



YOSEMITE
CONSERVANCY®

Volunteers Risk Management Manual
& Emergency Communications Guide
Spring 2019

The door to safety swings on the hinges of common sense.

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INTRODUCTION

To ensure all Yosemite Conservancy (YC) volunteers have a safe and enriching experience, volunteers must be able to assess and minimize the effects of hazards, as well as respond effectively in the event of an emergency. This manual is to promote safe practices and consistent understanding of safety protocols and guidelines among all our volunteers. This is a living document that will change as technology and information evolve. It is the responsibility of volunteers, administrative staff, and YC to stay informed on current practices. This manual is not a substitute for good judgment so please use your common sense.

You are a highly valued member of the team and we want to make sure you are equipped to take the best care of yourself.

GENERAL SAFETY POLICY

- Safety protocols apply to all volunteers while participating in a Conservancy program.
- Volunteers, as a condition of hiring, will acknowledge that they have read and understand the Volunteer Risk Management Manual, and that compliance is mandatory and a condition of volunteering.

EXTRACURRICULAR ACTIVITIES AND DAYS OFF IN YOSEMITE

While hazards may occur on the job with help nearby, the risk is greater on days off in more remote park locations. Activities during time off are done at your own risk. Follow these safety protocols while hiking in the park.

- Use the buddy system rather than hike alone.
- Before leaving, inform your team leader and provide in writing:
 - The make, model, year, color, and license number of your car
 - Where you will be hiking and what trailhead you will use
 - When you plan to be back in camp
 - Who is going with you
 - Your cell phone number
- Take a day pack with the following:
 - 2-3 liters of water
 - Food, including salty snacks
 - Hiking map
 - Compass
 - Headlamp & extra batteries (or a spare headlamp)
 - First-aid kit with any medications used
 - Cell phone
 - Signal whistle
 - Knife/multi-tool

- Fire starter (lighter, matches, etc.) in a waterproof container
- Sun protection (sunscreen, sunglasses, hat)
- Trash bag
- Toilet paper and Ziploc bag
- Additional items:
 - Layers of clothing
 - Hiking poles
 - Emergency blanket/shelter

LEAVE NO TRACE EXPECTATIONS

In order to instill a strong low impact ethic in all volunteers as well as visitors we come into contact with, be familiar with the following Leave No Trace principles.

1. Plan ahead and prepare.
2. Travel and camp on durable surfaces; camp 200 feet from water.
3. Dispose of waste properly.
4. Leave what you find.
5. Minimize campfire impacts.
6. Respect wildlife; no feeding and use proper food storage for bears.
7. Be considerate of other visitors.

DRUG AND ALCOHOL POLICY

Illegal drug use is prohibited. The use/allowance of alcohol for those of legal age should be carefully considered and moderate in nature. While marijuana is legal in the State of California, it remains illegal on federal land (Yosemite National Park).

ENVIRONMENTAL CONSIDERATIONS AND PROCEDURES

General Guidelines

While doing activities with a risk of physical harm, volunteers must continually assess the appropriateness of the activity based on the environmental conditions, and adjust their risk management plan in keeping with general YC safety procedures.

Bicycle Use

- Helmets must be worn at all times.

Camp Cooking

- Most volunteers provide their own stoves and cook their own meals.
- Camp stoves must be placed on a level surface and never operated inside of tents.
- Open flames are a hazard. Ensure clothing does not contact flame.
- When pouring hot water, always set the receiving receptacle on a hard surface rather than hold it.
- Practice good hygiene, you're more likely to get giardia and infection from hands than drinking water.
- Unhygienic food (i.e. raw chicken or beef) is the leading cause of camp illness. Be aware of the health risks associated with unrefrigerated raw meats.
- If applying insect spray to your skin, do so at a reasonable distance from food. If applying spray on a windy day, position yourself so that food is not located downwind of the spray.

Footwear

- Shoes should be worn in camp and at work at all times.
- Hiking boots or shoes with sturdy soles are recommended for work projects and wilderness hiking.

Flash Flood

- If a flood is imminent, seek access to higher ground.

Heat

- Yosemite can reach over 100 degrees in some locations and the Conservancy monitors heat levels to determine when to shutdown work activities.
- Stay hydrated with extra water and eat salty snacks.
- Seek shade whenever possible.
- When the heat is too uncomfortable to function, stop work and seek relief.
- If lightheaded or dizzy seek help immediately.

Insects

- Ticks, spiders, and mosquitoes are present at lower elevations; perform tick checks and be aware of black widow and brown recluse spiders.

Lightning

Volunteers may encounter lightning. If storms are in the area move into a location where timely escape to lower ground is possible. The industry standards for lightning procedures can be summarized as:

When the interval between lightning and thunder is **30 seconds (roughly 6 miles away)**, move to a safe location (inside a normal building is the safest; this does not include summit huts). Inside a vehicle is safer than outside. However a rock shelter on top of a mountain is not considered a building. If a building is not available, follow these guidelines for safer terrain:

- Get below the tree line and down low on mountains.
- In wide open spaces or gently rolling hills, move into a ravine or significant depression.
- Get off the water.
- Avoid lone trees or tall objects.
- Don't touch anything metal or tall.
- Avoid long conductors – metal fences, power lines, phone lines, railway tracks, handrails, wet extended ropes, wet rock, cracks, crevices, overhangs, caves, and tree roots.
- Position yourself equidistant from and in between two trees when among trees of equal height.
- Position yourself about 50 yards from any nearby cliff(s); do not touch rock if possible because it conducts electricity.

When the interval between lightning and thunder is **15 seconds (roughly 3 miles away)** groups should be in lightning drill position.

- If possible spread out with space between each person to avoid multiple injuries from a strike.
- Assign each participant a number and conduct a count off after each strike.
- Squat on something non-conductive like an insulate pad or a backpack as long as it does not have metal stays.
- Remove metal objects from your body as they can cause serious burns if exposed to current.
- Avoid being a bridge between an object and the ground. Do not lean against tent poles, trees, vehicles.

- Stay positioned until the storm passes and is at least 3 miles away.
- Prepare for the potential of hypothermia with necessary raingear, insulated clothing and snacks.

Proceed cautiously and stay in a safe area until the storm is at least 6 miles away; it is common for lightning strikes to happen in front of and behind storms.

Rain

- Many volunteer stations and work projects are outdoors. While you are not likely expected to work in the rain, be prepared for precipitation.
- Clothing should include rain gear and extra shoes to replace wet ones.
- Camping gear should include a rain cover for your tent.

Rock Fall

- Awareness
 - Know the dangerous areas and exercise caution when traveling through them.
 - Be aware of new debris on the trail and loud noises that sound like gunshots or thunder.
- Avoidance
 - Never venture onto a closed trail.
 - Avoid stopping in known rock fall locations. Rest before and after rock fall zones.

Smoke

- Fire smoke levels are monitored by the Conservancy for your safety.
- When uncomfortable remain indoors.
- If a respiratory condition is exacerbated by smoke, it's appropriate to leave the park until the smoke clears rather than sleep in a tent.

Sun Protection

- Hat, sunscreen, protective clothing and sunglasses are always recommended.

Swimming

- For all water-related activities footwear is strongly recommended.
- Dipping/swimming/jumping areas must be safe to enter and exit.
- It's not advised to swim above waterfalls unless water level is very low and there are no strong currents.
- Use your best judgment about slick surfaces.
- Obey all NPS warning signs.

Tree Fall

Due to prolonged drought and ensuing bark beetle infestations, there are a record number of dead trees across California with the majority located in the northern and central Sierra. As a result, all volunteers should maintain vigilance during hiking and camping activities in order to minimize exposure to potential tree/limb fall.

- Do not camp below trees or limbs that are dead.
- Be aware that storms and high winds may exacerbate tree/limb fall. Seek shelter in buildings or under bridges, via a path that stays out of the forest. NPS will close the campgrounds if 30 mph winds are forecast as this is strong enough to fell trees and limbs.
- Characteristics that may suggest a potentially dangerous tree/limb include, but are not limited to:
 - Obvious dead branches
 - Forked trunks are signs of potential weakness
 - Branches that cross or rub invariably lead to weak spots.
 - Evidence of internal decay of the trunk or large branches such as cavities, disfiguration (cankers) and the fruiting bodies of fungi (conks).

Vehicles

- Generally volunteers transport themselves to and from work sites and assume personal liability for driving others in their vehicles.
- If arranging a carpool, remind drivers of their personal rather than YC's liability.
- Ensure there is always an emergency vehicle at a work project and disclose the location of the keys to everyone in the group.
- Clear all vehicles of food and scented items for storage in bear proof lockers.

Water Treatment

- Drinking water should be obtained from a potable water tap when possible.
- If water is obtained from a natural source (stream, river, spring, snow, etc.), it must be properly treated by use of either a water filter, chemical, boiling or ultra violet treatment.
- Volunteers administer their own method of water treatment and do so at their own risk

Wildfire

- If confronted by a wildfire:
 - Do not attempt to fight the fire.
 - Evacuate and notify emergency services.
 - Move away from the fire into the wind; avoid being downwind from a fire.
 - Avoid being above a fire unless above the tree line with no fuel between your position and the fire.
 - When moving away from a fire, stay at the same elevation.
 - Be aware that smoke tends to fill valleys.
 - Be aware of wind direction and speed; terrain features and the fire itself can substantially alter wind direction; large fires can create their own local weather.
 - Avoid saddles, chimneys, gullies, and steep slopes; this terrain can accelerate fire growth.
 - Avoid areas of light fuels such as dried grasses and shrubs; these can easily flare up; many fire fatalities occur in light fuel flare ups.
 - Be aware of flaming objects rolling downhill and airborne embers which can start spot fires downwind.
- A safe area must have a radius six times the height of the tallest tree in the line of the fire. In calm conditions the flame from a burning tree can be twice the height of that tree. Winds can cause a plume of flame to trail downwind from a burning object considerably farther than twice the height of that object.
- A safe area is considered:
 - Substantially fuel-less area such as alpine tundra or an extensive talus field.
 - A previously burned area.
 - Rivers, lakes, etc. are unlikely to provide adequate safety and should be considered a last resort. Bodies of water can be a barrier to fires but not to smoke. Intense fires can create lethally superheated steam. Hypothermia is a possible result of even a brief stay in an alpine lake or stream.
 - Once in a safe area individuals should seek depressions in the ground, remain still, and if smoke is present breath 2-3 inches from the ground (where the coolest, least smoky air is).
 - Should relocating be required due to flame or smoke, individuals should crawl to where the fire has already burned or another safe area.

Wildlife

Yosemite is home to many species of wildlife. Keeping a respectful distance and never feeding wild animals is a requirement of the program. It is a special treat to see wild animals in their natural environment. Few pose risk to humans; however keep the following in mind:

- Black bear: keep all food and scented items stored in bear proof containers and not in vehicles. If encountering a bear, raise your arms and voice to scare the bear away.
- Ground squirrels: fleas can carry the bubonic plague, avoid all contact.

- Mountain lion: use large, loud gestures to look threatening and do not bend down. Back away slowly and do not run. If a lion attacks, fight back.
- Mule deer: are capable of goring with antlers and kicking with sharp hooves.
- Rattlesnakes: are venomous; avoid contact. They are mostly found at lower elevations in park.
- Raccoons, bats, and a few other species may possibly carry rabies.

EMERGENCY GUIDELINES

While it is not your responsibility to respond to emergencies, the following provides guidelines should you be injured or encounter an injured individual. If you do decide to respond, do so within the limits of your training, experience, and any personal physical limitations.

General Guidelines

A situation will be considered an emergency if someone has symptoms that a prudent layperson, possessing an average knowledge of health and medicine, could reasonably expect to result in serious impairment to victim's health. Environmental, social, and contextual circumstances also need to be considered when the situation includes one or more of the following:

- There is a fatality.
- There is potential for loss of limb or life, or a significant or permanent injury or illness.
- There is potential for serious public relations consequences.
- Aircraft is required.
- Unscheduled loss of contact with an individual or a group occurs.
- Serious behavioral incidents involving sexual misconduct, assaultive behavior, or serious self-harm occurs.

In a true emergency, contact emergency services first.

Dispatch and 911

- In an emergency involving a fellow volunteer, use a cell phone/land line/send a runner to reach NPS Dispatch. Instruct dispatch to contact YC.
- You are empowered to notify dispatch to assist with a visitor emergency as well. Be sure to let the Volunteer Program Manager know you assisted with in an incident. You are not required to fill out an Incident Report Form for assisting other visitors, only for program participants.
- **NPS DISPATCH, 24 HOURS A DAY**
 - 209-379-1992
 - 209-379-1997
 - 911

EMERGENCY CONTACTS

Yosemite Medical Clinic and Nearby Hospitals

- Yosemite Medical Clinic; 209 372-4637
- Mariposa: John C. Fremont Hospital; 209 966-3631
- Oakhurst: Urgent Care Center; 559 683-2992
- Mammoth: Mammoth Hospital; 760 934-3311
- Sonora: Sonora Regional Medical Center; 209 536-5000

Call List

Dispatch has all of the YC Manager Numbers. In the event you have a cell signal, please also communicate with YC management about your situation if it is an emergency.

<i>Name</i>	<i>Cell</i>	<i>Home</i>	<i>Work M-F 9am-4pm</i>
Adonia Ripple General Manager	307 699 3790	209 379 2116	209 379 2317 x15
Mark Marschall Volunteer Manager	209 347 7816	209 347 7816	209 379 2317 x 14
Simon McIntosh Volunteer Program Asst.	978 578 8432		209 372 0571

- YC Management must be contacted **as soon as possible** in case of emergency involving a participant.
 - YC Management will determine when to notify local authorities and pertinent land owners/agencies regarding an emergency.
- When outside assistance is requested, including local SAR (Search and Rescue) or use of aircraft, YC management is to be notified. This can be via NPS Dispatch if needed (209 379-1992). Evacuation and medical care should not be delayed due to communication attempts.
- After any emergency incident involving a participant, an Incident Report Form must be completed by either a Team Leader or a participant and submitted to the Volunteer Program Manager.

MEDICAL SUPPLIES

First Aid Kit

It is advisable that all volunteers carry their own first aid kits. YC first aid kits are kept at volunteer campsites in a designated bear box and at most stations and made available for anyone to use at any time. The following people are responsible for kits:

- Work Weeks: the contracted cook/host
 - NPS work leaders also carry first aid kits for field work.
- Visitor Information Assistants: volunteer team leaders
- Corporate Work Crews: volunteer host
 - NPS work leaders also carry first aid kits for field work.

Contents

Ace bandage
Alcohol swabs (4)
Band-Aids (8-12)
Band-Aids (2-4 2x2)
Benzalkonium chloride towelettes (4)
Betadine swabs (4)
Butterfly bandages
Candle

Charged radio
Compass
Disposable lighter
Dressings (2-4 2x2 and 2 4x4)
Gauze (1 roll)
Headlamp and extra batteries
Iodine water treatment
Irrigation syringe

Latex gloves (3 pairs)
Moleskin
Popsicle sticks (finger splints)
Q-tips
Quarters for payphone (4)
Quick Ice
Rescue breathing mask
SAM splint

Sanitary pads (2-3)
Scissors
Space blanket
Surgical tape (1 roll)
Thermometer

Tourniquet
Triangular bandage
Tweezers
Whistle
Ziploc bags

Field Incident Report forms (2)
Missing Person Questionnaire (1)

Over the Counter Medications

If you choose to carry over the counter medications (OTC) in your first aid kit, use informed judgment before administering and be aware of any harmful drug interactions. Of all OTC to carry, aspirin will be the most universally useful (heart attack to fever and pain).

Prescription Medications

Participant medical forms should list any prescription medications being taken. Inevitably participants do not always report this thoroughly. If you are taking a hike off duty with a fellow participant, be sure to query them about their medications and allergies