

**PACK & SADDLE  
STOCK CAMPING**



**Backcountry Horsemen  
of California**

*Concerned Men and Women Dedicated to  
Gentle Use of California Trails & Backcountry*



## Introduction & Purpose

This syllabus is designed and written to introduce the basics of stock packing and camping and is by no means complete, nor is it meant to serve as an authoritative text. It is only meant to serve as a guide for individuals inexperienced in horse and or mule packing. Camping with pack stock is a lifelong process. As a person masters the skill involved, the individual will eventually develop his or her own style or system.

This syllabus has been designed as an outline for each unit to add information pertinent to their local unit and area. The key to good instruction is to be flexible in teaching what is desired and needed to your particular group of students.

There is a two-fold purpose for this course.

1. *The obvious is to teach students how to pack and enjoy themselves in the backcountry utilizing livestock.*
2. *The second is to present common sense actions while in the backcountry.*

By the end of this course, you will be ready to venture out on your own pack trip. Ideally your unit should have a group of support packers who are willing to assist you in this effort.

It is strongly suggested that you head into an area where there is plenty of feed, water, public pastures, and beautiful scenery. If this were not possible, then it would be wise to plan a short trip to begin with. Whatever you decide, plan your first trip so that it is a successful one.



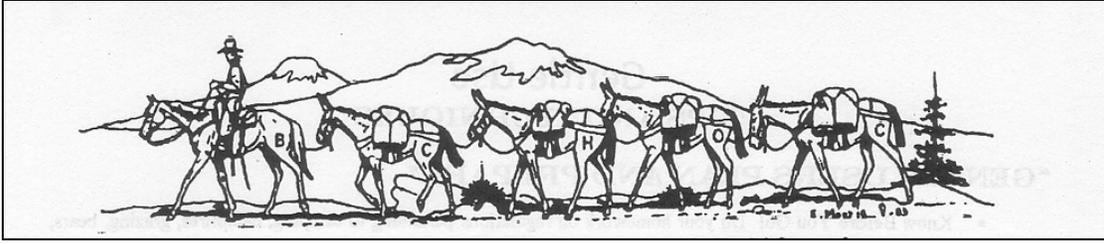
## Sincere Thanks

Credit for this document belongs to a number of units and people for their dedication gathering and preparing information to include in this manual. Without their contributions and tireless effort this document would not be possible.

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*Thanks BCH members! If we missed your contributions please accept our sincerest apology.*





## The Backcountry Horsemen of California

### Who We Are and What We Do!

The Backcountry Horsemen of California is a group of dedicated men and women working to preserve the historic use of trails with recreational pack and saddle stock. They perform public service activities for numerous land management agencies and they are continually working to educate their members on how to be "Gentle Users."

The use of livestock has played an important role in the American culture. California and the western states have particularly had a long tradition of using pack and saddle stock in the backcountry. The Backcountry Horsemen of California carry on this tradition in modern times. With this use comes the responsibility and obligation to care for our public lands and to ensure their use for future generations.

The Backcountry Horsemen of California work in cooperation with government agencies to help clear trails, maintain historic sites, construct new facilities, sponsor educational seminars and clinics, and assist with service projects as requested. They also strive to stay current on relevant issues and to provide input on management plans and activities that pertain to backcountry trails on public lands.

Membership in the Backcountry Horsemen is open to any individual or family sharing the concerns of the organization. There are numerous units throughout the State. A member may affiliate with any of the units or become a "member at large." The units conduct activities of their choice, but also operate under broad guidelines established by the State Board. Each unit is represented on the board by one or more Directors.

The Backcountry Horsemen of California focus their efforts in three key areas:

- Service Projects,
- Education, and
- Public Lands Issues.

We offer a few Tips and Techniques for "Gentle Use" of the backcountry. We hope you will consider these ideas and we look forward to seeing you on the trail!

## Gentle Use TIPS AND TECHNIQUES

### "GENTLE USERS PLAN AND PREPARE"

- Know Before You Go! Do your homework on regulations pertaining to camping, campfires, grazing, bears, trails and terrain. Obtain maps and information on the area.
- Plan your menus, check tack and gear, and be prepared for emergencies.
- Condition your stock. Familiarize them with crossing bridges, logs, water, and rocky areas.

### "GENTLE ON THE TRAIL"

- Take it easy on the trail! Remove deadfalls whenever possible to avoid creating a new trail.
- Avoid cutting switchbacks. This will help to prevent erosion and costly repairs.
- Keep stock traveling single file to avoid creating multiple trails.

### "GENTLE USE OF CAMPSITES"

- Select campsites on firm, dry ground. Use existing sites whenever possible. Camp at least 100 feet from lakes and streams, where terrain permits.
- Use a stove for cooking to be less reliant on fires. Where campfires are allowed, use only dead and down wood, if available. Use an existing fire ring, particularly in high use areas.
- Naturalize your site before leaving by spreading pine needles and twigs. Scatter manure and fill in any holes that may have been created by your stock.

### "GENTLE WITH WASTE MANAGEMENT"

- If you pack it in - pack it out! This includes leftover food scraps and unburned items from your campfire, such as foil, plastic and glass.
- Washing dishes, clothes, or yourself should be done at least 100 feet from any water source.
- Use "cat holes" that are 6-8 inches deep to dispose of human waste. Waste should be buried at least 100 feet from water and well away from camp.



## **"GENTLE STOCK MANAGEMENT"**

- Ensure your stocks are well prepared for backcountry challenges. Conditioning them beforehand can help prevent colic, lameness, and other illnesses.
- Have your stock accustomed to crossing bridges, logs, rocky areas, and streams. These are common to backcountry travel.
- Be prepared to use highlines, bobbles, pickets, electric fences, or loose grazing. Pack supplemental feed, if needed. Practice before you go!

## **"GENTLE WITH PLANTS AND ANIMALS"**

- Properly store your food from bears and other wildlife.
- Avoid trampling fragile vegetation in and around your campsite.

## **"GENTLE WITH OTHER USERS"**

- Treat others with respect and common courtesy.
- Keep noise to a minimum. Use colors for equipment and clothing that blend into the surrounding.
- Be of assistance when a need arises.





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# I. PLANNING A PACK TRIP

## HISTORICAL FACT

The use of pack stock has a long history in the world. The mule first originated in Asia before the Roman Empire existed.

Queen Elizabeth of Spain in 1486 organized, equipped and maintained pack trains of 14,000 mules and burros which carried supplies and munitions of war for her armies of 13,000 Cavalry and 40,000 Infantry.

Mules were a major factor in the development of California. As fast as missions were established in new territory, mules went along.

Pack and saddle stock were a significant contribution to our movement west in America.

The tradition of pack and saddle stock use in California goes back many years.

Since the Wilderness Act of 1964 the need for stock in the backcountry has increased and so has the need for us to be very aware of the potential impacts produced.

The Backcountry horsemen have made great strives to educate the stock user in methods, which will continue our use of stock in the backcountry.

This course is not only designed to introduce you to packing, but also to be a reminder to be a Gentle User to the back country and to the stock you use.

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## TRIP EXPECTATIONS

- What type of trip will you take?
  - ▶ Are you seeking solitude, good fishing, long days in the saddle?
  - ▶ Consider your experience with animals!
  - ▶ Plan your trip accordingly.
- Your first trip should be short and easy to accomplish a successful and memorable experience.
  - ▶ A longer more complicated trip means more livestock, which in turn means increased time for care of the animals.
  - ▶ Be aware of the ability the other people on the trip possess.
  - ▶ Be prepared to assist those with less experience.
- How far do you plan to ride?
  - ▶ Per day and for the entire trip.
  - ▶ Take into consideration the ability of the people and the animals on the trip!
  - ▶ It is very important that you leave enough time at the end of the day to establish a proper camp!
- Depending on your expectations, you should be able to choose where and when to travel to best meet your goals.

## KNOWLEDGE OF THE AREA

It is imperative to be familiar with where you are going! This is not always possible. Be prepared ahead of time!

- Buy Maps!!!
  - ▶ Get them out and go over routes and possible side trips. Consider river and stream crossings, alternative campsites, bridges, mountain passes and fishing opportunities. Consider other trails or road heads that could be used in case of emergencies.



- Call Land Management Agencies
  - ▶ Whenever possible, talk to field personnel. When gathering information consider such things as access, weather conditions, snow pack, availability of feed, popular or high use areas and wildlife, such as the presence of bears.
  - ▶ In popular areas there may be campsite closures or fire restrictions that you should be aware of. You may not be able to camp where you had planned. Check on areas closed to grazing and restrictions as to the number of stock allowed.
  - ▶ Use existing impacted campsites whenever possible. When in pristine areas plan on much more time to select a proper site, leave as little trace as possible when you leave.
  - ▶ With this information you should be better prepared for your trip, have a more enjoyable experience and be ready to minimize your impacts.

## **TIME OF YEAR / EXPECTED WEATHER**

The type of environment you plan to visit may not be able to withstand the impact of your stay during certain times of the year. On a trip into the Sierra in June, you will most likely encounter snowdrifts on trails and high run-off. This means the trails will be wet and muddy and relatively fragile. Streams may be dangerous or impossible to cross. Trips planned for late July in the same area will for the most part encounter dry trails, which can withstand a high level of traffic. In most areas there will be a certain time of year when the area will be more susceptible to impacts than at other times. By planning backcountry visits to avoid these fragile periods, many camping and stock related impacts can be reduced or eliminated.

Time of year definitely influences the weather, but unexpected conditions can always occur. Plan for the unexpected and be prepared. Encountering weather conditions for which you are unprepared can jeopardize your safety and the safety of others in your party. This may force you to make decisions and implement action that will compromise your efforts to minimize impacts.



## TYPE OF EQUIPMENT / CLOTHING NEEDS

Many amenities can be left at home. Taking only what you need will make setting up and breaking down camp go much more quickly. A simple camp makes it easier to leave little trace of your presence.

Having the proper clothing to stay warm and dry will enhance your ability to enjoy your back country visit and may eliminate the need to react to adverse weather situations.

Select equipment and gear for your stock that allows the flexibility to make choices that will minimize your impacts. Cook stoves allow you to camp in areas where firewood is not abundant. Using lightweight, compact stoves, tents and sleeping gear may enable you to cut down on the number of livestock required to support your trip. Fewer numbers of animals allows you greater choice of campsites because less feed is required and less time spent caring for animals.

Your equipment must be adequate for the type and length of trip you have planned. Sore horses, rolled loads, wet matches, leaky tents and blisters can ruin a trip. Go through the equipment list; then carefully examine the gear. It must all be in good repair.

- Basic Survival Equipment
  - ▶ Matches in a waterproof container. (It is advisable to also have a back-up method for fire starting, such as flint, steel, and tinder. A cigarette lighter full of fluid works well.)
  - ▶ Knife.
  - ▶ Compass and map.
  - ▶ Reserve quick-energy food source such as candy, nuts, or dried fruit.
  - ▶ Water (particularly in dry country).
  - ▶ Whistle for signaling (coach type; if metal, the mouthpiece can be wrapped with tape for cold weather).
  - ▶ Space rescue blanket (lightweight and useful for a number of protective purposes).
  - ▶ Rain poncho or equivalent.



- ▶ Lightweight flashlight (leave spare bulb and check batteries).
- ▶ Minimal first aid supplies (Band-Aids, compress bandages, tape, disinfectant, moleskin, and so fourth).

## **TEMPERAMENT AND EXPERIENCE OF STOCK / NUMBER OF STOCK**

Ideally, stock used in the backcountry should be fit, calm, reliable and experienced. Excitable, inexperienced animals tend to cause more problems on the trail, in camp and out grazing. These problems can increase your impact on the area and on other visitors as well. A calm, experienced horse won't be so upset by hikers, wildlife or other domestic animals on the trail, or tend to paw the ground as much or pull back when tied up. Know your stock.

Take time to accustom your animals to the types of restraints you will use. Make sure they will eat the type of supplemental feed you will bring. The road head is not the ideal place for your stock to learn about packsaddles, noisy loads or wind-blown tarps. Educate your stock at home where you can supervise them and keep them from hurting themselves and others.

Consider how you will use your stock. If they will be used only for transportation into and out of the mountains, consider having someone drop you off and pick you up. If you will be moving camp everyday, keep it simple. There will be less impact, less gear to pack and chores will be done more quickly.

Some groups reduce the number of stock they require by hiking with pack stock. Evening rides to a favorite fishing hole are still possible if your pack loads slung on riding saddles. In order to reduce stock numbers, some hunters ride into the mountains expecting to hike out (if they are successful with their riding horses) packing the game across the saddle.

## **MEAL PLANNING AND FOOD PREPARATION**

Plan your meals carefully. This will reduce waste from leftovers and help minimize extra food that has to be packed out at the end of the trip. Food can make up a large portion of the total weight the stock packs in. Extra time spent planning not only meals but the type of food used (dry vs. canned) is time well spent, for it can reduce total food weight considerably.

By repackaging food items into reusable containers and plastic bags you can greatly reduce the weight and bulk of your food and avoid bringing unnecessary packaging into the backcountry.



## WHAT TO TAKE

- Horse Related Equipment
  - ▶ Fly spray- Permethrin/Pyrethrin (Concentrate)
  - ▶ Grooming equipment – Curry-comb, brush, hoof pick
  - ▶ Bell, hobbles, electric fence, etc.
  - ▶ Leather punch and fence pliers
  - ▶ Nosebags
  - ▶ Small scale to weigh packs
- Shoeing Equipment
  - ▶ At least one hind and one front shoe, which fits each animal.
  - ▶ Nails
  - ▶ Nippers, hammer. rasp, pull offs, knife
  - ▶ Easy boot sized to fit
- Vet Kit
  - ▶ Scissors, thermometer, hemostats
  - ▶ Bandages elastic 6" gauze, Vet wrap
  - ▶ Antibiotic ointment
  - ▶ Betadyne, triple antibiotic ointment, gauze pad dressings
  - ▶ Assortment of needles and syringes
  - ▶ Eye ointment without cortisone
  - ▶ Surgical Soap
  - ▶ Chlorhexidine, Betadyne



- Camp Equipment - Keep it light
  - ▶ Shovel, rake, saw or ax (keep saw or ax handy on a pack animal to cut logs out of trail)
  - ▶ Collapsible water bucket
  - ▶ Solar shower
  - ▶ Propane lantern and stove with extra bottles
  - ▶ Rain gear- tarps, tent, and kitchen tarp
  - ▶ Roll-up cots, tables, and chairs (luxury items)
  - ▶ Lightweight grill
  - ▶ Kitchen equipment - Kitchen box (be creative)
  - ▶ Matches and fire starter
  
- Food For Animal
  - ▶ Grain or pellets (4 way grain or barley-corn) 3-5 lbs AM and PM while stock is on the highline (Example- PM feed then turn out, if trust worthy, then catch first light and feed AM ration)
  - ▶ Salt - 41b block is enough placed on log or rock where it won't cause detrimental impact needed on trip which exceed three days
  
- Personal Gear- See clothing list
  - ▶ Sleeping bag
  - ▶ Flashlight with extra batteries -First Aid Kit for people
  - ▶ SHARP KNIFE ON BELT AT ALL TIMES!
  
- Clothing
  - ▶ Slicker - Stay dry (3/4 length is best)
  - ▶ Wide Brimmed Hat- Keeps sun and rain off
  - ▶ Layered Clothing



- ▶ Underwear
  - ▶ Thermal underwear
  - ▶ Long sleeve shirt - protects from sun and cold
  - ▶ Good quality coat- one which sheds water well
  - ▶ Chaps
  - ▶ Good boots with heels- combination hiking/riding
  - ▶ Gloves - warm knit (wool does well) or leather with liners. Whatever is comfortable and allows you to handle your stock.
- Don't Worry About Getting Dirty. Plan on wearing some of the same clothes each day, especially pants. This cuts down on weight and keeps you from packing extra clothing into and out of the mountains.
  - Use a Soft Duffle Bag. It conforms well when making up your loads.



## BACKCOUNTRY PREPARATION CHECKLIST

### CLOTHING

- Hat
- Hat Cover
- Slicker
- Windbreaker
- Heavy jacket
- Gloves
- Sweats<sup>1</sup>
- Long-johns<sup>1</sup>
- Shorts<sup>1</sup>
- Jeans
- Handkerchief
- Shirts
- Underwear
- Socks
- Visor / Soft cap
- Tennis Shoes / Camp Shoes
- Boots / Spurs
- Waterproof Overshoes<sup>1</sup>
- Chaps<sup>1</sup>
- Rubber Sandals or water shoes<sup>1</sup>
- Swimsuit<sup>1</sup>

### OTHER

- Sleeping bag / Wrapped
- Pillow<sup>1</sup>
- Towel & Wash cloth
- Flashlight
- Toiletry Kit
- Medicine Kit<sup>2</sup>
- Horse Medicare Kit<sup>2</sup>
- Bug Repellent<sup>1</sup>
- Sunscreen
- Wipies<sup>1</sup>
- Maps<sup>2</sup>
- Camera<sup>1</sup>
- Fishing Pole and tack<sup>1</sup>
- Notepad<sup>1</sup>
- Scales<sup>2</sup>
- Knife (sharp)
- Grain & Salt<sup>2</sup>
- Tent<sup>1</sup>
- Extra Tarps<sup>1</sup>
- Extra Rope<sup>1</sup>
- Saw, Ax, Shovel<sup>2</sup>

- Portable Electric Fence<sup>2</sup>

### TACK

- Saddle
- Good Blanket
- Breast Collar
- Bridle (with long reins)
- Bosal & Neck Rope
- Cattle Pouch
- Hobbles<sup>1</sup>
- Bell<sup>1</sup>
- Nose Bag<sup>1</sup>
- Brush<sup>2</sup>
- Extra Leather<sup>2</sup>
- Extra Shoes and Nails<sup>2</sup>
- Extra Cinch<sup>2</sup>

### FOR TRAILHEAD

- Lantern
- Stove
- Coffee pot
- Breakfast Goodies
- Water
- Hay

1 Optional Items

2 Joint Effort



## AUTO PREPARATION CHECKLIST

### CHECK THE FOLLOWING FOR SERVICEABILITY

- Tires
- Spare Tires
- Tire Air Pressure
- Fan Belts and Hoses
- Coolant
- Brakes
- Wipers
- Lights
  - Head Lights
  - Tail and Turn Lights
  - Clearance Lights
- Trailer Floor

### CHECK EMERGENCY ITEMS

- Jack & Handle
- Jumper Cables
- Tire Chains
- Flares
- Extra Fuel

- Drive slower when transporting stock in the mountains. Some animals can get colic from the stress of traveling in a trailer. Check stock from time to time for abnormal sweating or trying to lay down in the trailer. Carry medicine in case of colic. Check with your veterinarian for medicines and prescriptions.
- Use lower gears when coming down hills to keep brakes from getting hot and for a slower descent.
- If possible, get the stock you will be transporting together a day or two ahead of time so you can observe them and determine a pecking order. This will help you in deciding the best traveling position in the trailer for each of your animals to minimize fighting. Also in open or stock trailers, placing stock head to tail will allow more room and is a more natural standing position for your animals.



## AGENCY REGULATIONS

- A. Agency contacts
  - a. Depends on:
    - i. Where you go.
    - ii. Which agency your dealing with.
      - 1. USFS, NPS, BLM, or USF&W
      - 2. "District" within the agency
        - a. In FS district rangers are allowed some freedom in determining some policies. It appears as if regulation enforcement changes from district to district.
  - b. Learn who is in charge of the wilderness you usually visit or the ranger station closest to the area you will be traveling in.
    - i. Stop by, ask questions, learn:
      - 1. Who has been there the longest?
      - 2. Who spends a lot of time "in the field"?
      - 3. Do this early in the season, every season.
  - c. Expect agency personnel to be seasonal.
  - d. Regulations often change from season to season.
- B. Wilderness Permits.
  - a. Check to see if they are required where you plan to go.
  - b. Check with multiple agencies if necessary.
  - c. The agencies can be your best ally and are there to help you so approach them freely.
    - i. Agencies are for documentation, explaining new regulations, and enforcing quotas.
    - ii. Quotas may prevent you from being the social event of the season, but they are designed to prevent overuse.
- C. Fire Permits
  - a. Some wilderness permits work as fire permits.
  - b. Fire restrictions can change from day to day, check these often.
    - i. Restrictions changes can be based on weather, where you camp, environmental conditions, elevation limitations, etc.
  - c. Opportunity for agency to go over fire restrictions and safety techniques.
    - i. Large expenditure of dollars are spent for control of fire.
    - ii. An ounce of prevention is worth a pound of cure.



# CAMPFIRE PERMIT



**CALIFORNIA CAMPFIRE PERMIT**

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

is authorized to build a campfire, subject to the terms listed on this permit on National Forest Land and Bureau of Land Management Land.

**SPECIAL LIMITATIONS:** Some areas have special limitations regarding campfire use. It is your responsibility to find out what these limitations are. The best way to do this is by contacting a local agency office in the area you intend to visit. Throughout the year, as fire danger increases, fire restrictions are put into effect. Strict compliance with fire restrictions is required.

**TERMS OF PERMIT**

**Permittee agrees to the following:**

1. Clear all flammable material away from the fire for a minimum of five feet in all directions to prevent escape of the fire.
2. Have a shovel available at the campfire site for preparing and extinguishing campfires.
3. Have a responsible person in attendance at all times.
4. Extinguish campfire with water, using the drown, stir, and feel method.



**READ AND SIGN**

Permittee's signature \_\_\_\_\_ Date \_\_\_\_\_

Issued by \_\_\_\_\_ Agency/Unit \_\_\_\_\_

Expiration Date \_\_\_\_\_

RS-FS-5100-54 (revised Jan. 1992) LE-63

**Fire Restrictions on National Forest Land are as follows:**

a) With a Campfire Permit, you may use a:



Wood Fire



Charcoal Fire



Portable Gas Stove

b) In addition, when **FIRE RESTRICTIONS** are in effect, you may use **ONLY** a portable stove with gas, jellied petroleum or pressurized liquid fuel outside of developed recreation sites, or designated fire safe areas.







**ADDITIONAL INFORMATION**

- On private land you must have written permission from the landowner for campfire use.
- Some designated wilderness areas require a special permit.
- Many high-country areas prohibit wood fires to protect scarce vegetation.
- If you smoke outside a vehicle, be sure you do so within a cleared area at least 3 feet in diameter.

**Definition:** A **campfire** is a fire which is used for cooking, personal warmth, lighting, ceremonial or esthetic purposes that is not within a building, mobile home or living accommodation mounted on a motor vehicle. Campfires include wood fires, charcoal fires, and portable gas stoves using gas, jellied petroleum or pressurized liquid fuel.

**Liability:** You are liable for the cost of suppression and damages caused by any wildfire that starts through your negligence. Reference California Health and Safety Code 13009, Suppression costs collectable.

*Federal Law prohibits discrimination in employment or delivery of program services on the basis of race, color, sex, age, religion, national origin, marital status or disabling condition.*

# VISITOR'S PERMIT

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE		FORM APPROVED GSA GEN. REG. NO. 27		(14) TRAVEL PLAN		TRAVEL ZONES (or composite)				H I G H T S	
VISITOR'S PERMIT (Nat. FSM 2322)		List of suitable areas to be traversed - in sequence of travel - and number of nights to be spent in each zone. In areas where suitable campsites are assigned, list one such camp site and the number of nights assigned.									
WHEN SHOWED, THIS FORM - VISIT PERMIT AUTHORIZES											
(1) NAME (Print, show street and town)										28	29
(2) MAILING ADDRESS (Optional)										30	31
(3) CITY AND STATE										32	33
(4) TO VISIT land in local ownership in accordance with regulations										34	35
(5) DATE'S WHEN land outside of park and forest lands										36	37
										38	39
(6) LOCATION OF ENTRY POINT										40	41
(7) LOCATION OF EXIT POINT										42	43
(8) PRIMARY METHOD OF TRAVEL										44	45
(9) NUMBER OF PEOPLE IN GROUP										46	47
(10) NUMBER OF PACK AND SADDLE STOCK										48	49
(11) NUMBER OF WATERCRAFT ON VEHICLES <small>*Class Regulations - Vehicles not provided in many parks areas</small>										50	51
I agree to abide by all laws, rules and regulations which apply to the area and will do my best to see that everyone in our group does likewise.										52	53
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## Wilderness Regulations

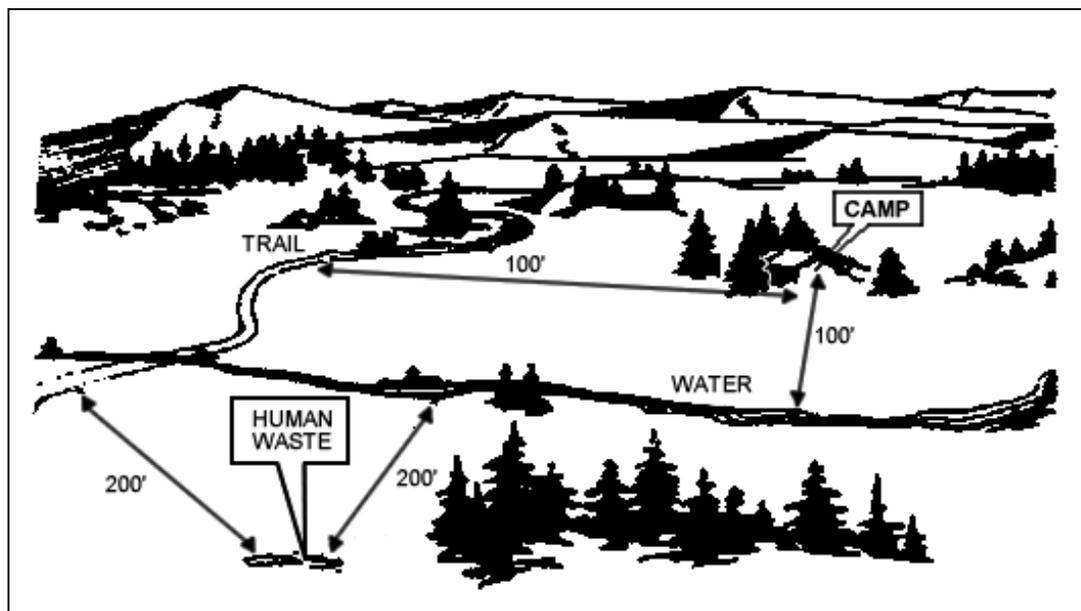
The regulations listed below are from the INYO and SIERRA National Forest. You may want to use the regulations for your specific areas. Most of the regulations below are just plain common sense and courtesy.

1. Overnight wilderness visitors are responsible for having a valid wilderness permit and a campfire permit where fires are allowed if it is required in the area you are going to.
2. Select campsites at least 100 feet from lakes, streams, and trails where terrain permits. Try to select a campsite on hard surface that is screened to preserve the natural appearance of the landscape.
3. Body waste and all wash water should be buried at least 100 feet from lakes and streams. Bury body waste in at least 4 inches of soil. Pack out sanitary napkins and disposable diapers.
4. Pack out all you pack in. Burnable refuse may be burned if fires are allowed. Do not burn aluminum and glass. Burying refuse is not an acceptable practice. Some packaging contains foil and plastics which should not be burned. Try your skill at "No Trace" camping and leave the wilderness cleaner than you found it.
5. Maintain water quality. Soap or detergent, even biodegradable, should not be used in lakes or streams. Boil or filter all water prior to drinking.
6. Shortcutting switchbacks causes trail erosion and resource damage costing tax dollars to repair. Stay on existing trails.
7. Cuffing or defacing standing trees, dead or alive, is not permitted.
8. Dogs or other pets are not allowed in the California Bighorn Sheep Zoological Area nor in National Park wilderness. They are allowed in a National Forest wilderness if kept under confinement.
9. Discharging firearms is permitted only for emergencies and taking of wildlife as permitted by State game laws. Firearms are NOT permitted in the National Parks.
10. Motorized vehicles and mechanized equipment, including bicycles, are prohibited.
11. Construction of improvements such as rockwalls, larger fireplaces, boughbeds, tables, etc. is not permitted. Improvements destroy natural beauty and leave man's imprint.

12. Tying of pack and saddle stock within 100 feet of the lakes, streams, trails, and campsites is not permitted except while loading and unloading. Tying away from these areas will preserve the quality of the wilderness and water.

### Minimum Impact Techniques

1. Give stock the right-of-way. For everyone's safety, get off the trail to the downhill side and remain still until the stock passes.
2. Solitude is an important wilderness quality. Respect it by leaving space between campsites and conducting yourself accordingly.
3. Drab/earth colors are preferable when selecting equipment and clothing, to help minimize your presence in the wilderness. Try to "hide" your campsite from view to preserve the natural landscape.
4. Where fire is permitted keep it small and sit close. However, backpack stoves are recommended for cooking throughout the wilderness and back country areas. Leave standing dead wood for others to enjoy. Snags are a part of the natural beauty of the Sierra high country.
5. When unloading, tie stock to trees 8" in diameter or larger, then let stock run loose or use hitch lines on hard surface sites for tethering stock. Scatter manure to prevent odor and fly problems.





## BACKCOUNTRY PREPAREDNESS

### BEARS

Most people's perceptions of bears come from images seen on television. However, the characters of Yogi and Smokey are fantasy. Bears are wild animals and their presence is common in the Sierra Nevadas. The bears that live in the Sierra are the American Black Bear (*Ursus americanus*). Adult bears can weigh up to 350 pounds and can be any shade of black or brown, from chocolate to cinnamon to blonde.

Encounters between forest users and Black Bears has increased in the Sierra. Many areas receive daily and nightly visits. Why are bears approaching humans more and more? What are they after? FOOD. Human food. Grabbing a food snack out of a tree or an ice chest from a car or picnic table is easier than foraging for berries and grubs. The bears are simply adapting to their environment.

If a bear gains access to your food just one time, it becomes habituated. A habituated bear is one that becomes dependent on human food sources and less fearful of humans. It is critical that a bear never gain access to human food. Taking the time to store your food properly, both at the campground and in the backcountry, is your moral and legal responsibility. Proper food storage makes the difference between a wild bear and a dead bear.

### PROPER FOOD STORAGE

On some trails bears may visit you every night. On others, you may not see bears during your entire trip; however, that doesn't mean that bears do not live in that area. In all cases, the best way to store your food properly is in a BEAR-RESISTANT CANISTER. Safe food storage is as simple as placing the locked canister on the ground approximately 50 feet from your camp. This method of food storage in the backcountry is the only proven, effective way to store your food. In many places this storage type is a requirement. Please check to find out the requirements for the area you will be traveling through. Canisters are available for sale and rent at some sporting goods stores and some Ranger Stations.

Where allowed, the counter-balance method may work in some areas. It is hard to do well, requires trees and rope, and bears can often, and do, thwart it. This method is just a deterrent and really only buys you time to get up and protect your food, which holds its own set of dangers. This method should be your last resort if you don't have a bear canister.

Additionally, there are food storage lockers available in some areas of the backcountry of some National Parks. However, using a bear canister allows for



maximum freedom and safety while traveling and when choosing camping locations.

### PROPER FOOD STORAGE AT CAMPGROUNDS

Food storage is important when you are camping at campgrounds. Just because there are more people and vehicles around doesn't mean there is less danger of losing your food. Remember, for bears, more people mean more food.

Store all of your food and toiletries in food storage lockers if they are available. Don't forget, portable bear canisters work when camping at campgrounds too. If you must leave food in your car, use the trunk. Never have ice chests, food, or food wrappers visible in your vehicle.

### REMEMBER

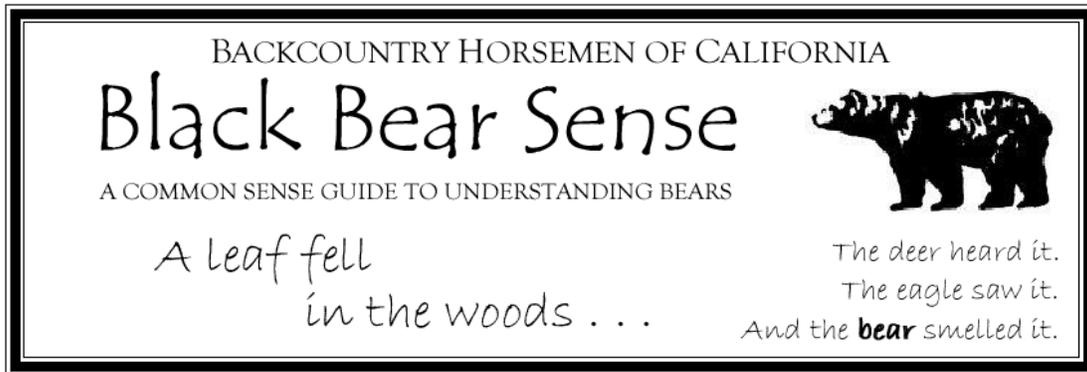
Bears have an extraordinary sense of smell. Bears are attracted to and will eat anything with an odor, such as toothpaste, soap, garbage, sunscreen, etc. While not normally aggressive towards humans, bears are possessive of their food and will defend it. They are very quick and powerful animals. **DO NOT TRY TO RETRIEVE YOUR FOOD FROM A BEAR.** If a bear gets into your food, stay a safe distance away and then be sure to clean up the mess afterwards. Report all incidents to a ranger.

You can keep bears wild and alive by storing your food properly. Each camper is the most important part of a successful bear protection program. All it takes is a little thought and preparation.

**IMPROPER FOOD STORAGE RESULTS IN: Property Damage, A Safety Threat, and A Dead Bear.**

Information obtained from INYO National forest flyer





You humans have me figured to be just like Yogi, BooBoo or your cuddly stuffed Toddy Bear. Please remember, I am a wild animal. Statistically, you are quite safe from us bears. We do add a risk to you visiting the, backcountry but you take a much greater risk driving to the trailhead. Even if you should die in the wilderness, you are much more likely to fall off a cliff, drown, suffer heart; failure or succumb to hypothermia than you are to be attacked by one of us boars.

My eyesight is not perfect but my sense of smell and hearing are very keen. I can smell you humane coming for quite some distance and I'll usually be gone at the first whiff of human intrusion. There are some of us boars you have invited in for milk and cookies. To some of my follow beam, the smell of humane in the woods works like a dinner bell. All of us beam remember where our meals come from. We aren't dumb and our stomachs rule. We have a road map sketched in our minds. All the best restaurants (campsites, berry patches, care, oak groves, etc.) are located on this map and we will visit them again. in a couple. of days.

We bears are intelligent and opportunistic critters and when we become accustomed to the idea that humane share our space, we readily take advantage of everything that association has to offer -such as helping ourselves to your delirious pork and beans, granola bare, bacon, toothpaste, soap. Some of us have even cultivated a taste for chocolate. We will also cat chapstick and deodorant. With noses like, ours it is impossible, to hide the fact that you are keeping all that good stuff in your tent, your car, or your camper! Our noses load us to the food and our incredible strength gets us pact almost any obstacle. We are able to open the side of your trailer as though we had can openers for claws. We will open cane of spaghetti sauce and ravioli The fact is, when we bears arc offered the, choice, we will almost always opt for the, easiest meal at hand; we have discovered that beef stow with milk and cookies tastes better than grubs!

If we gain access to your food, we become habituated. That means we become dependent on human food sources and are less afraid of humane. Therefore, it is critical that we never gain access to human food. You humane need to mind your manners while you are visiting the forests and parks Take time to store your food properly at; the, campground and in the backcountry. It is your moral and legal responsibility. Proper food storage makes the difference between a wild bear and a dead bear because problem boars are often destroyed. The following suggestions may make the difference, of having a good time during your visit or going home angry and upset. Please help us both stay alive.

## Black Bear Essentials to Remember

The following are what we bears would like you humans to remember.

### You Must Be Alert

### Please Do Not Surprise Me

### You Are Being Aggressive If You:

- Get between me and my cub
- Are anywhere near a carcass ....  
It's my food!
- Walk directly towards me
- Circle or crowd me .....
- I need an escape route!
- Try to take "your" food away from me .....
- It's mine!



The following are some helpful hints to remember while visiting the forests and parks.

### Avoid a Confrontation

- Separate cooking and sleeping areas
- Store food and garbage properly
- Keep a clean camp site

### Avoid a Confrontation: Watch for these Signs

- Large areas of torn up ground
- Rocks or boulders turned over
- Logs or stumps torn apart
- Fish or dead animals
- Berries
- Claw marks on trees
- Bear scat

### Remember: Wild Animals Can Be Dangerous

- Bears habituated to food are dangerous
- Do not run
- Try to look larger than you are

## REMEMBER

Bears have an extraordinary sense of smell. Bears are attracted to and will eat anything with an odor. While not normally aggressive towards humans, bears are possessive of their food and will defend it. They are very quick and powerful. **DO NOT TRY TO RETRIEVE YOUR FOOD FROM A BEAR.** If a bear gets into your food, stay a safe distance away and then be sure to clean up the mess afterwards. Report incidents to a ranger. You can keep bears wild and alive by storing your food properly. Just use some thought and preparation.

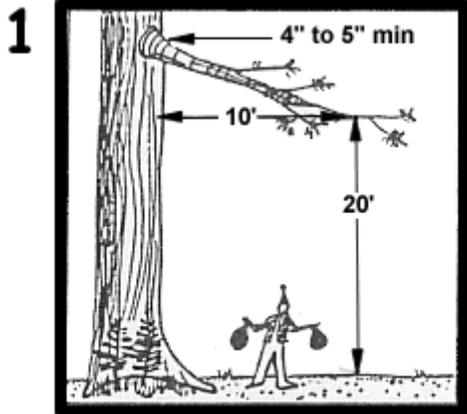
## PROPER FOOD STORAGE FOR BACKCOUNTRY USERS

On some trails bears may visit you every night. On others, you may not see bears your entire trip, however, that does not mean that bears do not live in that area. In all cases, the best way to store your food properly is in a portable, BEAR-RESISTANT CANISTER OR PANNIER. Safe food storage is as simple as placing the locked canister or pannier on the ground 50 feet from your camp. **THIS METHOD OF FOOD STORAGE IS THE ONLY PROVEN, EFFECTIVE WAY TO STORE YOUR FOOD.** It is required in some areas of the backcountry that you store your food in bear-resistant containers. Please check with the agencies about requirements before starting your trip. Canisters are for sale and rent at sporting goods stores and some ranger stations, Panniers are available through some saddle shops. Using a bear-resistant container allows for maximum freedom and safety while traveling and when choosing a camp location. The counter-balance method should be your last resort. This method is hard to do well, requires trees and rope, and bears often thwart it. In fact, bears will probably get your food if you do not get out of your warm bed and make some, mighty loud noise and keep a sentinel on watch after the first visit.

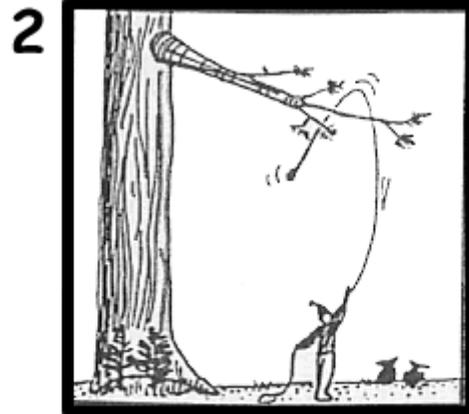
## PROPER FOOD STORAGE AT CAMPGROUNDS AND TRAILHEADS

Food storage is just as important at campgrounds and trailheads. Having more people and vehicles around doesn't mean there is less danger of losing your food. To a bear, more people means more food. **STORE ALL FOOD IN FOOD STORAGE LOCKERS IF THEY ARE AVAILABLE.** If there are, no lockers, then store the food and ice chest in your vehicle (better in the trunk), keep them covered and out of sight. Leaving food in your vehicle at the trailhead while you are in the backcountry is asking for trouble. Bear-resistant containers work when camping at campgrounds, too!

**COUNTER-BALANCE TECHNIQUE**



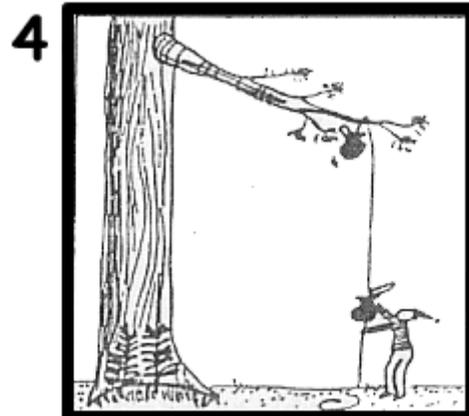
1 Find a tree with a "live" branch 4" to 5" in diameter that has a down slope to it and nothing below it that could support a bear. Balance load-sacks with no more than 10 pounds per sack.



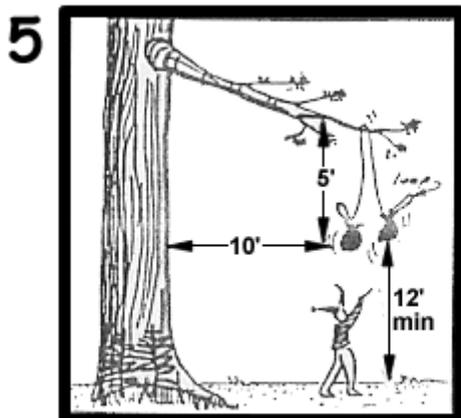
2 Tie a weight to the end of a piece of rope and toss it over the end of the branch.



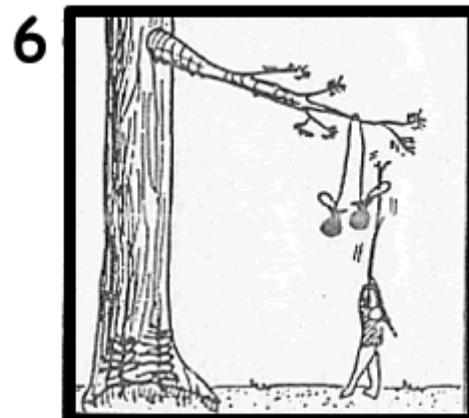
3 Move the rope as far out on the branch as possible so that it will support the weight of the food-sacks but not a bear.



4 Tie a secure loop in the rope near one sack and pull it up. Next tie another secure loop near the second sack and put excess rope inside the sack.



5 Toss the second sack upward so that the food sacks are evenly balanced over the end of the branch.



6 To retrieve the sacks hook either loop on either sack with a long stick and pull downward.



## HYPOTHERMIA

Hypothermia (hypo, low; thermia, temperature) results from excessive loss of body heat. It is called "the killer of the unprepared" and represents lowering of the inner core temperature of the body. The first sign of hypothermia is uncontrolled shivering followed by vague or slurred speech, fumbling hands, or stumbling gait. Due to decreased blood flow to the brain, the next step is irrational judgment and memory loss. Individuals have been known to lose track of where they are, to discard items, and even to start removing clothing. At this point a fairly rapid descent into unconsciousness and death can occur.

Four factors are usually present when hypothermia occurs. The first is cold temperature, although severe cold is not required. Temperatures well above freezing can initiate critical body heat loss when combined with other factors. Wetness resulting from rain or snow immersion, or perspiration accelerates heat loss. Also, wind and the resulting chill factors can greatly decrease the apparent temperature. A likely victim for hypothermia is any individual who is exhausted and who has unwisely wasted body energy reserves.

Field treatment includes moving the victim to a sheltered area, removing wet clothing, and replacing with dry clothing or placing in a sleeping bag. These methods are intended to stop heat loss. Heat can be restored to the victim by having someone get into the sleeping bag with the victim to begin warming by direct skin-to-skin contact. If the victim is conscious, warm fluid and quick-energy food should be given. Do not administer alcohol! As the victim recovers, keep him warm and dry and proceed to medical help if possible. In severe cases with greatly lowered body temperatures, cardiac arrest may occur on warming. An individual trained in cardiopulmonary resuscitation (CPR) should monitor the victim and provide treatment if necessary.

Know your enemy. Never underestimate the power of cold, dampness, and wind. Do not overestimate your own strength or that of your party. One individual or a single mishap can pin you to a location exposed to the elements.

## DEHYDRATION

Dehydration occurs as water evaporates from your body without adequate replacement. The blood thickens, causing a strain on the heart, and tissue cells may die from lack of water. In a desert or hot area you must take precautions against overexposure to the sun. You may be affected by sunburn, heat exhaustion, or heat stroke. All may be prevented by staying out of the sun and avoiding overexertion. Avoid sweating, as this uses body fluid rapidly. Carry water in your stomach, not in your canteen. If you are thirsty, drink. Saving water if you are already becoming dehydrated will do no good. If you are short of water, do not eat food, because water will be used for digestion. If extended



exposure to hot weather extremes occurs, sleep during the day and walk during cooler hours. Daytime cooling can be achieved by digging about 30 inches into the soil; lie inside the hole and cover yourself. Even though air temperatures are high, the ground temperature below the surface should be considerably cooler.

## SNAKEBITE TREATMENT

Submitted by Norm Quam

According to Maynard H. Cox, founder and director of the North Florida Snakebite Treatment Center, you do not cut and suck the venom, apply ice, or apply a tourniquet. The poison from a bite of any pit viper (all rattlesnakes, cottonmouth, (water) moccasins and copperhead moccasins) is walled in by itself in the capillary beds at the bite area for 12 hours. A tourniquet is not necessary - the poison can not go anywhere. Cuffing through the fang holes damages tissue, nerves, muscles and veins and can cause infection. Sucking gets less than two to nine percent of the venom out when done immediately. Ice is unnecessary and may add frostbite to the problems.

Cox says that when death occurs in the 30 minutes after a person is bitten it is from shock. Shock is caused from pain and fright. Snake venom, when it is injected by the bite (which only occurs in 60% of poisonous snake bites) causes, a fiery pain. If the bite happens to be on an artery, vein, lymphatic vein or nerve trunk, the pain and fright are intensified and the shock is much worse. This increases the chance of death. Cox recommends that the first thing you must do in the case of poisonous snakebite is to TREAT FOR SHOCK!

A good rule of thumb is; "If the face is pale, raise the tail. If the face is red, raise the head." Do not allow the victim to get cold or hot. Keep reassuring him or her that they will be all right. Then get them to a hospital, or get to a phone and call for help. Cox says if you survive the first 30 minutes, you have 12 hours to get antivenom. After that, tissue begins to break down and organs begin to fail. Ultimately, the victim will die of congestive heart failure. Cox says no one in this country should die of snakebite.

Cox advises when you are in the woods, look carefully before you place your hands and feet. If you see a snake DON'T FREEZE - RUN! You can outdistance it in three steps. Cox tells of a young boy who froze when he saw a snake because that is what his mother told him to do. He was bit three times by a diamond-backed rattler. The smart thing to do is to move away as fast as possible.

Another fallacy is that coral snakes have to grasp and chew in order to poison. Not true. The coral snake just has to nick you as it's mouth is already full of venom when it is nervous or frightened.

"Dead" snakes can bite. Cox tells of a rattler that had bitten one person, was cut into 12 pieces, put in a bucket, and brought to the hospital with the victim. Another man put his hand into the bucket to remove one of the pieces and was bitten. Can you defang a rattler and make a pet? NO! The rattler has several sets of fangs behind the first set waiting to grow in. Weather has to be below freezing and not above 40 degrees for several weeks for snakes to hibernate.

Remember:

1. Do not cut and suck the venom.
2. Do not apply ice or tourniquet.
3. Treat for shock and get the person to help.

### RATTLESNAKE SEASON

The hazards remain the same, but the recommended treatments have changed.  
Excerpts from article by Peter Fish

Each snake bit is serious but rarely fatal. You should know that everything you have been taught in the past for treating a bite is probably wrong.

The dozen of rattlesnake species that inhabit the West differ in size and aggressiveness, but all share the heat-detecting facial pits that put the snakes in the pit viper class. All have rattles; interlocked segments made of keratin, like your fingernails. All are venomous, although the potency of the venom varies by species.

At least 8,000 cases of venomous snakebite occur in the United States each year, with rattlesnake bites accounting for at least a third of that number. Though that sounds frighteningly high, fatalities are rare, perhaps 10 to 12 a year. A substantial percentage of victims picked up, taunted, or otherwise acted like idiots around the snakes. Dr. Willis Wingert, professor of pediatrics and emergency medicine at Los Angeles County-General Hospital, analyzed a decades worth of snake bites in Southern California and found that more than half occurred while people were handling the snakes. Forty percent of the victims were intoxicated.

In his classic book, *Rattlesnakes*, Laurence Klauber lists wise measures for avoiding rattlers outdoors: Step on logs, never over them. Don't lift stones by placing hands or fingers under them - use a stick instead. In grassy or brushy areas, stay on the trail or in clearings. If you hear a rattle, don't move until you know where the sound is coming from, then quickly give the snake a wide berth.

Suppose you are one of those 8,000 snakebite victims? First know what not to do. Despite what you may have heard, do not make an X-shape incision and attempt to suck the venom out. Don't pack the wound with ice. Don't apply a tourniquet. All of these "remedies" can invite serious tissue damage, even amputation.



Instead follow Dr. Wingert's advice: "The best first aid is to put the victim in a vehicle and transport him to the closest emergency room."

If you have to wait for transportation, you can take measures that may help the victim. Your first task is to determine whether the bite injected venom. As many as 20 percent of rattler bites are venom less. Venom causes the following symptoms; burning pain near the wound, rapid swelling of the affected area, tingling and a metallic taste in the mouth, muscle twitching, and general weakness.

If envenomization has occurred, keep the victim calm and stationary. Remove jewelry, shoes, or anything else that could be constricting as the affected limb swells. Keep the victim warm and comfortable until help arrives.

### LOST OR STRANDED

Remain calm. Remember that you have prepared yourself for this situation. Sit down and evaluate your situation. Can you retrace your route? Can you see obvious landmarks consistent with your map? If you are uncertain, admit that you are lost and prepare to spend the night before it is dark. If lost, the best thing is to stay put. Moving or wandering around only burns up energy, increases anxiety, makes matters worse. Searchers are much more likely to find you if you stay in one place.

Spend your energy wisely. Pick a sheltered campsite, gather a good supply of firewood, and build a small fire. Plan and construct a shelter. A small lean-to shelter can be built from downed branches. Support a ridgepole between two upright poles or in crotches of adjacent trees. Additional poles can be placed against this pole and covered with branches. Additional protection can be provided from your poncho or space blanket. Place your shelter so that heat will radiate in from your fire. (In the winter, snow caves can be dug. A cave about 3' x 7' will accommodate one person. Care must be taken to not get wet while preparing the cave. Adequate ventilation is needed and can be provided by putting a small hole in the roof of the cave.) Locate water and assess your emergency food supply. Check yourself for injuries and blisters and apply appropriate first aid. Improve your shelter if possible. Rest. Try to stay warm and dry, and stay put. When appropriate, use your distress signal to help searchers locate you.



## WATER

A frequent source of water is essential to survival. You need 2 to 4 quarts each day, although you may survive up to a few days without water. There is a sharp distinction between water for survival and water for convenient outdoor use. In general you should consider all outdoor water potentially contaminated. There are a number of disease-causing microbes from both animal and human sources that may be present in untreated water. Even water that looks fresh and clear may carry these microbes. If possible water should be treated before use. Boiling for three minutes plus one minute for each 100 feet of elevation is minimal for safety. Preferably, water should be boiled for additional time of up to 20 minutes. Chemicals for water treatment can be purchased at sporting goods stores, as can water-purifying filter pumps. Finding water in arid conditions can be difficult. Look for plants that thrive on water and for animals that live near water. Dig in shady portions of dry stream beds. Look for springs at the base of cliffs or for potholes in bedrock. Dew can be sponged from plants early in the morning. In critical survival situations, replenishing the fluid in your body is more important than assuring that the water is free of disease-causing organisms.

## LIGHTNING SAFETY TIPS

If you were out recreating in the woods would you know what to do to keep safe during a lightning storm? What about lightning safety at home? Here are a few tips from Richard Kithil American Lightning Protection, INC., on what to do if you are caught in a thunderstorm.

1. Take cover indoors when possible.
2. Get out of aluminum frames of doorways and windows.
3. Avoid trees. Lightning often hits trees, travels down the trunk and may explode the bark. The charge then spreads out on the ground.
4. Go to a low-lying area. Brush is better than trees because it has "disbursed streamers" which don't act as a specific lightning rod. Get off the ridge, peak, roof, or tower.
5. Get off machinery; turn off machinery (a gas engine is less attractive than an electric engine.)
6. Take cover in a metal-topped vehicle when it's not possible to go inside a building. Do not touch any metal parts of the vehicle. The rubber tires do not provide protection from lightning (nor do rubber-soled shoes.)



7. Turn off your electronic devices (radios, microwaves, televisions) and avoid actions that would generate static.
8. Use surge protection on electrical devices.
9. Carry a 4-foot square of polyethylene in your pack to whip out and stand on as an insulator.
10. Make your body a single point ground by putting your ankles and knees together and then crouching down. This posture lessens your chances of being a lightning rod or of having a charge enter one foot from the ground, travel through your vital organs, and then exiting through your other foot. Another suggested position is to drop to your knees and bend forward, putting your hands on your knees. Do not lie flat on the ground because electrical current from a strike can easily travel through your vital organs this way, too.
11. Get away from each other. This will lessen the draw as a target.
12. Get away from rocks and boulder fields. If you are hiking or camping get off the rocks. Lightning likes to travel through the route of least resistance, and water (as in trees and our "70% water" bodies) is a great conductor from the ground to the sky. Rocks don't hold much water, so your body would be the conductor.
13. Aluminum and fiberglass poles will conduct electricity (keep in mind for skiing, tent camping, leaning on fences, fishing.) Carbon fiber is better. Stay away from metal objects and tall objects such as telephone poles, light standards, and antennas.
14. If you are in the water, count to ten between a lightning strike and the thunder, if you get to ten or less get out of the water and go to safety immediately. Remember, water is a conductor. A ten count means that the lightning is 2 miles away, (4-5 seconds per mile).
15. The largest percentage of lightning strikes of trees was found to have been on sub-alpine firs. (Tall, often single, high elevation, on rocks, moisture content?) Don't seek them for cover....
16. If your hair stands on end, immediately take safety action. A lightning strike could be eminent. You are charged up and ready to go; a perfect target.



17. Get rid of the metal objects. Your radio, wheel chair, the baseball cap (with the metal rivet around the hole at the top,) your keys and knife. (If you have a plate in your leg or screws in your knee... sorry.)
18. If on a horse, get off. Separate. The horse may have metal shoes, bit, and rigging in the saddle. (If the storm is a ways off, unsaddle your friend and put him in the brush.)
19. Lightning can happen in snow, rain, hail, dust; many kinds of turbulence where static occurs; then it looks for a good target of least resistance to discharge this voltage.
20. Make certain you stay under cover until the danger has passed. Just because the rain may have stopped does not mean that the lightning is over.
21. Err on the side of being very conservative. Most of us have just been lucky so far. Take defensive action. Perhaps the best advice of all is to keep calm and keep low.



BACKCOUNTRY HORSEMEN OF CALIFORNIA  
**Bare Bottom Basics**  
A COMMON SENSE GUIDE FOR

Imagine - it's late afternoon, high in the backcountry. You gently check the heat beneath your cook pot in drooling anticipation of your evening feast as you begin to relax with a sense of achievement in the extra effort it required to get here. The awe-inspiring vista laid out before you is truly splendid as the sun gently dips behind the magnificent granite peaks. The serenity of the mountain meadow, the beauty of the alpine lake, the majestic grandeur of the stately pines and the errant strand of double-plely toilet tissue wafting delicately in the breeze through your camp! HUH!!?

Sadly, this scenario (or one equally disgusting) is played out all too frequently. In many areas there is no such thing as complete isolation in our backcountry any longer. If you are there, chances are someone else has been there too and how we deal with our waste is of prime concern.

Many folks don't have a clue when it comes to dealing with the most basic of human functions in the backcountry, away from the friendly confines of their personal, porcelain throne! While difficult and uncomfortable for many to discuss, the subject of bowels is one that is common to us all.

Please take the time to learn these Gentle Use Techniques to properly dispose of your waste and toilet items. They are easy to master and will help to make you a better backcountry visitor. Everyone will appreciate the proper disposal of human waste as we enjoy our time in the backcountry.

Whether you use the term Gentle Use, Tread Lightly, Minimum Impact, or Leave No Trace, the principles are all the same.

It is a simple fact that humans regularly consume both food and water and the end product is the production of urine and feces.

Urine attracts wildlife. Animals may defoliate plants because of salt in urine. Therefore, urinating on non-vegetated soils away from any water source is a simple solution.

Solid waste is a bit different. The problem is that fecal waste is the medium for disease. Some of the most common means of transmission are direct contact with feces, contact with a contaminated insect, or ingestion of contaminated water. Improper disposal of human waste can produce significant health hazards. The most common problem being a severe diarrhea with dehydration. This can be very dangerous to you and others.

Proper disposal should ultimately accomplish the following objectives:

- A**void pollution of the water source
- A**void negative response of others finding it
- M**inimize the possibility of spreading disease
- M**aximize the rate of feces decomposition



No means of human waste disposal is without problems. No single recommendation is correct for every situation. Use toilets where they have been provided. If these are not available, then you must consider all factors and use other methods: catholes, latrine, or pack it out.

In popular areas one method to consider is the use of catholes. Decomposition is slow, but the prime objective is to decrease contact with others. The main idea behind the use of catholes is to disperse the waste, not concentrate it. Always choose a site out of the way, where others are unlikely to walk, and more than 200 feet from any water source, trails and camps. Dig your hole six to eight inches deep. It should have at least two inches of topsoil. Camouflage the surface when you are finished.

Latrines are another suitable option of human waste disposal. They may be necessary when disposal sites are limited. They are appropriate for large groups in popular areas during long stays. This is especially true if you have inexperienced campers or young children. If you dig a latrine, make it wider than it is deep, but a minimum of twelve inches deep. After each use cover the feces with soil and compress with shovel to help with decomposition. When the waste is four inches from the surface, fill it in.

For group use during an extended stay, modification of the latrine is advisable. Dig a shallow trench or a series of catholes. The advantages are an appropriate site and the feces are not concentrated in one hole. This should only be used in an area that is non-vegetated or has exposed mineral soil.



Now for the toilet paper (T.P.) topic. Toilet paper that is discarded or uncovered can linger. This is disgusting to others and a health hazard. When you use T.P. try to get by with the smallest amount possible. Please consider non-perfumed and non-ink printed products.

The best option is to put it in a plastic Ziploc bag and pack it out. One alternative is to burn it later in a hot fire. (A hot fire does sterilize and incinerate). At the bare minimum, bury it deep in the cathole with the feces. Remember in a dry or cold environment the paper lasts a long time. At some point you may run out of that great modern invention! At that time you may have to consider another source such as leaves, grass, rocks, pinecones, sticks or snow.

Feminine hygiene articles are another story. The best solution is to double or triple-bag them and carry them out with your trash. You may pack them with crushed aspirin, used tea bag, baking soda to reduce odor. Never bury them in latrines or catholes, as animals will dig them up. They are difficult to burn and you need a really hot campfire for complete combustion. Ladies -your cycle may begin one week earlier due to change in altitude, increase in exercise or change in daily routine. Please go prepared! Extra precautions are needed in bear country.

Sometimes it is uncomfortable for people to talk about these subjects so we hope this information has been of help and that you will take the time to consider how you have managed your waste in the past and how you will in the future.