Field teams must perform preventative maintenance in a timely manner (e.g., having oil changed by a qualified mechanic), and report any potential hazards or needed repairs to the protocol lead.

Rules that must be followed when operating an NPS vehicle:

- Seatbelts must be worn by all occupants when the vehicle is in motion.
- The use of handheld electronic devices by the operator is prohibited in all vehicles (including rental or privately owned) while on official NPS business or travel (you may be held liable if an incident were to occur).
- The operator is responsible for: Checking gauges for lights (report all lights to the facility manager, for red lights e.g. “brake” or “oil symbol”, do not drive the vehicle), check for proper tire inflation, wiper/washer operation, complete a “walk around” visual inspection, and the vehicle must be returned clean(trash) with fuel at or above half of a tank.
- Each vehicle has a fleet charge card for fuel and service. The use of premium gasoline is not permitted. After fueling the vehicle, record mileage on the receipt and keep the receipt. Missing fleet cards should also be reported to your supervisor immediately.
- Vehicles should be locked when not in use. The operator is responsible for safeguarding the keys and charge card at all times. Unless the vehicle is “standard shift”, only set the parking brake on steep inclines, they will stick if left for a long period of time.
- Do not use NETN vehicles to push, pull, tow, or “jump-start” other vehicles. If in ACAD, contact Dispatch to help jump dead batteries.
- Use the most direct route to complete business. The vehicle cannot be used for “side” or personal business. NETN vehicles can only be used to and from a residence with authorization. Non-Government affiliated personnel (hitchhikers, family members, visitors) are prohibited.
- The use of alcohol, drugs, or any medication that may inhibit your driving ability is prohibited.

- The use of tobacco products, including smokeless tobacco, electronic, and vape devices is prohibited.
- All vehicles must be inspected in accordance with the inspection laws of the state in which they reside. They do not have to carry a state inspection sticker.

Because government vehicles are self-insured, damage resulting from government vehicle accidents are generally paid by the driver's program (e.g., NETN). However, in cases of severe negligence, the driver found at fault for the accident may be personally liable.

GSA Rental Information

Preventative maintenance records are monitored by GSA Fleet. When service is required, the contact person for the rental (likely the NETN program manager) will receive an e-mail that identifies the maintenance service required and when the vehicle is due for that service. Field teams must have requested services performed promptly after the notification.

Break downs

At the first sign of mechanical trouble, gently and smoothly take your foot off the accelerator. Do not brake hard or suddenly, stay calm, signal, and gently work your vehicle over to the break-down lane or side of the road. Once off the road, keep the vehicle visible (flashers, flagging). If you have a flat tire call for roadside assistance. There is no need to endanger yourself changing a tire on the roadway. Call 1-800-241-3673 for Ford Roadside Assistance. If the manufacturer's number does not work you may need to check the sticker on the window for the correct number or call the local or state police for assistance.

If the vehicle is unsafe to operate, arrange for a tow service and pay for these services with the vehicle charge/gas card using the services described above. Contact state or local police in case of an emergency or if you experience delays in finding a towing service. If the vehicle is safely out of traffic, wait inside the vehicle with the doors locked. If someone stops to offer assistance, open the window slightly and ask them to call the roadside assistance numbers or the police if you haven't done so already. The vehicle will be towed to the nearest approved repair facility.

Do not walk on an interstate, especially during inclement weather and when it is dark. However, if you do not have cell service and you can safely reach a source of help on foot without jeopardizing your safety, try the direct approach by walking. Keep as far from traffic as possible and walk on the right side of the road. Do not cross a multi-lane highway.

Procedures for reporting a motor vehicle accident

A copy of this SOP (including all appendices) should be in every NPS and GSA vehicle at all times. Note that some procedures are different if vehicles are National Park Service (NPS) owned versus Government Services Administration (GSA) owned. Therefore GSA vehicles should also have a GSA Motor Vehicle Accident Reporting Kit (GSA Form 1627) in the glove compartment.

In case of automobile accident in a **GSA-owned vehicle**, locate the GSA Motor Vehicle Accident Reporting Kit (GSA Form 1627) in the glove compartment, and follow the instructions therein. Also contact **Joanna Lubach**, NETN's GSA Representative at (603) 854-1645.

In the event of an automobile accident in an **NPS-owned** vehicle, follow the procedures listed in Appendix S1.E and complete the corresponding forms (SF-91 and SF-94) in Appendices S1.F and S1.G. Note that this SOP and corresponding appendices address Federal guidelines and requirements for accident reporting only. Cooperators and contractors may have additional reporting requirements.

Contact Information

Northeast Temperate Network:
Aaron Weed, NETN Program Manager
Marsh-Billings-Rockefeller NHP
54 Elm Street
Woodstock, VT 05091
work: (802) 457-3368 x237
e-mail: aaron_weed@nps.gov

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Appendix S1.A. NETN Job Hazard Analysis (JHA) for Water Monitoring Field Work

JOB SAFETY ANALYSIS:	**JOB TITLE:** **Water Quality/Quantity Field Monitor** **DEPARTMENT:** **Northeast Temperate Network** **ANALYSIS BY:** **Elizabeth A. Arsenault, ACAD/NETN Physical Science Technician**	☒ **NEW** ☐ **REVISED** ☒ **REVIEWED** **William G. Gawley, ACAD/NETN Biologist**
Required and/or Recommended Personal Protective Equipment: *Required:* At least two methods of communication (i.e., park radio and cell phone in most parks; Personal Locator Beacon as backup), driver's license, personal flotation device (PFD), throw-bag lifeline, first aid kit. *Recommended as appropriate:* Rain gear, condition-appropriate gloves, footwear and clothing, safety glasses, sunglasses, sunscreen, insect repellent, sufficient food and water.		

Tasks	**Potential Hazards**	**Recommended Action or Procedure**
Planning and Communication	Not being prepared and following plan/itinerary. Communication breakdowns.	Plan ahead. Know where you will be going, the stream, lake or pond to be monitored, and any particular hazards associated with the monitoring site. Check the weather forecast and plan accordingly. Check in with DOS prior to field work with a trip plan, and after field work to confirm the work is safely completed. Contact the DOS with any changes, including cancellation of field work. If return will be delayed, contact DOS before agreed-upon check-in time to establish a new check-in time. Always carry at least two methods of communication, and verify that they are full charged before starting field work.
Emergency Preparedness	Not knowing emergency procedures. Not having emergency supplies.	Know who to contact and how to reach them in the event of a life-threatening or non-life-threatening emergency. Have directions to emergency medical facilities Have current CPR and first aid certification. Carry a well-maintained first aid kit.

Tasks	Potential Hazards	Recommended Action or Procedure
Working outdoors during storms	Being struck by falling trees or branches; being struck by lightning; being caught on lakes during high wind and wave conditions; being caught in flash floods/high streamflow	Listen to the weather forecast each morning (park radio and/or internet). Plan or adjust field work to avoid being out in thunderstorms. Water monitoring is never conducted during thunderstorms. If you see or hear a thunderstorm coming, retreat from high ground and exposed areas. Go inside a sturdy building or vehicle, if possible. If you can't get inside and if you feel your hair stand on end, lightning is about to strike. Make yourself the smallest target possible and minimize contact with the ground. Crouch down on your pack on the balls of your feet and keep your feet close together. Place your hands on your knees and lower your head. During a thunderstorm, members of the field team should stay separated by at least ten feet. Postpone lake or pond monitoring when excessive wind speeds or whitecaps exist. Postpone work if safety will be compromised by storm and/or flooding conditions.
Working in heat, humidity, or cold	Heat exhaustion, sunburn, dehydration, hypothermia	Evaluate the weather forecast each morning and plan field work accordingly. Carry and drink plenty of water. Take extra breaks during extreme weather events. Adjust the work routine to minimize exposure to extreme heat and humidity. Take adequate garments for all possible weather conditions. Choose clothing that will keep you warm even if it gets wet. Wear sunglasses to avoid eye damage. Apply sunscreen and lip balm.
Hazard trees	Being struck by falling trees or branches	Look up. Be alert for widow-makers, storm damaged trees with large broken limbs, and unstable standing dead trees. Do not spend extended time in an area with hazard trees.
Poisonous plants, especially poison ivy	Contamination/toxicity from contact with poisonous plants	Learn to identify poison ivy in its many growth forms. Wear long sleeves and pants. Be aware of poison ivy and avoid coming in direct contact with it. Thoroughly wash hands, equipment, and clothes with Tecnu or similar specialized soap if you come into contact with poison ivy.

Tasks	Potential Hazards	Recommended Action or Procedure
Bee, wasp, or yellow-jacket stings	Multiple stings from disturbing or stepping into nest areas	Be alert to hives in brush, ground holes, or hollow logs. Watch for insects traveling in and out of one location. If you are allergic to bee stings, tell your partner (if working in a pair). Make sure you carry emergency medication with you at all times and that your partner (if applicable) knows where you keep it. Wear long sleeve shirts and trousers, tuck in shirt. Bright colors and metal objects may attract bees or wasps. If you are stung, a cold compress may bring relief. If stinger is left behind, scrape it off of skin. Do not use tweezers as this squeezes the venom sack, worsening the injury. If the victim develops hives, asthmatic breathing, tissue swelling or a drop in blood pressure, seek medical help immediately.
Bites from mosquitoes, black flies, and other insects	Itchy reactions to multiple bites	Wear long sleeves and pants. Avoid sitting on the ground or on logs, especially in dry sunny grassy areas. Use insect repellants. Do not apply Permethrin, Permanone, or greater than 30% DEET directly to skin, only to clothing. Carry after-bite medication to reduce skin irritation.
Ticks	Contracting diseases transmitted from ticks	Use tick avoidance precautions, including pre-treating clothing with Permethrin, tucking pants into socks and shirt into pants when hiking. Wear clothes (including pants and long-sleeved shirts) that are light colored and check for ticks on clothing after traveling through vegetation. Conduct a thorough tick check every evening after completing field work. Know how to identify tick life forms, and the signs & symptoms of tick-borne diseases.
Venomous snakes	Being bitten by a venomous snake	Venomous snakes are rare in NETN parks. Be alert for snakes in thick vegetation and rocky habitats. Look **before** putting hands or feet in places out of immediate view. Treat all bites as if envenomation has occurred. Immobilize the bitten area and keep it lower than the heart. Apply a bandage, wrapped two to four inches above the bite, to help slow the venom. This should **not** cut off the flow of blood from a vein or artery - the band should be loose enough to slip a finger under it. Remove rings, watches, shoes, etc. before swelling begins in earnest. Seek medical attention immediately and/or call for help. Remain calm. Rattlesnake bites are more likely to be life-threatening.

Tasks	Potential Hazards	Recommended Action or Procedure
Working in bear territory	Black bear encounter	Be especially alert near dawn or dusk. Be especially aware of mother bears with cubs. Never approach cubs or come between a mother bear and her cubs. Face the animal, continually make noise – do not freeze or remain silent. Appear larger by standing tall, waving arms or jacket over your head. Slowly back away – do not approach a bear. Never run from a bear. Throw things and shout loudly. Fight back aggressively.
General foot travel	Falling or tripping due to wet areas, poor footing, uneven terrain, loose/rolling rocks and heavy pack.	Use caution at all times. Walk carefully, watching footing. Wear appropriate boots for conditions. Stay aware of your feet. Address blisters and hot spots promptly. Avoid carrying excessive weight loads or unbalanced loads. When walking on a steep slope, lean upslope. Ensure that stems and vines are alive and can support your weight before relying on them. Use extreme caution traversing wet rocks, streams, steep slopes or blowdown areas.
Walking through thick vegetation	Cut, scratched, or bruised by vegetation; eye or ear injuries	Shield your eyes and face with your hands, glasses, or hat when moving through tall thick brush. Keep your head and eyes pointed somewhat downward so your head hits obstacles before your eyes. Wear pants and long-sleeved shirts to protect bare skin. Look before you grab vegetation to avoid grasping thorny stems. Do not follow closely behind other people to avoid having branches snap back and hit you.
Carrying a pack and other equipment	Injuries from improper packing, adjustment, and lifting of backpacks. Injuries from improper carrying of gear	Learn how to properly pack, adjust, lift, and carry a pack. When hand-carrying gear, keep one hand free. If carrying long equipment, be aware of other people and never swing around quickly. Avoid allowing a long piece of equipment to project up and behind you, where you cannot see it.

Tasks	Potential Hazards	Recommended Action or Procedure
Working in streams	Injuries from slipping, tripping, falling and/or drowning, upstream and downstream hazards, such as dam releases, downstream rapids or outlet into large river	Attend wader safety training. Wear PFD when wading, and have throw bag available. Check with park resource manager about upstream conditions such as scheduled or other releases from impoundments, or construction. Be aware of downstream conditions such as swift water or rapids, or confluence into a large river. Do not monitor a stream if the velocity x depth is greater than 10 ft^2/sec. Conduct a visual inspection of stream site for potential hazards. Wear appropriate foot gear for stream monitoring. To ensure safety and to stay dry, use the appropriate knee boot, hip, or chest wader. If crossing a stream, unbuckle your pack and be prepared to jettison gear should you lose your balance or fall in. Be aware of shifting sandy bottoms, slippery rocks, and holes between rocks. Be aware of and avoid underwater hazards such as snags, trash, broken glass and rusted metal. Use a sturdy pole or walking stick for balance.
Working from a boat	Injuries from improper carrying of boat, motor and other equipment, falling and/or drowning, equipment malfunctions	Do not overload boat with people or equipment. Wear PFD when working in and around water and have throw bag available. Attend the one-time DOI Motorboat Operations Certification Course (MOCC) and refresher training every 3 years. Attend canoe and wader safety training and refreshers. Learn how to properly lift and carry a boat and motor. Consider using canoe dolly to transport boat if possible. Have motor inspected each year prior to monitoring season and fire extinguisher inspected monthly. Regularly check inflatable boat for leaks. Conduct a visual inspection of boat launch and surrounding area for noticeable hazards. Maintain a low center of gravity, especially in canoes. Use extreme caution when standing in canoes and small boats. Use caution when reaching overboard to obtain samples, retrieve the anchor, etc. and know self-rescue techniques.
Calibrating instruments and other lab work	Injuries from slips, trips, and/or falling, chemical spills and exposure	Attend hazard communications training, which includes proper labeling procedures, use of MSDSs, spill procedures and emergency lab procedures. Obtain training to ensure proper equipment use techniques. Utilize lab ventilation and wear proper personal protective equipment (PPE) when using chemicals. Keep lab or other workspace clean and uncluttered.

Please sign your name below to certify that you have read the Job Hazard Analysis and fully understand the Safety Standard Operating Procedures for the NETN water quality monitoring protocol.

Print Name:_____ Signature:_____ Date:_____

Print Name:_____ Signature:_____ Date:_____

Print Name:_____ Signature:_____ Date:_____

Print Name:_____ Signature:_____ Date:_____

Print Name:_____ Signature:_____ Date:_____

Print Name:_____ Signature:_____ Date:_____

Print Name:_____ Signature:_____ Date:_____

Print Name:_____ Signature:_____ Date:_____

Print Name:_____ Signature:_____ Date:_____

Appendix S1.B. Green-Amber-Red Analysis (GAR) for Water Monitoring Field Work

This appendix describes application of the GREEN-AMBER-RED (GAR) Risk Assessment Model as outlined in the NPS Operational Leadership Student Manual (Version 2; July 2011) to the NETN Water Quality and Quantity Monitoring Protocol. This GAR was written by the Acadia Water Monitoring Crew Leader (Elizabeth Arsenault) and William Gawley (Water Monitoring Protocol Lead) on 29 March 2012 and approved by the NPS Northeast Region I&M Program Manager (John Karish) on April 2012.

The GAR model allows for a general assessment of a task or operation and generates communication concerning the risks of an activity (in this case, conducting the field-based activities of the NETN Water Quality and Quantity Monitoring Protocol). The most important parts of the process are the team discussions leading to an understanding of the risks and how they will be managed.

The GAR analysis is a seven step process. Each step is defined and explained in the context of the NETN Water Quality and Quantity Monitoring Protocol below.

Step 1: Define the Mission or Task

The NETN Water Monitoring protocol includes two field-based monitoring activities: stream monitoring while wading, and lake monitoring from a boat or lake's edge. Monitoring staff are part of two-person field teams who work independently from each other. One field team samples in ACAD, and one team samples in Lower NETN. The activity may be conducted away from roads and trails but no site includes a hike more than 30 minutes from the parked vehicle.

Step 2: Define the Threats

The threats/hazards for this activity along with mitigation measures are described in the associated JSA (Appendix S1.A). Of specific concern is that monitoring staff will regularly be working on uneven and possibly slippery streambed surfaces. In lakes and ponds, staff will be working from a canoe or inflatable boat or at the water's edge. A fatality through drowning or a severe slip and fall is possible and is the most significant risk encountered when conducting this activity.

Step 3: Assess Risk and Assign a Numerical Value

The numerical ranks (**Error! Reference source not found.**S1.B.1) were assigned by Elizabeth Arsenault, the Acadia Water Monitoring Crew Leader, and William Gawley, the NETN Water Monitoring Protocol Lead. NETN staff reviewed the ratings and analysis and their suggestions were incorporated. It should be noted that at the time final numerical values were assigned (April 2012), the protocol had been implemented for several years and considerable time and effort had already gone into evaluating and mitigating risks.

The activity risk can be visualized using the colors of a traffic light. If the total risk value falls in the GREEN ZONE (1-35), risk is rated as low. If the total risk value falls in the AMBER ZONE (36-60), risk is moderate and you should consider adopting procedures to minimize the risk. If

the total value falls in the RED ZONE (61-80), you should implement measures to reduce the risk prior to starting the event or evolution.

The ability to assign numerical values or "color codes" to hazards using the GAR Model is not the most important part of risk assessment. The critical steps in the process are team discussions leading to an understanding of the risks and how they will be managed.

Table S1.B.1. NETN Water Monitoring Protocol assigned risk codes of 0 (For No Risk) through 10 (For Maximum Risk) to each of the eight Green-Amber-Red Risk Assessment elements.

Element	Rating
Supervision	2
Planning	2
Communication	2
Contingency Resources	5
Team Selection	3
Team Fitness	3
Environment	6
Event/Evolution Complexity	6
Total Risk Score	29

Step 4: Identify Risk Control Options

Supervision

The NETN Water Quality and Quantity Protocol clearly identifies personnel, roles and responsibilities, and a chain of command. The NETN protocol lead is responsible for the safety of both the Acadia and Lower NETN (LNETN) field teams and is available to answer questions from all monitoring staff during normal operational hours (i.e., 8:00 am to 4:30 pm, Monday-Friday). The crew leaders at Acadia and in the LNETN are the safety officers for their respective field teams, and conduct a daily briefing to ensure that safety procedures are explained, understood, and followed. If a crew leader is not present in the field, the next most senior crew member is the designated safety officer. All monitoring staff are required to work with a partner in the field. Monitoring staff are required to follow check-in procedures with the NPS staff at their assigned park. Additionally, there is a NPS Safety and Environmental Protection Specialist stationed at Acadia who is available for consultation and who provides safety training for all staff based in the park. A score of 2 was assigned due to the availability of on-site supervision and the fact that the team is not large, and work is conducted in pairs with regular check-ins.

Planning

The NETN Water Quality and Quantity Protocol includes numerous SOPs that explain hiring, training, personal safety, emergency communication (equipment and contacts), and appropriate field

activities. Crew members are required to review these materials during training, and crew members are encouraged to have first aid and CPR training. Due to this advance planning, written documentation, and training procedures, a low score (2) was assigned.

Communication

Routine and emergency communication equipment and procedures are explained in manuals and instructions supplied with the equipment. Contact information for appropriate park staff and emergency services, and most effective communication methods for each park and sample site are provided during training at the beginning of the season and reviewed upon arrival at each park. Communication includes early coordination by the crew leader with park natural resource managers, rangers, and dispatch at least one month in advance of a visit to schedule field assistance and logistics. Daily monitoring and sampling plans are agreed upon and communicated to all crew members and the protocol lead at the beginning of the day. A daily check-in procedure is in place for the field team to ensure that a responsible party knows if someone has not returned from the field activity in a timely manner. Due to this advance planning, written documentation, and training procedures, a low score (2) was assigned.

Contingency Resources

Contingency resources include communication equipment and procedures that explicitly involve park rangers, park dispatch, and 9-1-1. Crew members must always have at least two modes of communication (park radio, cell phones, and/or Personal Locator Beacon). Acadia crews are assigned park radios and have access to park cell phones, and Lower NETN crews are assigned a park cell phone and a park radio. Notification of emergency services should happen within minutes of an incident, but emergency services may not be able to reach the crew quickly due to the remoteness of some sites. A score of 5 was assigned instead of a lower score because of the potential delay before emergency services could reach the crew. This score was also assigned because neither crew currently has access to a Personal Locator Beacon or SPOT GPS Messenger, and cell reception is not always reliable in ACAD.

Team Selection

The monitoring protocol clearly identifies the essential skills and abilities required to execute this protocol in a competent manner. Prior experience with sampling water chemistry and performing field work is required for most team members. Each year before the field season, permanent ACAD and LNETN staff attend a refresher training as well as training on new or modified activities. Seasonal employees entering duty later in the season and temporary field assistants in the LNETN receive on-site training by the crew leader while monitoring if they are unavailable for pre-season training. This is due to the long field season (April through October) and limited hours available for seasonal employees. A score of 3 was assigned (instead of a lower score) because some crew members may have limited experience and a lack of extensive pre-season training. Learning job skills in the field can distract from attention to safety issues, even though a review of hazards and safety practices is conducted at the beginning of each site visit.

Team Fitness

Team selection seeks to strive for an overall high level of initial team fitness. Water monitoring field teams are in the field for approximately six hours per day at ACAD (not including drive times) and up to eight hours per day (not including drive times) in the LNETN. Teams may be required to hike several miles through rough terrain and work during harsh weather conditions (i.e. high heat/humidity, cold, and rain). Team members are instructed to carry adequate water and food, rain gear, and changes in clothes, as there is a potential to get wet while working in, near, or on the water. Team members also check daily weather forecasts and the crew leader has the option to adjust the daily field schedule during days with high heat, high humidity, high air pollution, or other hazardous weather conditions. Sampling always occurs during daylight hours. A score of 3 was assigned because the shifts are not long, even though the work can be strenuous. Monitoring staff must be diligent about adequate rest and nourishment to ensure that fatigue does not become a factor.

Environment

Environment was assigned a higher score (6) primarily because of the inherent dangers associated with working in streams and on lakes or ponds. Streams often have a very uneven and slippery substrate, and caution is needed to avoid slipping and falling in this environment. Activities occur during a variety of weather conditions, but are cancelled during thunderstorms and high winds. The crew leader is responsible for deciding when to cancel field activities due to weather or otherwise hazardous conditions. The protocol lead may also call off field activities, and will communicate decisions to field teams through the crew leader. Unexpected encounters with dangerous wildlife are possible (e.g., black bears, venomous snakes, etc.), mostly at the LNETN parks. Despite training, working in pairs, and using a life vest on lakes/ponds and streams the possibility exists for an individual to slip and be rendered unconscious, potentially leading to a drowning.

Incident Complexity

Incident complexity was assigned a higher-medium score (6) because daily field conditions vary constantly due to weather, and water conditions (waves, currents, flash flooding) can change quickly and unpredictably. Individual monitoring staff must use judgment and experience to respond appropriately. In addition, field teams can be (or perceive themselves to be) under considerable pressure to complete the field workload within stringent time intervals to accommodate water sample holding times and shipping requirements, and travel schedules. These administrative and operational pressures may tempt field teams to become careless or work longer hours, which can lead to accidents and injury caused by fatigue. The protocol lead must communicate regularly with field teams and adjust schedules or program goals if they cannot be accomplished or achieved safely.

Step 5: Evaluate Risk vs. Gain

The NETN Water Monitoring Protocol Lead has determined that the activity, if carried out in accordance with all SOPs, has an acceptable level of risk.

Step 6: Execute Decision

The decision made by the NETN Water Monitoring Protocol Lead is to conduct the activity in accordance with NETN Water Quality and Quantity Monitoring Protocol Standard Operating Procedures (SOPs).

Step 7: Supervise – Watch for Change

The NETN Water Monitoring Protocol Lead continually solicits feedback from all members of the water monitoring field team on safe execution of the protocol, including risk control options not considered thus far.

Appendix S1.C. Directions to nearest hospital from each park.

Acadia National Park – Headquarters

Directions to nearest hospital start at the **Headquarters building** (A) in Acadia National Park and end at the **Mount Desert Island Hospital** (B) in Bar Harbor, Maine. Destination is 1.6 miles and **five minutes** away:

Phone Number: (207) 288-5081.

Location: 10 Wayman Lane, Bar Harbor, ME 04609

Directions:

1. Head East (turn right) on Eagle Lake Road/ ME- 233 toward Arata Drive. Continue to follow ME-233 for 1.3 miles
2. ME-233 turns right and becomes Main St./ ME -3. Continue for 0.2 miles.
3. Turn left at Wayman Ln. MDI Hospital will be on the left (115 ft).

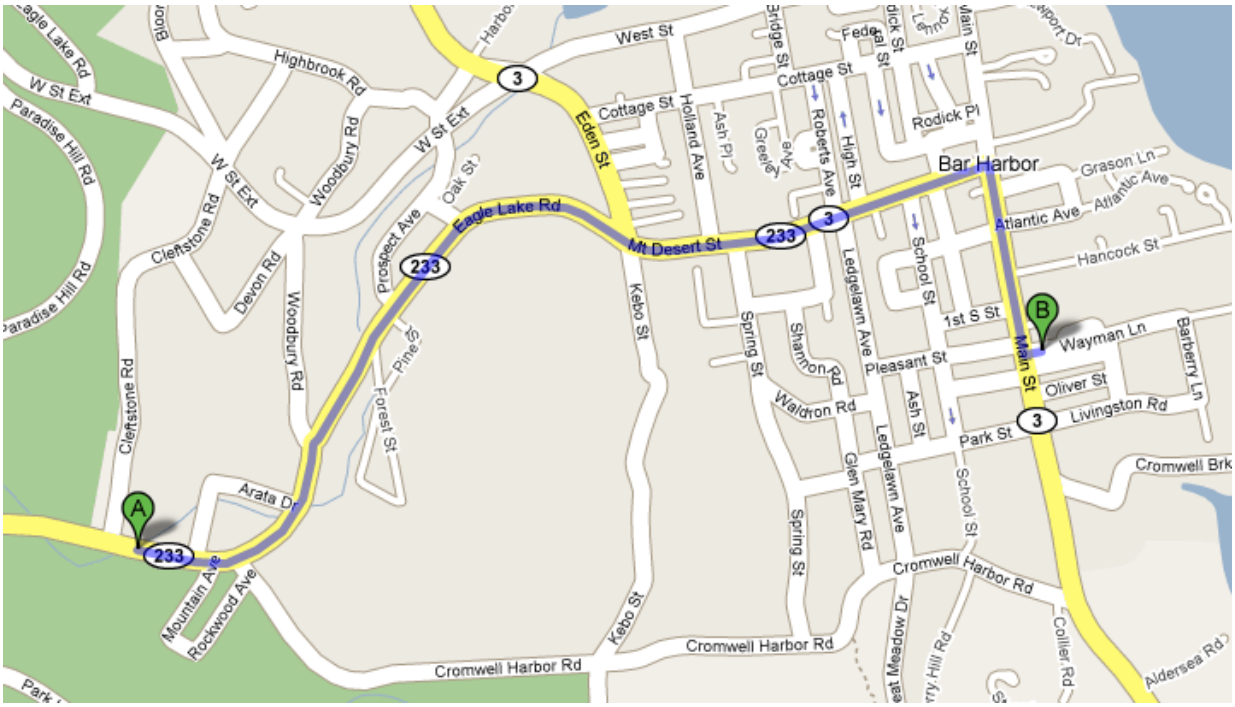


Figure S1.C.1. The route from Acadia NP Headquarters to the Mount Desert Island Hospital in Bar Harbor, Maine.

Acadia National Park – Seawall

Directions to nearest health clinic start at the **Seawall Park Housing** (A) in Acadia National Park and end at the **Community Health Center** (B) in Southwest Harbor, Maine. This clinic has been good for treating Lyme disease, but does not have emergency services. Destination is 2.3 miles and **four minutes** away:

Phone Number: (207) 244-5630.

Location: 9 Village Green Way, Southwest Harbor, ME 04679

Directions:

1. Head east on ME-102 Alt N/Seawall Road toward Seascape Ln for 2.2 miles.
2. Turn right onto ME-102 N/ Main St. and go 0.7 mi.
3. Turn left onto Village Green Way and go 0.1 mi. Community Health Clinic is at 9 Village Green Way.

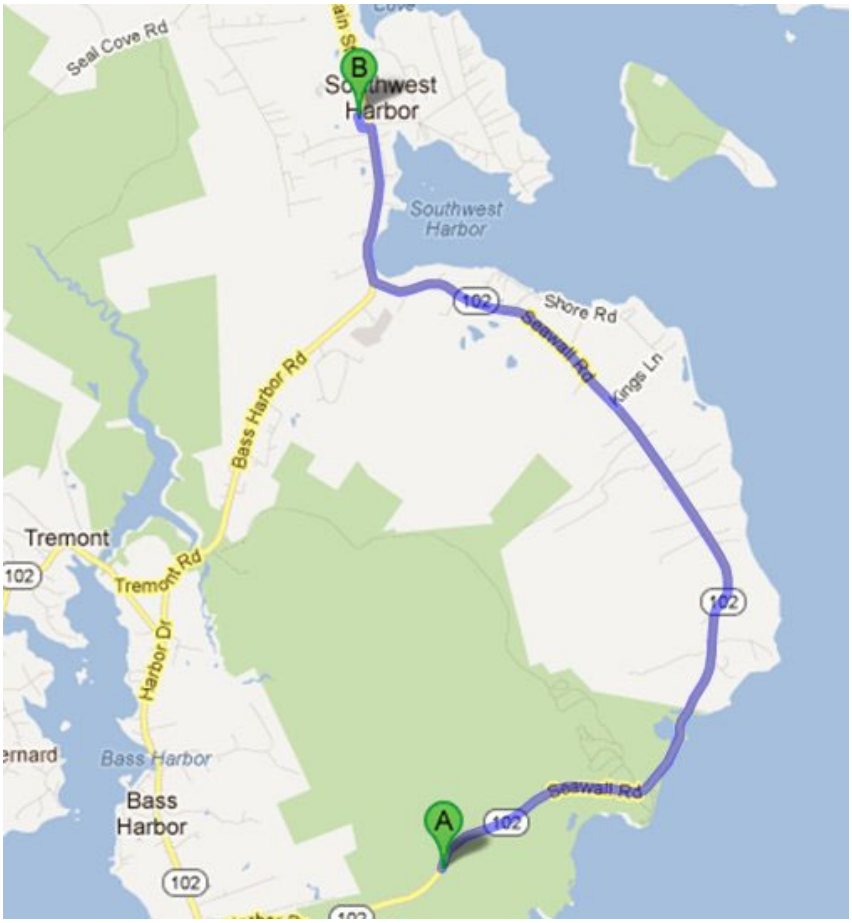


Figure S1.C.2. The route from Acadia NP Seawall Park Housing to the Community Health Center in Southwest Harbor, Maine.

Acadia National Park– Schoodic

Directions to nearest health clinic start at the **Schoodic Education and Research Center Entrance** (A) in Acadia National Park and end at the **Eleanor Eidener Dixon Memorial Clinic** (B) in Gouldsboro, Maine. Destination is 11.5 miles and **24 minutes** away.

Phone Number: (207) 963-4066.

Location: 37 Clinic Road, Gouldsboro, ME 04607

Directions:

1. Head south out of parking lot and go about 240 feet.
2. Take the 1st left and go 0.1 miles.
3. Turn left toward Moore Rd and follow 3.3 miles.
4. Continue straight onto Moore Rd for 1.5 miles.
5. Turn left onto ME-186 W/Main St and proceed 0.6 miles.
6. Turn right onto ME-186 W/Newman St and follow for 6.0 miles.
7. Continue onto Clinic Rd and go 0.1 miles. Clinic will be on the left.

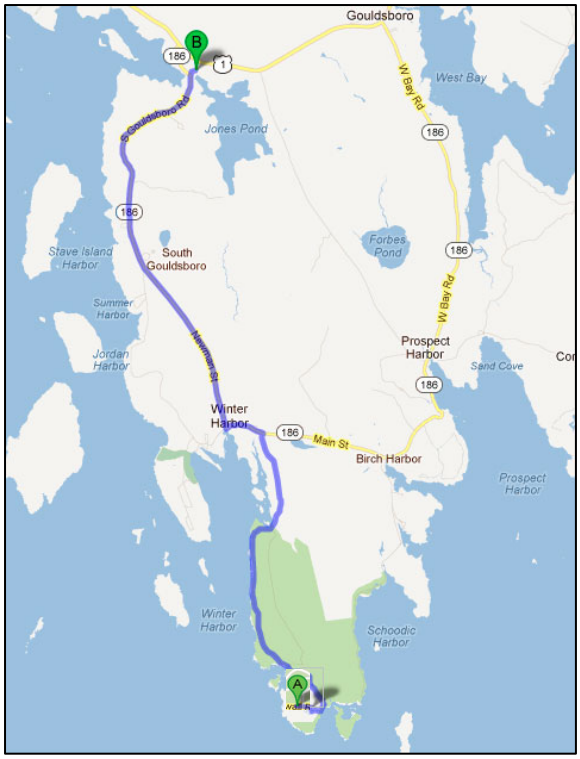


Figure S1.C.3. The route from Schoodic Education and Research Center (A) in Acadia National Park to Eleanor Widener Dixon Memorial Clinic (B) in Gouldsboro, Maine.

Marsh-Billings-Rockefeller National Historic Park

The nearest hospital to Woodstock, Vermont is Dartmouth Hitchcock Medical Center (DHMC) in Lebanon, New Hampshire, and is about 22 miles and **31 minutes away**. Directions to nearest hospital start at the **Billings Farm parking lot** (A) in Woodstock, Vermont and end at the **Dartmouth Hitchcock Medical Center** (B) in Lebanon, New Hampshire:

Phone Number: (603) 650-5000

Location: 1 Medical Center Drive, Lebanon, NH.

Directions:

1. From the Billings-Farm parking lot, turn left at the Y onto Elm Street/ VT-12. Continue for 0.4 miles.
2. Turn left at Pleasant St./ VT-12. Continue for 0.6 miles.
3. Turn left at US-4/VT-12/Woodstock Rd. Continue to follow US-4 for 9.4 miles.
4. Turn right and go 0.1 miles.
5. Take the ramp onto 1-89 South and go 8.1 miles.
6. Take exit 18 for NH-120 toward Hanover and go 0.2 miles.
7. Turn left at Centerra Pkwy/Lahaye Drive and continue on Lahaye Drive for 0.5 miles.
8. Turn right at the Hitchcock Loop Road/ Medical Center Drive and continue for 0.3 miles.
9. Turn left at DHMC East Entrance, and turn right to stay on DHMC East Entrance.

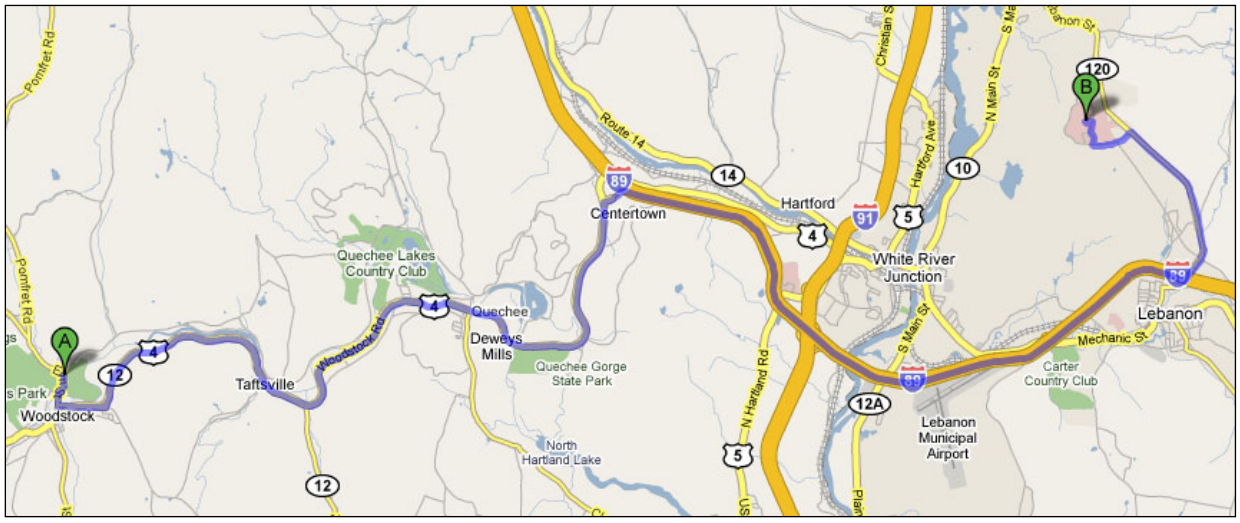


Figure S1.C.4. Route from Marsh-Billings-Rockefeller NPS in Woodstock, Vermont to Dartmouth Hitchcock Hospital in Lebanon, New Hampshire.

Minute Man National Historic Park

Directions to nearest hospital start at the **Brooks Village parking lot** (A) on 2A (N Great Road) in Minute Man National Historical Park, and end at **Emerson Hospital**. Destination is 4.7 miles and about **7 minutes** away.

Phone Number: (978) 287-3690 (Hospital) or 978-287-3690 (Polo Emergency Center)

Location: 133 Old Road to Nine Acre Corner, Concord MA 01742

Directions:

1. Head northwest on Massachusetts 2A W/N Great Rd toward Bedford Ln. Continue to follow Massachusetts 2A W. Continue for 4.6 miles.
2. Turn left onto Old Road to 9 Acre Corner. Continue for 433 feet.
3. Turn left. Continue for 0.1 miles.
4. Destination will be on the right.

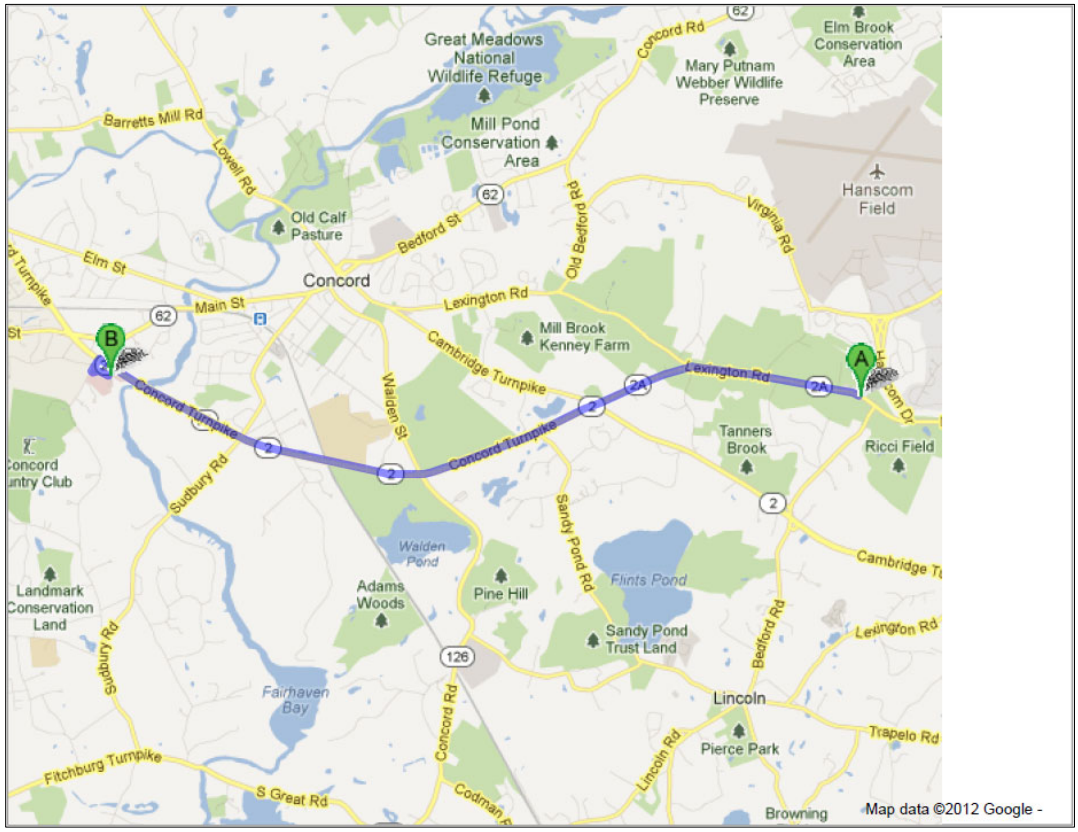


Figure S1.C.5. Route from Minute Man NHP Brooks Village parking lot in Concord, Massachusetts to Emerson Hospital.

Morristown National Historic Park

Directions to nearest hospital start at the **Jockey Hollow Visitor Center** (A) in Morristown National Historic Park, and end at **Morristown Memorial Hospital** (B). Destination is 6.5 miles and about **18 minutes** away:

Phone Number: (973) 971-5000.

Location: 100 Madison Ave, Morristown, NJ 07962.

Directions:

1. Head northwest on Cemetary Rd. toward Sugarloaf Rd. Continue 1.2 miles.
2. Turn left at Sugarloaf Rd. Continue 1.3 miles
3. Turn left on Jockey Hollow Rd. Continue 0.8 miles
4. Continue on Western Ave. Continue 1.9 miles.
5. Turn right on NJ-24/ Washington St. Continue 0.2 miles.
6. Continue on NJ-53/ South St. for 0.7 miles.
7. Turn slight left at Madison Ave/ NJ-53. Continue 0.5 miles. Destination is on the left.

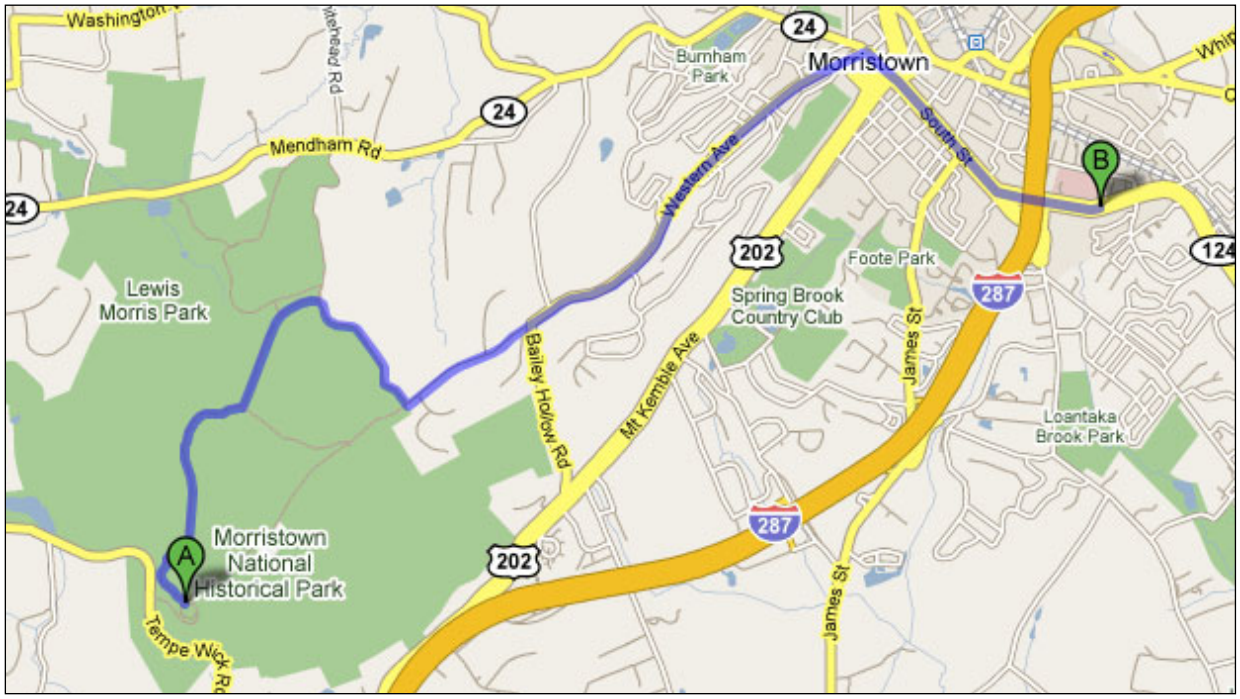


Figure S1.C.6. Route from Morristorn NHP Jockey Hollow Visitor Center to the Morristown Memorial Hospital, both in Morristown, New Jersey.

Roosevelt-Vanderbilt National Historic Sites (ELRO, HOFR, VAMA)

Directions to nearest hospital start at the **Visitor Center parking lot** (A) at the Home of FDR National Historic Site**,** and end at **St. Francis Hospital** (B). Destination is 4.8 miles and about **9 minutes** away:

Phone Number: (845) 483-5000.

Location: 241 North Road, Poughkeepsie, NY 12601.

Directions:

1. Head south on Albany Post Rd./ Rte-9/ US-9 toward Kessler Dr. Continue for 3.7 miles.
2. Turn left onto Delafield St. Continue for 0.2 miles.
3. Turn left onto Spruce St. Continue for 308 ft.
4. Spruce St. turns right and becomes Talmadge St. Conti
5. Turn left at NY-9G/ Washington St. Continue for 0.4 r
6. Destination is on the right side of Washington St.

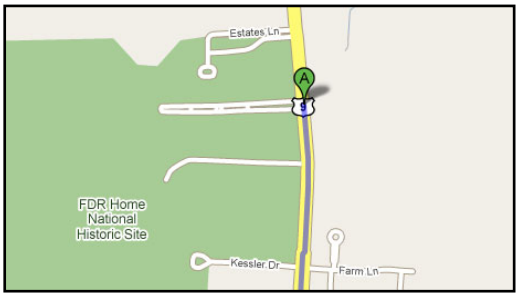


Figure S1.C.7. Start point at Home of FDR NHS Visitor Center pa

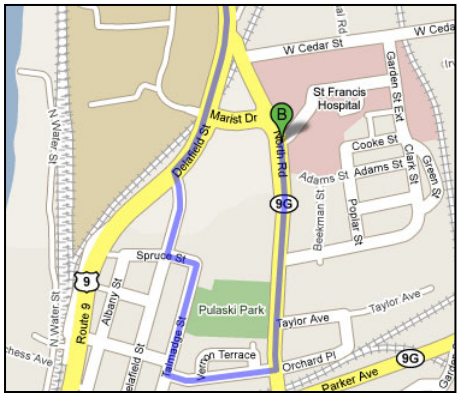


Figure S1.C.8. End point at St. Francis Hospital.



Figure S1.C.9. The entire route.

Saint-Gaudens National Historic Site (Option 1)

Directions to nearest hospital start at the **Visitor Center parking lot** (A) at Saint-Gaudens National Historic Site**,** and end at **Mount Ascutney Hospital** (B). Destination is 3.8 miles and about **10 minutes** away:

Phone Number: (802) 674-6711.

Location: 289 County Road, Windsor, VT 05089.

Directions:

1. Head southwest on St. Gaudens Rd. toward NH-12A/ NH Rte 12A/ Wilson Rd. Continue for 0.6 miles.
2. Take a slight left at NH-12A/ NH Rte 12A/ Wilson Rd, and continue for 1.5 miles.
3. Turn right onto Bridge St. and continue for 0.3 miles.
4. Turn left on State St. and go 0.7 miles.
5. Turn right at County Rd. and go 0.3 miles.
6. Destination is on the left side of County Rd.

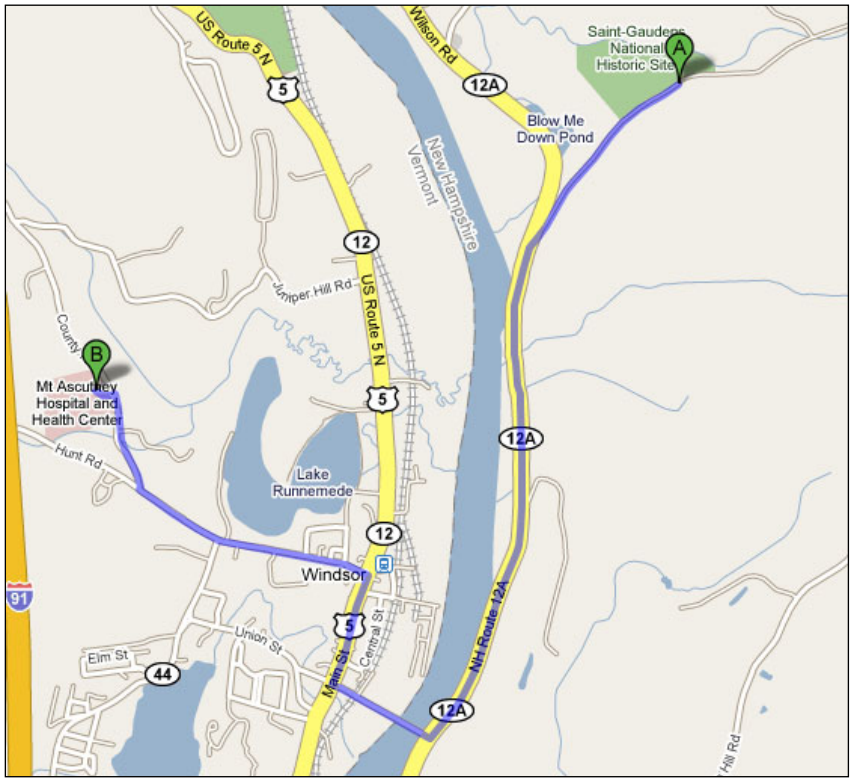


Figure S1.C.10. Option 1 route from Saint-Gaudens NHS Visitor Center parking lot to Mount Ascutney Hospital.

Saint-Gaudens National Historic Site (Option 2)

An alternative to Mount Ascutney Hospital is the Dartmouth Hitchcock Medical Center in Lebanon, New Hampshire. For injuries that are not life-threatening, DHMC is the better option. Directions to DHMC start at the Visitor Center parking lot (A) at Saint-Gaudens National Historic Site**,** and end at Dartmouth Hitchcock Medical Center in Lebanon, NH (B). Destination is 19.5 miles and about **33 minutes** away:

Phone Number: (603) 650-5000

Location: 1 Medical Center Drive, Lebanon, NH.

Directions:

1. Head southwest on St. Gaudens Road toward NH-12A/NH Route 12A/ Wilson Rd. Continue for 1 mile.
2. Turn sharp right at NH-12A/NH Route 12A/ Wilson Road, and continue on NH-12A for 11.4 miles.
3. Merge onto I-89 S via the ramp to Concord/Lebabon and go 3.8 miles.
4. Take exit 18 for NH-129 toward Hanover and go 0.2 miles.
5. Turn left at Centerra Pkwy/Lahaye Drive and continue on Lahaye Drive for 0.5 miles.
6. Turn right at the Hitchcock Loop Road/ Medical Center Drive and continue for 0.3 miles.
7. Turn left at DHMC East Entrance, and turn right to stay on DHMC East Entrance.

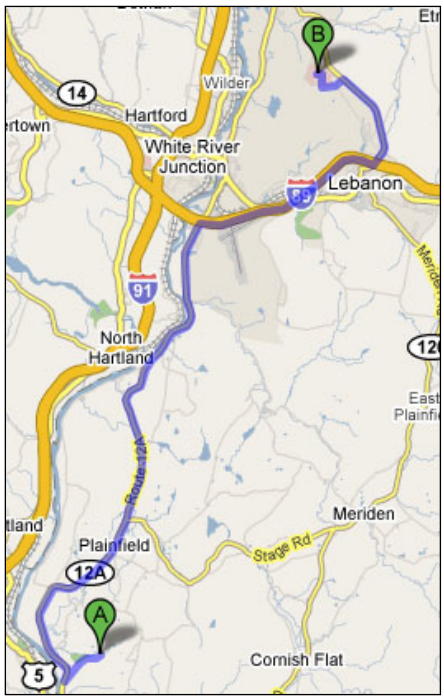


Figure S1.C.11. Option 2 route from Saint-Gaudens NHS to Dartmouth Hitchcock Medical Center.

Saratoga National Historic Park

Directions to nearest hospital start at the **Saratoga National Historic Park entrance on NY- 32** (A)**,** and end at **Saratoga Hospital** (B). Destination is 11.6 miles and about **24 minutes** away.

Phone Number: (518) 587-3222

Location:.211 Church Street, Saratoga Springs, NY 12866

Directions:

1. Turn right onto NY-32 N and go 0.8 mi.
2. Turn left onto Co Rd 71 and go 1.5 mi.
3. Turn right onto Sweer Rd. and go 1.4 mi.
4. Continue on Nielson Road for 0.9 mi.
5. Turn right onto Chapman Hill Rd and go 0.5 mi.
6. Continue onto Fitch Rd.
7. Turn right onyo New York 9P N and continue 2.2 mi.
8. Turn right onto Gilbert Rd. and go 1.3 mi.
9. Turn left onto Lake Ave. and go 2.1 mi.
10. Continue onto Church Street. After 0.6 mi, destination will be on the right.

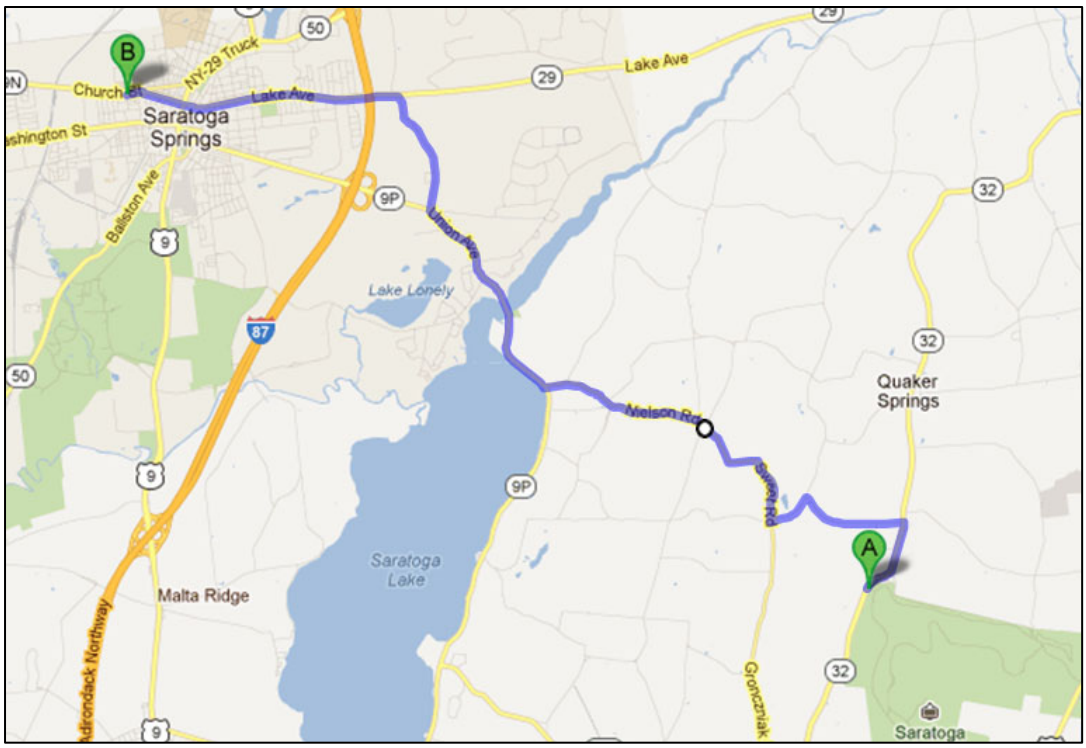


Figure S1.C.12. Route from Saratoga NHP entrance on NY-32 to Saratoga Hospital.

Weir Farm National Historic Site (Option 1)

Directions to nearest hospital start at **Weir Farm National Historic Site** on Nod Hill Road (A), and end at **Danbury Hospital** (B). Destination is 12.2 miles and about **22 minutes** away.

Phone Number: (203) 739-7000

Location: 24 Hospital Avenue, Danbury, CT 06810

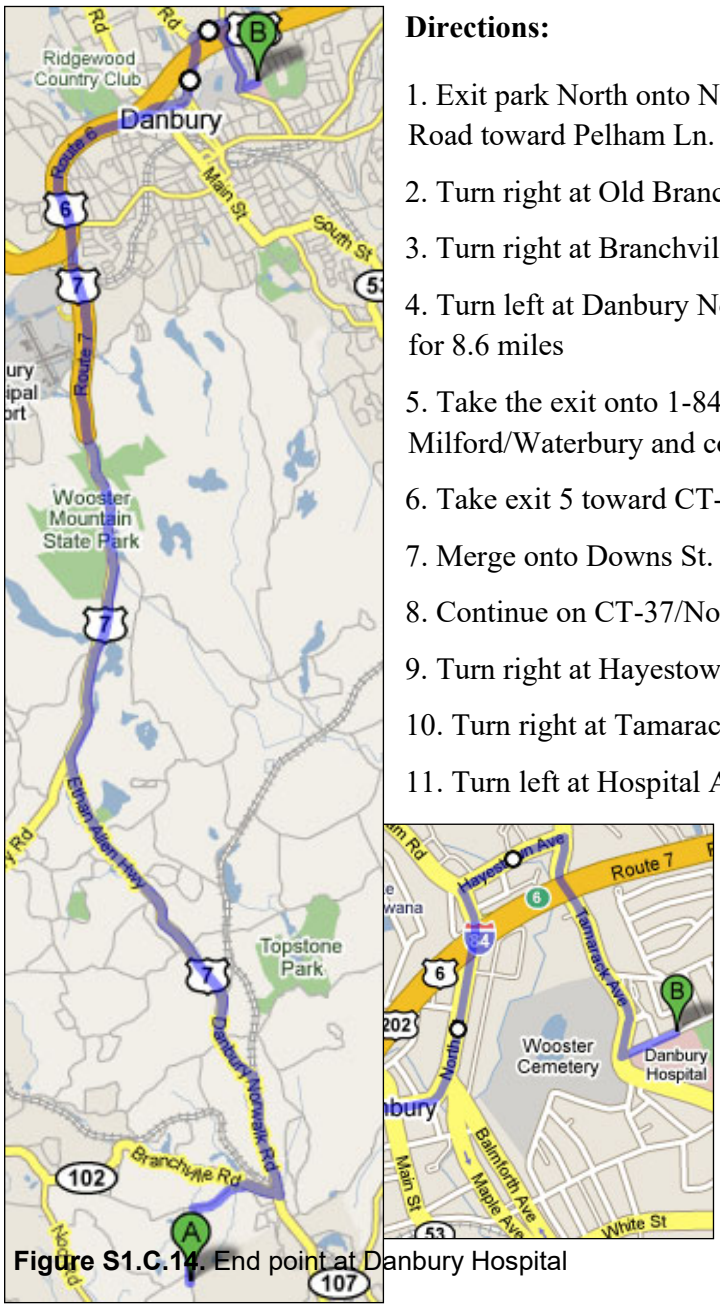


Figure S1.C.14. End point at Danbury Hospital

Directions:

1. Exit park North onto Nod Hill Road. Head North on Nod Hill Road toward Pelham Ln. Continue for 0.7 miles.
2. Turn right at Old Branchville Rd, and continue 0.5 miles
3. Turn right at Branchville Rd/CT-102, and continue 0.3 miles.
4. Turn left at Danbury Norwalk Rd/US-7 Continue to follow US-7 for 8.6 miles
5. Take the exit onto 1-84 E/ US-7 N toward New Milford/Waterbury and continue for 1.7 miles.
6. Take exit 5 toward CT-37/Bethel/CT-39/CT-53. Go 0.2 miles.
7. Merge onto Downs St. and go 0.7 miles.
8. Continue on CT-37/North St. / Rte-37 for 0.7 miles
9. Turn right at Hayestown Avenue and go 0.3 miles.
10. Turn right at Tamarack Avenue and go 0.6 miles.
11. Turn left at Hospital Avenue.

Route from Weir
bury Hospital

Weir Farm National Historic Site (Other options)

WEFA has requested that we also include **Norwalk Hospital**, which is the same distance away:

1. Exit park South onto Nod Hill Road- Follow Nod Hill Road down to the end where it meets with CT-33.
2. Take a left on CT-33 S/Ridgefield Rd and follow it down to US-7
3. Take a right onto US-7 S for about 3.5 miles and follow signs toward Norwalk until you come to a traffic light with the D.M.V. on your left and the Interstate 95 connector on your right.
4. By this time you will see blue hospital directional signs on your right – take right then left to get onto connector .
5. Follow the connector south to Exit #1(again, look for blue hospital sign) go left at the end of the exit onto VanBuren St.- then at second light take right onto Maple St.- hospital is on the left.

Urgent care centers in Norwalk and Ridgefield are closer and can handle most situations where monitoring staff would be transporting someone (as opposed to an ambulance):

Urgent Care of Norwalk

346 Main Ave.
Norwalk, CT 06851
Phone: (203) 846-0005 Fax: (203) 846-0012

1. Head south on Nod Hill Rd toward Granite Dr (2.0 mi)
2. Turn left to stay on Nod Hill Rd (1.3 mi)
3. Turn left onto CT-33 S/Ridgefield Rd (2.0 mi)
4. Turn right onto CT-33 S/US-7 S/Danbury Rd (1.2 mi)
5. Slight right onto US-7 S/Danbury Rd. Continue to follow US-7 S (2.0 mi)
6. Continue onto Main Ave. Destination will be on the left (1.4 mi)

Urgent Care of Ridgefield

10 South Street
Suite 101
Ridgefield, CT 06877
Phone: (203) 431-4600 Fax: (203) 431-4601

1. Head north on Nod Hill Rd toward Pelham Ln (443 ft)
2. Turn left onto Pelham Ln (0.9 mi)
3. Turn right onto Whipstick Rd (0.2 mi)
4. Continue onto Nod Rd (1.4 mi)

5. Continue straight onto Branchville Rd (1.2 mi)
6. Turn right onto Main St (1.0 mi)
7. Turn right onto Danbury Rd (0.3 mi)
8. Take the 2nd right onto South St. Destination will be on the right (171 ft)

Appendix S1.D. Workers' Compensation (OWCP) & Safety Management Information System (SMIS) Procedures

May 2022

Rhonda Washington (rhonda_washington@nps.gov) at WASO OWCP is the primary contact for workers' compensation. Useful resources on Worker's Compensation is the Workers' Compensation website on InsideNPS (Workers' Compensation (sharepoint.com) and the Department of Labor's Employee's Compensation Operations & Management Portal (ECOMP), which is the online system for processing worker's compensation claims (https://www.ecomp.dol.gov/). DOI's Safety Management Information System (SMIS) is the online system for reporting work-related injuries and illnesses (https://www.smis.doi.gov/).

EXTREMELY IMPORTANT: Make sure that the employee gets prompt medical treatment, if medical attention is needed. If the injury is life-threatening, the employee should be taken to an emergency room immediately; the paperwork can wait. For non-life-threatening injuries, it is acceptable to issue a CA-16 and CA-17 before the on-line information is entered.

IMPORTANT:

1. If at all possible the employee should see a physician for worker's compensation purposes. The Worker's Compensation Program could deny payment if someone other than a physician performed an examination on the employee.

2. It is now required to be on the NPS network or VPN to access SMIS.

3. Ticks: According to the 2020 Memo 2.C (NER-RS) "Guidance on the Tick Bite Protocol and to Clarify the OWCP Claim Process" from Region 1 "Tick bites are treated as an exposure incident because the tick may or may not have a tick-borne illness. Also, the employee may not obtain a tick-borne disease even if the tick is carrying a tick-borne disease. The Office of Worker's Compensation Programs will approve claims for tick bites as a traumatic injury if the tick is removed by a physician or if an employee has a need to seek medical treatment for an acute infection, phlebitis, etc, from the tick or the tick removal, but will not approve preventative treatment of prophylactics until an employee has been diagnosed as having a tick-borne disease."

    a. If an employee finds a tick that is embedded on their body please follow tick removal process outlined in the protocol's Safety Plan.

    b. Report the embedded tick as an Exposure in SMIS if the tick was acquired during normal working activities.

4. If needed, the employee can provide names of witnesses to the injury within SMIS and they will notified by SMIS/ECOMP to provide a report.

Initial Reporting

A summary of the Workers' Compensation reporting and claim process for staff is summarized at InsideNPS (Workers' Compensation (sharepoint.com). If the injured person is a volunteer and the volunteer's supervisor is a NPS employee, the supervisor can enter the information into SMIS. If assistance is required, the regional safety manager is available. A volunteer who is a foreign national (and does not have a social security number) will need to be processed on paper and the SMIS help-desk (303) 236-3796 may be required to help.

1. If an employee has an accident or exposure (e.g., bitten by a deer tick), the first step is for the employee to determine if medical assistance is required and report the accident/exposure to their supervisor. Afterwards a SMIS report should be initiated within 48 hours and completed within 6 days. Note that if there is a recent claim in the SMIS system for this employee, he or she may not be able to start a new report if information similar e.g. same accident, date(s) etc.. Contact Keith Williams (R1 Occupational Safety & Health Manager) for assistance. **Note that the supervisor needs to be aware of all details of the injury to review and complete their portion(s) in SMIS.**
2. Go to https://www.smis.doi.gov, and click on Accident Reporting. SMIS has good help tools and videos describing the processes on their homepage. The incident can be initiated by the supervisor if needed (employee incapacitated, medicated, no internet, no VPN, etc.). Three electronic "SMIS User's Guides", "Quick Start Aids" and PowerPoint presentations are available on-line for all employees and supervisors on the SMIS website. A SMIS help desk is available to provide assistance and can be reached at (303) 236-3796.
3. Once the employee fills out the CA-1 or CA-2, the supervisor needs to go into SMIS (Safety Management Information System) to fill out the supervisor portion of the form. The supervisor should receive an automated message from the SMIS system. **IMPORTANT: The CA-1 must be submitted within 30 days after the date of injury to continue your probable entitlement to continuation of pay (COP).**
4. If a worker's compensation claim will be part of the injury/illness reporting (which is not always the case), the employee will click "Yes" to the question "Do you want to file a Worker's Compensation Claim?" within SMIS. Note that this step is within SMIS and will initiate the process and direct the employee to ECOMP.
5. Once the employee reports an incident in SMIS the supervisor will receive an email from SMIS notifying them to review and complete their portion.
6. If the employee initiates a Worker's Compensation Claim, the supervisor will receive an email from ECOMP notifying them to review and complete their portion.
7. Form CA-16 is generated within ECOMP after the supervisor reviews and completes their portion. But the form is a blank pdf that is to be printed, filled out, and signed. Note that the employee's supervisor can provide a signed copy of CA-16 to the employee without completing any steps within SMIS or ECOMP if the situation calls for it.

a. Part B of form CA-16 (boxes 14-38) must be completed by the physician.

b. Box 1 of form CA-16 is completed by the employee.

c. Boxes 2 – 13 of form CA-16 are completed by the supervisor.

8. It is recommended that the employee get a printed report from the physician/medical center upon discharge describing the extent of injury and any needed accommodation. As well as copies of all test results, x-rays, etc. At the very least, the employee should verify that all sections on CA-16 are completed and legible.
9. The employee then uploads all relevant document (CA-16 completed by physician at a minimum) to ECOMP.
10. There may be more to do once the extent of injury, needed accommodation, and treatment is fully known to ensure the medical provider is compensated through OWCP. The employee, supervisor, WASO OWCP and the Region 1 safety officer will work together to get this all done.
11. For all contact info related to the claim and medical treatment, employees should be advised to use their permanent address and contact info, as claims tend to be slow to process and may not occur until after an employee's season ends.

SMIS and ECOMP (if required) are the permanent record for all documents. The employee should keep copies as well especially if an OWCP claim is being processed. If there are any questions contact the Region 1 safety manager at 267-207-6328 or keith_williams@nps.gov

Time sheets

Make sure that the employee's time sheet is filled out correctly to reflect any lost time due to the injury; this is required under FECA, the Federal Employees Compensation Act.

1. Time lost on the day of injury due to a traumatic injury is coded as Administrative Leave (060).
2. Lost time ("Continuation of Pay" or COP) after the day of injury includes time spent going to doctor's appointments, physical therapy, or time the employee is not able to work due to the injury.
3. Record the amount of hours lost due to the injury on the employee's time sheet using the appropriate code. NOTE: Frank Alvarez (7/11/2008) recommended claiming the full day that has any time lost as COP. Even if the employee only spends 1 hour at a doctor's appointment, he thought that the full day should be coded COP. This advice seems to run counter to the pay code information that Carol Daye supplied: "Code the T&A Record with the actual number of hours absent."
4. If the employee is unable to work for a period that includes lieu days, use the codes for Unpaid COP on each lieu day.
5. Continuation of Pay codes:

a. 160 – FECA/COP Paid (1st Occurrence)

b. 164 – FECA/COP Paid (2nd Occurrence)

c. 166 – FECA/COP Paid (3rd Occurrence)

d. 168 – FECA/COP Paid (4th Occurrence)

e. Other codes are available for 5th through 11th occurrences; starting at 16L

f. My assumption is that an "occurrence" is any time related to a specific accident or injury. So if an employee has a tick bite and then sprains an ankle, you'd use the "first occurrence" codes for the tick bite and the "second occurrence" codes for the sprain.

6. Unpaid Continuation of Pay codes:

    a. 161 – FECA/COP Unpaid (1st Occurrence)

    b. 165 – FECA/COP Unpaid (2nd Occurrence)

    c. 167 – FECA/COP Unpaid (3rd Occurrence)

    d. 169 – FECA/COP Unpaid (4th Occurrence)

7. Other codes are available for 5th through 11th occurrences; starting at 16M

8. There are separate codes for "Light Duty" work, but the NPS 2007 Supervisor's Guide says to use code Regular Hours (010) for "Light Duty" or an AWA.

Revision Log

June 26, 2009 – Added a paragraph about handling injured volunteers.

January 7, 2010 – Added section "Other important information".

March 21, 2012 – Changed NPS OWCP contact to Cecelia Neugebauer.

Appendix S1.E. Instructions for responding to an automobile accident in an NPS-owned vehicle.

At the scene:

1. Stop immediately. If you are hurt call 911. If the engine compartment has not been affected (battery) turn on flashers.
2. Take steps to prevent another accident at the scene, but do not endanger yourself.
3. Call 911 if needed.
4. If there are injuries, and you are qualified and capable, you may help others at the scene.
5. Provide your name, address, place of employment, name of your supervisor, upon request show your driver's license, vehicle registration information (if the vehicle has one) to emergency responders, and any party involved in the incident.
6. In reporting an accident and events, employees should state the facts to the best of their knowledge. **Conclusions as to fault or responsibility should not be stated.** The employee should report the accident only to authorized representatives of the Government, the employee's insurance company (if you were grossly negligent, you may need to speak with your insurance company), and police officers investigating the accident. The employee shall also file any report required by local laws. Contact your supervisor as soon as possible. If you are hurt, ask the police to call your supervisor.
7. In the event of death, actual or potential serious injury, or significant property damage (greater than $2500), the employee involved will immediately notify their supervisor and work together in contacting the NER Regional Tort Claims Officer (TCO), Keith Williams (215) 597-7701 for injuries, the NER Regional LE Branch Chief Melody Morrison for property damage at (215) 597-4940, and Andrew Tittler the NER Solicitor (617) 223-5700.
8. Get names and addresses of preferably two witnesses. Ask witnesses to complete Standard Form SF-94, Statement of Witness, contained in the vehicle accident kit (located in the glove compartment).
9. Complete Standard Form SF-91, Motor Vehicle Accident Report at the scene (also in the glove compartment kit). If conditions prevent this, make notes of the following:
    - Registration information for other vehicle(s) (owner's name, owner's address, plate number, VIN#, and vehicle description)
    - Information about the other drivers (names, address's, driver's license number, expiration date, and state
    - Name and address of each person involved and extent of injury, if any
    - Name and address of company insuring the other vehicle(s) and policy number
    - General information such as location, time, weather, damage, etc.
10. Ask police to provide a Police Report and, if available, submit a copy with your SF-91
11. If you have a camera, take pictures of the accident scene and any damage to the vehicles involved. Submit photos with SF-91 (do not take photos of injuries).
12. If vehicle is unsafe to operate, arrange for a towing service and pay for these services with the vehicle charge/gas card. Call State or local police to find the nearest towing service.

After the incident:

1. Submit all reports and data to your supervisor within one working day if possible.
2. If a federal employee is injured, the Workers' Compensation process needs to be initiated within 48 hours of the incident (see Appendix S1.D.). Supervisors will assist with this process (CA-1 forms, contacting the Workers Compensation Coordinator, etc.). It is important for injured employees to receive prompt medical treatment. Make sure the injured employee sees a doctor, not a physician's assistant, nurse, or nurse practitioner. Claims by other than a doctor will get rejected.
3. Monitoring staff involved in the accident will enter all information into SMIS (Safety Management Information system) or if unable to their direct supervisor will report the incident. The NETN Program Manager will inform the Regional Safety Manager Keith Williams (215)-597-7701. All Tort claims are now being handled directly by the DOI office of the solicitor at doitorts@sol.doi.gov. Complete these steps as soon as possible, but no later than 10 calendar days.

Reporting:

All motor vehicle accidents involving federally owned or leased vehicles including, UTV's, electric motor vehicles, and employee-owned or rented vehicles, while being used on official business shall have a report filed regardless of the amount of damage. All accidents will be investigated by a supervisor.

All public/visitor/private property accidents will be reported on a SF-91 when a government vehicle is involved, government property is damaged, a fatality occurs, medical treatment is required and/or a reasonable possibility of a tort claim is expected. (Theft and vandalism should be reported to local law enforcement in accordance with Park agreements)

Reporting multiple vehicle accidents- when a privately owned vehicle damages Government property, two reports (SF-91) are required: one report for the Government property and one for the private operator. Submit all forms to your supervisor. Supervisors will review and submit all forms to the CDSO and/or Safety Manager. The Safety Manager must supply TCO copies of reports within 10 calendar days.

MOTOR VEHICLE ACCIDENT (CRASH) REPORT	*Please read the Privacy Act Statement on Page 4*	**INSTRUCTIONS: Sections I through IX are filled out by the vehicle operator. Section X, items 73 thru 83c are filled out by the operator's supervisor. Section XI thru XIII are filled out by a crash investigator for bodily injury, fatality, and/or damage exceeding $500.**

SECTION I - FEDERAL VEHICLE DATA

1. DRIVER'S NAME *(Last, First, Middle)*	2. DRIVER'S LICENSE NUMBER/STATE/LIMITATIONS	3. DATE OF CRASH

4a. DEPARTMENT/FEDERAL AGENCY PERMANENT OFFICE ADDRESS	4b. TELEPHONE NUMBER	4c. E-MAIL ADDRESS

5. TAG OR IDENTIFICATION NUMBER	6. ESTIMATED REPAIR COST	7. YEAR OF VEHICLE	8. MAKE	9. MODEL	10. SEAT BELTS USED?
	$				☐ YES ☐ NO

11. DESCRIBE VEHICLE DAMAGE

SECTION II - OTHER VEHICLE DATA *(Use Section VIII if additional space is needed)*

12. DRIVER'S NAME *(Last, First, Middle)*	13. SOCIAL SECURITY NUMBER/ TAX IDENTIFICATION NUMBER	14. DRIVER'S LICENSE NUMBER/STATE/LIMITATIONS

15a. DRIVER'S WORK ADDRESS	15b. TELEPHONE NUMBER

16a. DRIVER'S HOME ADDRESS	16b. HOME TELEPHONE NUMBER

17. DESCRIPTION OF VEHICLE DAMAGE	18. ESTIMATED REPAIR COST
	$

19. YEAR OF VEHICLE	20. MAKE OF VEHICLE	21. MODEL OF VEHICLE	22. TAG NUMBER AND STATE

23a. DRIVER'S INSURANCE COMPANY NAME AND ADDRESS	23b. POLICY NUMBER
	23c. TELEPHONE NUMBER

24. VEHICLE IS	25a. OWNER'S NAME(S) *(Last, First, Middle)*	25b. TELEPHONE NUMBER
☐ CO-OWNED ☐ RENTAL ☐ LEASED ☐ PRIVATELY OWNED		

26. OWNER'S ADDRESS(ES)

SECTION III - FATALITY OR INJURED *(Use Section VIII if additional space is needed)*

A

27. NAME *(Last, First, Middle)*	28. SEX	29. DATE OF BIRTH

30. ADDRESS

31. MARK "X" IN TWO APPROPRIATE BOXES	32. IN WHICH VEHICLE	33. LOCATION IN VEHICLE	34. FIRST AID GIVEN BY
☐ FATALITY ☐ DRIVER ☐ PASSENGER ☐ INJURED ☐ HELPER ☐ PEDESTRIAN	☐ FED ☐ OTHER (2)		

35. TRANSPORTED BY	36. TRANSPORTED TO

B

37. NAME *(Last, First, Middle)*	38. SEX	39. DATE OF BIRTH

40. ADDRESS

41. MARK "X" IN TWO APPROPRIATE BOXES	42. IN WHICH VEHICLE	43. LOCATION IN VEHICLE	44. FIRST AID GIVEN BY
☐ FATALITY ☐ DRIVER ☐ PASSENGER ☐ INJURED ☐ HELPER ☐ PEDESTRIAN	☐ FED ☐ OTHER (2)		

45. TRANSPORTED BY	46. TRANSPORTED TO

47. PEDESTRIAN

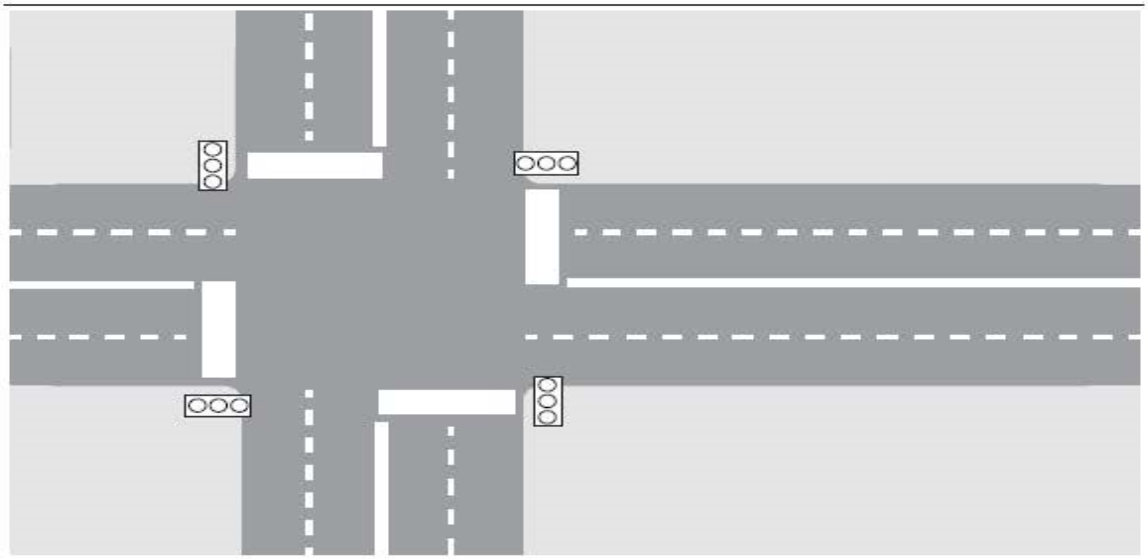
a. NAME OF STREET OR HIGHWAY	b. DIRECTION OF PEDESTRIAN *(Southwest (SW) corner to Northwest (NW) corner, etc.)*	
	FROM	TO

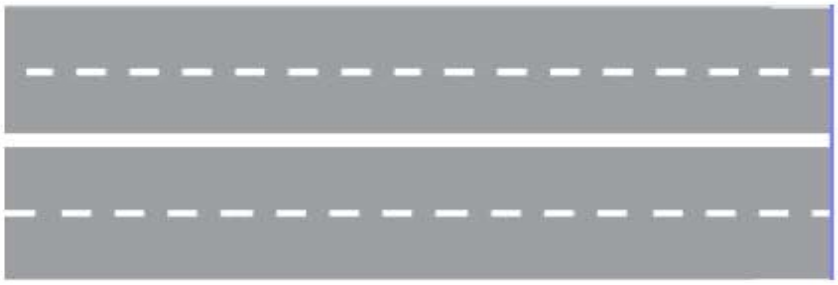
c. DESCRIBE WHAT PEDESTRIAN WAS DOING AT TIME OF CRASH *(crossing intersection with signal, against signal, diagonally; in roadway playing, walking, hitchhiking, etc.)*

SECTION IV - CRASH TIME AND LOCATION *(Use Section VII if additional space is needed)*

48. DATE OF CRASH	49. PLACE OF CRASH *(Street address; city, state, ZIP Code; Nearest landmark; Distance nearest intersection; Kind of locality (industrial, business, residential, open country, etc); Road description)*.
50. TIME OF CRASH ☐ AM ☐ PM	

51. INDICATE ON THE DIAGRAMS BELOW WHAT HAPPENED







1. Number the vehicles involved as follows:

Government Vehicle (GOV) #1 - Private Vehicle (POV) #2 - Additional Vehicles GOV or POV as #3, etc. and show direction of travel by arrow.

(Example: ----> **1** **2** <----*)*

2. Use solid line to show path before crash ——————— **2**
   Broken line after crash - - - - - - - - - - - - **2**

3. Show pedestrian by ----------> ◆

4. Show railroad by -|-|-|-

52. POINT OF IMPACT *(Check one for each vehicle)*

FED	2	AREA	FED	2	AREA	FED	2	AREA	FED	2	AREA	FED	2	AREA	FED	2	AREA
		a. Front			b. Right Front			c. Left Front			d. Rear			e. Right Rear			f. Left Rear
		g. Right Side			h. Left Side												

53. DESCRIBE WHAT HAPPENED *(Refer to vehicles as "Fed", "2", "3", etc. Please include information on posted speed limit, approximate speed of vehicles, road conditions, weather conditions, driver visibility, condition of crash vehicles, traffic controls (warning light, stop signal, etc.), condition of light (daylight, dusk, night, dawn, artificial light, etc.), and driver actions (making a U-turn, passing, stopped in traffic, etc.).*

SECTION V - WITNESS/PASSENGER ***(Witness must fill out Standard Form 94 - Statement of Witness) (Continue in Section VIII.)***

A	54. NAME *(Last, First, Middle)*	55. TELEPHONE NUMBER	56. HOME TELEPHONE NUMBER
	57. WORK ADDRESS	58. HOME ADDRESS	
B	59. NAME *(Last, First, Middle)*	60. TELEPHONE NUMBER	61. HOME TELEPHONE NUMBER
	62. WORK ADDRESS	63. HOME ADDRESS	

SECTION VI - PROPERTY DAMAGE ***(Use Section VIII if additional space is needed.)***

64a. NAME OF OWNER *(Last, First, Middle)*	64b. TELEPHONE NUMBER	64c. HOME TELEPHONE NUMBER
64d. WORK ADDRESS	64e. HOME ADDRESS	
65a. NAME OF INSURANCE COMPANY	65b. TELEPHONE NUMBER	65c. POLICY NUMBER
66. ITEM DAMAGED	67. LOCATION OF DAMAGED ITEM	68. ESTIMATED COST

SECTION VII - POLICE INFORMATION

69a. NAME OF POLICE OFFICER	69b. BADGE NUMBER	69c. TELEPHONE NUMBER
70. PRECINCT OR HEADQUARTERS	71a. PERSON CHARGED WITH CRASH	71b. VIOLATION(S)

SECTION VIII - EXTRA DETAILS

SPACE FOR DETAILED ANSWERS. INDICATE SECTION AND ITEM NUMBER FOR EACH ANSWER. IF MORE SPACE IS NEEDED, CONTINUE ON ADDITIONAL SHEETS OF PAPER.

PRIVACY ACT STATEMENT

The information on this form is subject to the Privacy Act of 1974 - United States Code set forth at 5 U.S.C. § 552a. Authority to collect the information is set forth at 40 U.S.C. § 491 and 31 U.S.C. § 7701. The information is required by Federal Government agencies to administer motor vehicle programs, including maintaining records on crashes involving privately owned and Federal fleet vehicles, and collecting crash claims resulting from crashes. Federal employees, and employees under contract, will use the information only in the performance of their official duties. Routine uses of the collected information may include disclosures to: appropriate Federal, State, or local agencies or contractors when relevant to civil, criminal, or regulatory investigations or prosecutions; the Office of Personnel Management and the Government Accountability Office for program evaluation purposes; a Member of Congress or staff in response to a request for assistance by the individual of record; another Federal agency, including the Department of the Treasury and the Department of Justice, or a court under judicial proceedings; agency Inspectors General in conducting audits; private insurance and the collection agencies *(including agencies under contract to Treasury to collect debt)*, and to other agency finance offices for Federal management and debt collection. Furnishing the requested information is mandatory, including the Social Security Number or Taxpayer's Identification Number (TIN) for use as a unique identifier to ensure accurate identification for individuals or firms in the system.

SECTION IX - FEDERAL DRIVER CERTIFICATION

I certify that the information on this form *(Sections I thru VII)* is correct to the best of my knowledge and belief.

72a. NAME AND TITLE OF DRIVER	72b. DRIVER'S SIGNATURE	72c. DATE

SECTION X - DETAILS OF TRIP DURING WHICH CRASH OCCURRED

73. ORIGIN	74. DESTINATION

75. EXACT PURPOSE OF TRIP

	DATE	TIME *(Include AM or PM)*		DATE	TIME *(Include AM or PM)*
76. TRIP BEGAN			77. CRASH OCCURRED		

78. AUTHORITY FOR THE TRIP WAS GIVEN TO THE OPERATOR	79. WAS THERE ANY DEVIATION FROM DIRECT ROUTE?
☐ ORALLY ☐ IN WRITING *(Explain)*	☐ NO ☐ YES *(Explain)*
80. WAS THE TRIP MADE WITHIN ESTABLISHED WORKING HOURS?	81. DID THE OPERATOR, WHILE EN ROUTE, ENGAGE IN ANY ACTIVITY OTHER THAN THAT FOR WHICH THE TRIP WAS AUTHORIZED?
☐ YES ☐ NO *(Explain)*	☐ NO ☐ YES *(Explain)*

	a. DID THIS CRASH OCCUR WITHIN THE EMPLOYEE'S SCOPE OF DUTY?	
82. COMPLETED BY DRIVER'S SUPERVISOR	☐ YES ☐ NO	b. COMMENTS

83a. NAME AND TITLE OF SUPERVISOR	83b. SUPERVISOR'S SIGNATURE	83c. DATE	83d. TELEPHONE NUMBER

SECTION XI - CRASH INVESTIGATION DATA

84. DID THE INVESTIGATION DISCLOSE CONFLICTING INFORMATION? ☐ NO ☐ YES *(If checked, explain below.)*

85. PERSONS INTERVIEWED

NAME	DATE	NAME	DATE
a.		c.	
b.		d.	

86. ADDITIONAL COMMENTS *(Indicate section and item number of each comment)*

SECTION XII - ATTACHMENTS

87. LIST ALL ATTACHMENTS TO THIS REPORT

SECTION XIII - COMMENTS/APPROVALS

88. REVIEWING OFFICIAL'S COMMENTS

89. CRASH INVESTIGATOR		90. CRASH REVIEWING OFFICIAL	
a. SIGNATURE	b. DATE	a. SIGNATURE	b. DATE
c. NAME *(First, Middle, Last)*		c. NAME *(First, Middle, Last)*	
d. TITLE		d. TITLE	
e. OFFICE		e. OFFICE	
f. TELEPHONE NUMBER	EXTENSION	f. TELEPHONE NUMBER	EXTENSION
g. E-MAIL ADDRESS		g. E-MAIL ADDRESS	

Appendix S1.F. SF-94 Statement of Witness.

STATEMENT OF WITNESS *(Attach additional sheets if necessary)*	*Please read the Privacy Act Statement on Page 3*	**OMB Control Number: 3090-0118** **Expiration Date: 11/30/2023**

Paperwork Reduction Act Statement - This information collection meets the requirements of 44 U.S.C. § 3507, as amended by section 2 of the Paperwork Reduction Act of 1995. You do not need to answer these questions unless we display a valid Office of Management and Budget (OMB) control number. The OMB control number for this collection is 3090-0118. We estimate that it will take 20 minutes to read the instructions, gather the facts, and answer the questions. Send only comments relating to our time estimate, including suggestions for reducing this burden, or any other aspects of this collection of information to: U.S. General Services Administration, Regulatory Secretariat Division (M1V1CB), 1800 F Street, NW, Washington, DC 20405.

1. WITNESS INFORMATION

a. NAME OF WITNESS:

b. HOME ADDRESS *(Include ZIP Code)*

c. E-MAIL ADDRESS

d. WORK TELEPHONE NUMBER	e. CELLULAR TELEPHONE NUMBER	f. HOME TELEPHONE NUMBER

2. ACCIDENT INFORMATION

a. DID YOU WITNESS THE ACCIDENT?	b. DATE OF ACCIDENT:	c. TIME OF ACCIDENT: ☐ *a.m.* ☐ *p.m.*	d. TIME YOU ARRIVED AT SCENE? ☐ *a.m.* ☐ *p.m.*

3. WHERE DID THE ACCIDENT OCCUR? *(Give Street Location, City, and State)*

4. TELL IN YOUR OWN WAY HOW THE ACCIDENT HAPPENED.

5. WAS ANYONE INJURED, AND IF SO, EXTENT OF INJURY IF KNOWN?

6. DESCRIBE THE APPARENT DAMAGE TO PRIVATE PROPERTY.

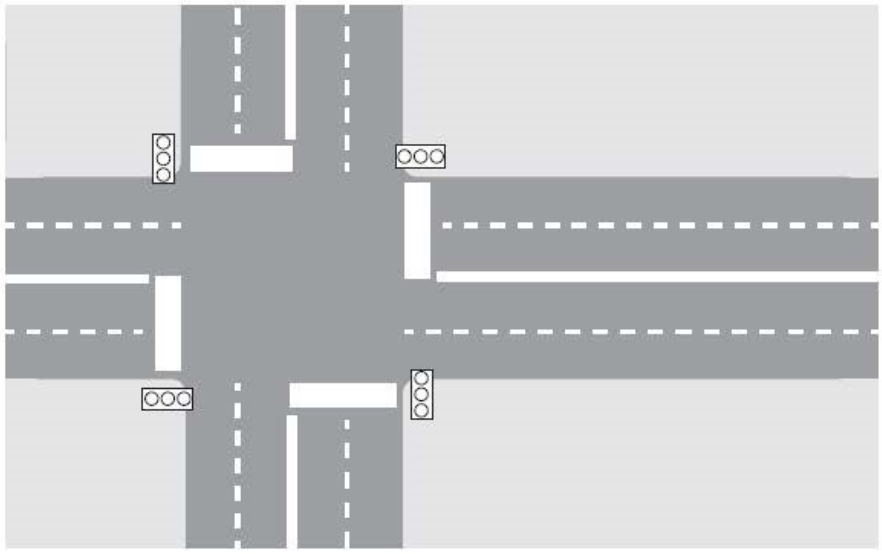
7. DESCRIBE THE APPARENT DAMAGE TO GOVERNMENT PROPERTY.

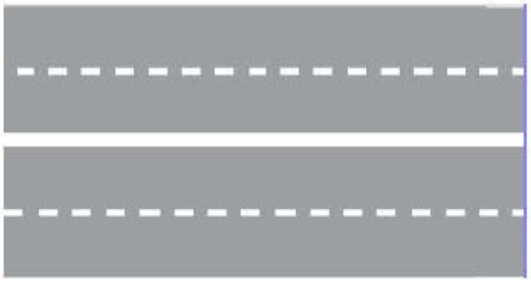
8. DESCRIBE ROAD AND CONDITIONS THAT INFLUENCED THE ACCIDENT *(e.g. weather, terrain, debris, road work, time of day)*.

9. DID YOU NOTICE ANYTHING UNUSUAL PRIOR TO OR DURING THE ACCIDENT?
IF YES, PLEASE DESCRIBE WHAT YOU NOTICED AND WHY YOU THINK IT WAS PERTINENT TO THIS ACCIDENT.

STANDARD FORM 94 (REV. 11/2020)
Prescribed by GSA - FMR (41 CFR) 102-34

10. INDICATE ON THE DIAGRAMS BELOW WHAT HAPPENED.







1. Number the vehicles involved as follows:

Government Vehicle (GOV) #1 - Private Vehicle (POV) #2 - Additional Vehicles GOV or POV as #3, etc. and show direction of travel by arrow.
(Example: ----> **1** **2** <----*)*

2. Use solid line to show path before accident ——— **2**
Broken line after accident - - - - - - - - - **2**

3. Show pedestrian by ----------> 

4. Show railroad by -|-|-|-

NOTES: Include other pertinent information such as: How many drivers/vehicles were involved? Describe the vehicles. How many passengers per vehicle(s)? Were Police, Fire and/or Rescue on the scene? Was a Police Report completed? Were Police, Fire and/or Rescue present before or after you arrived on the scene? Describe the accident *(provide your detailed account)*.

PRIVACY ACT STATEMENT

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12. WITNESS NAME:

13. WITNESS SIGNATURE: ▶	DATE:	TIME:

The Department of the Interior protects and manages the nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its special responsibilities to American Indians, Alaska Natives, and affiliated Island Communities.

June 2022

National Park Service
U.S. Department of the Interior

Northeast Temperate Network
54 Elm St
Woodstock, VT 05091

https://www.nps.gov/im/netn/index.htm