

Living with Predators Resource Guide

Recreating in Bear, Wolf And Mountain Lion Country

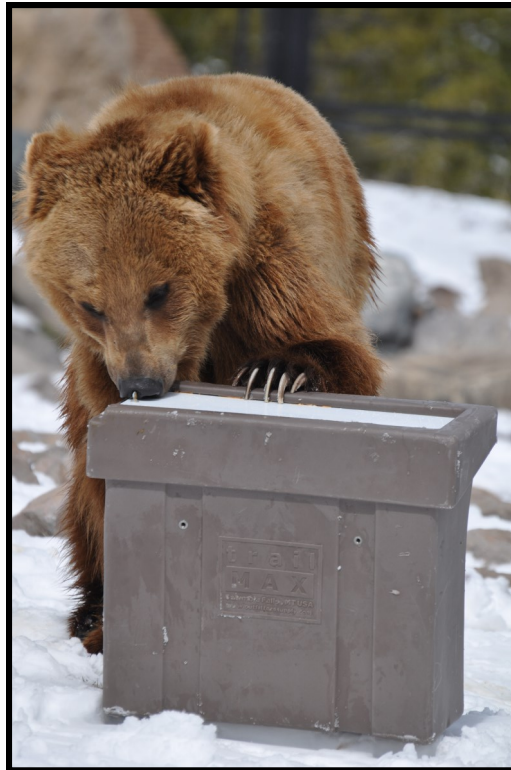


Photo was taken at the Grizzly & Wolf Discovery Center in West Yellowstone using captive grizzly bears.

2013 Edition

Produced by the Living with Wildlife Foundation

In cooperation with



**Montana Fish,
Wildlife & Parks**

And the Wildlife Management Institute

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Cover photo Courtesy of the Living with Wildlife Foundation

For more information on the “Living With Predators Resource Guide” series, please contact Patricia Sowka at the Living with Wildlife Foundation at:

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Publication Disclaimer

Care has been taken to ensure the accuracy and completeness of the information contained in the Living With Predators Resource Guides; however, the author and Montana Fish, Wildlife and Parks are not responsible for errors contained in these guides and does not guarantee the performance of the products and techniques included in the resource guides.

This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold with the understanding that the publisher is not engaged in rendering legal, accounting or other professional advice. If legal advice or other expert assistance is required, the services of a competent professional person should be sought.

Foreword

The *Living With Predators Resource Guides* were compiled by the Living with Wildlife Foundation in cooperation with the Montana Fish, Wildlife & Parks' *Living with Black Bears, Grizzly Bears and Lions Project* to help minimize conflicts between people and black bears, grizzly bears, wolves and mountain lions.

The guides contain information about how to reduce bear attractants, deter bears and other predators from developed areas, and where to obtain bear-resistant products. Most of the techniques and products listed in the guides were initially developed to reduce human/grizzly bear conflicts; however, many of these techniques and products have been effective at reducing conflicts with other predators as well.

The *Living With Predators Resource Guides* set consists of the following:

- ***Techniques and Refuse Management Options for Residential Areas, Campgrounds, and Other Group-Use Facilities***
- ***Recreating in Bear, Wolf and Mountain Lion Country***
- ***Predator Behavior Modification Tools for Wildlife Professionals***
- ***Practical Electric Fencing Guide: Controlling Predators***

All of the guides can be downloaded from the Living with Wildlife Foundation web site at www.lwwf.org.

It is important to note that not all of the products included in the guides have been tested for use as bear-resistant containers.

Considerations For Using The Living With Predators Resource Guides

- Not all of the products and designs listed in the resource guides have been tested and proven to be bear-resistant. In addition, products must be used properly and according to the manufacturer's specifications.
- Products that are advertised as "bear-proof" may not be 100% bear-proof. Most products that are advertised as "bear-proof" are most likely "bear-resistant" meaning that under certain circumstances (i.e. under certain weather conditions, after many years of use, if used improperly, or when tested by certain bears) the container may fail and allow a bear to access its contents.
- Please be aware that National Parks, National Forests, and State Parks may have specific regulations and requirements for food and garbage storage and disposal. Please consult the appropriate regulatory authority for the area that you'll be visiting.

Photo courtesy of the Living with Wildlife
Foundation. www.lwwf.org

Photo taken at the Grizzly & Wolf Discovery
Center, West Yellowstone, Montana.



Please report any bear activity near houses, campgrounds, schools, and other public or developed areas, to the appropriate bear management specialist for that area. Even if the bear's activity seems minor at the time, often the behavior escalates to a point where it requires management action, such as the relocation and/or ultimately, the killing of the bear. Please help prevent the need for such actions—

you can make a difference!

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Guidelines for Recreating in Wild Areas

It is important to identify the kinds of wildlife you could encounter in the area you will be visiting **BEFORE** you head out on your adventure. In this section of the resource guide, you will find basic guidelines and considerations for recreating in areas where grizzlies, black bears, and mountain lions occur. Please note that these are just general guidelines and considerations. Predator behavior is very complex and each animal may react differently based on its own unique life experiences.

After the guidelines and considerations section, we present information on products and techniques currently being used to minimize conflicts with these predators.

Please contact the local, state or federal regulatory authority to find out what species you could potentially encounter or for more specific information on these wildlife species.

Recreating in Mountain Lion Country

- Try to recreate in groups of at least two people.
- Don't assume that just because you don't see them, mountain lions are not around.
- Don't assume that unattended mountain lion kittens are orphaned—often the mother will "stash" them in a safe place while she hunts for food to bring back to them.
- Keep children close to you—they are most susceptible to lion attacks.
- Watch for signs of mountain lion activity in the area, including carcasses that have been "cached" or stashed by lions such as the carcass of a deer killed by a mountain lion that has been cached shown in the picture on the left below.



Watch for lion scat and lion "toilets" which are often located at the base of trees. Lion scat is shown in the photo to the right.



- If you see a lion, leave the area, but **DO NOT RUN. If you run, the lion could view you as prey and may pursue you.**
- If the lion attacks, ***stand your ground.*** Try to make yourself look as big and threatening as possible by shouting, waving your arms, waving sticks in the air, throwing sticks and rocks in the lion's direction, etc.



Photo Courtesy of Thomas D. Mangelsen

- If the lion continues its attack, be aggressive and try to fight it off—hit the animal with rocks, sticks or any other blunt, hard object.
- Use bear deterrent spray if it's available. Bear spray has been used successfully to divert confrontations with mountain lions

Hiking and Mountain Biking in Bear Country

- Try to recreate in groups of at least two people if possible.
- Always let someone know where and when you'll be hiking or biking and what time you plan to be back.
- Always carry an EPA-approved brand of bear spray when recreating in bear country.
- Stay on established trails; make plenty of noise, especially when the trail goes through areas of thick brush, or takes a bend and you can't see the path ahead.
- Avoid hiking at dusk or at night; bears are very active during these times and it's easy to startle a bear when the light is low.



Photo Courtesy of Patti Sowka

- If you plan to be out overnight, follow the guidelines listed in the section on camping in bear country.
- Watch for signs of recent bear activity—scats (droppings), bear tracks, logs that have been torn apart, large rocks that have been rolled over, trees with claw or bite marks or areas of digging; if you see signs of recent bear activity, leave the area.

Bear scat (photos on right) can vary in appearance depending upon what the bear had been eating.



- Watch for bear tracks on dirt or in the snow or mud. Bears often use trails and roads for travel—especially in areas of dense brush. Be especially alert in these areas and make noise when hiking up to a blind bend on the trail.

Watch for trees that have had their bark stripped off by bears. Bears strip away the bark to eat the sweet cambium beneath it. Some examples are shown in the photos below.



Photos by
Patti Sowka



- Avoid animal carcasses and berry patches—bears may be eating there.
- Keep children and pets close at all times; keep dogs leashed while hiking. Kids and dogs can excite bears which could result in a defensive or predatory response from the bear.
- Do not take odorous items along on your hike. Bears have a great sense of smell and may be attracted to items that have a strong smell, such as lotions, deodorants, scented soaps, etc.
- Do not leave backpacks, coolers or other gear unattended—hang packs using methods presented in this guide.
- If you encounter a grizzly while hiking or biking, remain calm and quiet. Keep watching the bear but avoid making direct eye contact with the bear. Back up slowly, and speak to the bear in a soft voice. Never turn your back or run from a bear.
- **DO NOT APPROACH BEARS TO GET A CLOSER LOOK OR A BETTER PICTURE!** View bears from a distance using binoculars or your camera lens. Bears can run as fast as 30 m.p.h., and can go from being “far away” to “way too close” almost in an instant. In addition, the bear you’re looking at may not be the only bear around—it could be a mother with cubs.

Women in Grizzly Bear Country

- There is no evidence that grizzlies are more attracted to menstrual odor than to any other odor.
- Practice careful hygiene—use pre-moistened unscented towelettes.
- Use tampons instead of pads.
- Never bury garbage since bears could smell it and dig it up; always pack out discarded feminine hygiene products. Hang garbage at least 10 feet off of the ground and at least 4 feet away from vertical supports while camping.
- Do not use or pack any scented hygiene items.

Camping in Bear Country

- Use designated camping areas when they are available and follow all regulations.
- Camp in open areas when at all possible.
- Do not put your tent near any potential feeding areas such as: near a carcass, near water or riparian areas, near berry patches, or near trails.
- Store food or other odorous items (including toothpaste, lotion, sun screen, bug repellent, etc.) in an airtight and bear-resistant container; that way if the bear does get into your pack, it won't get a food reward.
- If camping with pets, be sure to pick up any leftover or spilled food immediately and dispose of it the same way you dispose of your garbage.



Use bear-resistant food storage lockers like the ones pictured at left when they are available.

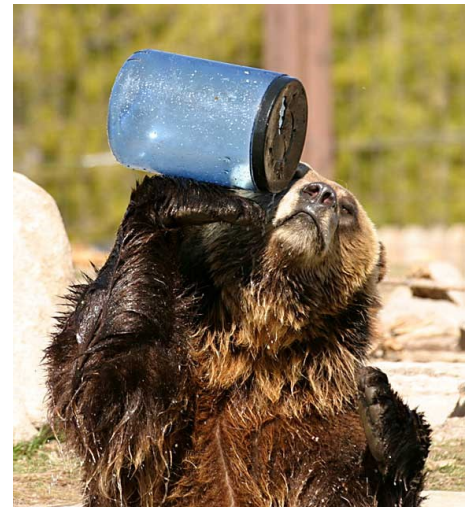


Photo above courtesy of Derek Reich, Zoöprax Productions

- Store pet food in a bear-resistant manner along with your food.
- Hang backpacks and other gear out of the reach of bears—at least 10-15 feet up from the ground and at least 4 feet away from any vertical support (tree, post or pole). *Techniques for hanging gear and other bear attractants are presented later in this guide.*
- **DO NOT STORE FOOD OR ODOROUS ITEMS IN YOUR TENT OR SLEEPING BAG!!**
- Do your cooking, eating and dishwashing at least 100 yards from your sleeping area.
- **Keep your camp clean—do not leave garbage or food unsecured.**
- **Never bury garbage. Pack all food and garbage out when you leave.**

The picture on the right shows what **NOT** to do when camping. The people staying at this camp site are not only putting themselves in danger. They might be setting the people camping there after them up for a conflict with bears!

Hunting in Bear Country

- Try to hunt with a partner or in small groups if possible. Make sure at least one person not on the trip knows where you will be hunting and when you will be back.
- Be alert for signs of bear activity—scats (droppings), bear tracks, logs that have been torn apart, large rocks that have been rolled over, trees with claw or bite marks or areas of digging.
- Avoid hunting in berry patches or near old animal carcasses.
- Do not hunt in low light conditions.
- Follow the guidelines listed above under “camping in bear country” for food and garbage storage and for storing and/or hanging your game meat while you’re in bear country (this also applies to hanging your meat at home if you live in or near bear country).
- Comply with all regulations regarding meat storage for the area you are hunting in; special regulations may apply if you’re hunting in grizzly country.
- If you’re using pack animals, make sure that the livestock feed (grain, corn, oats, etc.) is stored in a bear-resistant container.
- Always have bear spray within reach while hunting and butchering your game meat.
- Gut, butcher and pack out your meat as quickly as possible—always separate the gut pile from the rest of the carcass while you’re butchering.
- Pack out your meat—do not drag it (dragging will leave a scent trail).
- **DO NOT BUTCHER YOUR GAME ANIMAL OR DISPOSE OF THE CARCASS OR ENTRAILS ON OR NEAR ANY ROAD OR TRAIL—THIS MAY ENDANGER OTHER HUNTERS OR RECREATIONISTS!!!**



Hunting in Bear Country (cont.)

- **DO NOT SLEEP IN THE CLOTHES THAT YOU WORE WHILE BUTCHERING YOUR GAME!**

- If you must leave your game carcass in the field overnight, mark the carcass well and leave any unattended meat at least 200 yards away from the gut pile. When retrieving your meat, check your meat cache from a safe distance (200 yards) using binoculars to make sure that a bear isn't feeding on the carcass. Make lots of noise as you approach the carcass.
- If a grizzly bear is feeding on the carcass when you return, leave the bear and the carcass and vacate the area immediately. Report the location of the carcass and bear to the nearest game warden or wildlife official.
- Consider erecting a portable electric fence around the carcass to discourage bears. See *technique for installing an electric fence later in this guide*.
- There is some evidence that bears may be attracted to gun shots or congregations of ravens after a game animal has been taken—if a bear investigates, stay calm. In most cases the bear will remain at a distance until you leave the area. Pack out as much of the animal as you can in case the bear does approach the carcass after you leave the site.



Portable electric fence around game meat in Alaska. Photo courtesy of Jamie Jonkel, Montana Fish, Wildlife & Parks.

- It is **NOT** recommended that you shoot at a bear that approaches you or charges you. In many cases the bear is wounded and before dying or leaving the area, it attacks the shooter. Carry a can of bear spray—this product has been proven effective at deterring bears!
- Report any incident with a bear to the nearest authority as quickly as possible.
- Grizzlies in the Lower 48 States are protected—it is illegal to hunt grizzlies in the Lower 48 States.
- Please report any wildlife poaching to the nearest authority.

Disposing of Your Garbage in Bear Country

Proper disposal of all garbage is critical when you're recreating in bear country. Please keep these important points in mind:

- DO NOT bury your garbage. Bears have a great sense of smell and will dig it up.
- Hang your garbage using one of the methods described in this guide while you're camping.
- Pack out all garbage or dispose of it in a bear-resistant trash container if one is provided.
- If you burn any of your garbage, make sure it is completely burned before you leave. Dispose of any unburned or partially burned garbage in a bear-resistant trash container or pack it out with you.
- Make sure your camp fire is completely out before you leave your camp.
- If you see other recreationists being careless with their food and/or garbage, please report the situation to a ranger or other authority immediately...**BEFORE** the bears find it!



This is NOT the proper way to dispose of your garbage while camping!

SECURING FOOD, GARBAGE AND GEAR IN BEAR COUNTRY

While you are recreating in bear country, it is vitally important that you properly store your food, garbage and any other items that have an odor. Bears have a very keen sense of smell and could be attracted to anything that smells interesting to them. Items such as toothpaste, soap, lotions or bug sprays, deodorant, and any food or garbage items should be stored in a bear-resistant container.

Some public lands have strict food storage regulations in place to help prevent bears from becoming food-conditioned to unnatural foods. If you will be visiting a national or state park, a national forest, or a wilderness area, consult with the appropriate regulatory agency to find out what requirements for food and garbage storage apply in that area.

Before you purchase a container, check with the regulatory agency for the area you will be visiting to find out if they have a list of approved products that must be used in that jurisdiction.

Program to Test the Effectiveness of

Information provided by the Interagency Grizzly Bear Committee.

Please visit www.igbconline.org for more information.

One way to significantly reduce the likelihood of unacceptable human-bear encounters is to ensure that bears do not become conditioned to anthropogenic food sources such as garbage, dog food, bird seed or other unnatural foods. Bear-resistant containers are one way to secure potential bear attractants.

Over the past two decades, much progress has been made related to products and methods for securing bear attractants.



Manufacturers and agency personnel have taken the lead in developing better products for securing food, garbage and other bear attractants and now there are wide varieties of bear-resistant storage options available to consumers.

As new bear-resistant containers are designed, different materials developed and manufacturing processes evolve, a refined protocol has become necessary to evaluate containers in order to provide consistent and professional guidance to the public and to agency personnel.

In 1989 the Interagency Grizzly Bear Committee (IGBC) developed the first consistent protocol for defining, testing and recommending minimum design standards for bear-resistant containers (USDA Forest Service 1989). Since then the program has evolved to include the use of captive grizzly bears to evaluate the relative effectiveness of bear-resistant containers.

*Photos courtesy of the
Living with Wildlife Foundation.*

- continued next page -

Purpose

The IGBC Bear-Resistant Products Testing Program provides a means of evaluating the relative effectiveness of a wide range of products used to secure potential bear attractants. The testing program helps prevent ineffective products being placed into use. It also encourages the development of new and improved bear-resistant products and options for deterring bears.



The purpose of this program is to:

- 1) Test and certify products for use in grizzly bear habitat in the lower 48 states on federal and state lands that have applicable food storage regulations. Such regulations may vary, so the public is encouraged to check with the specific public land management unit in which they are interested.
- 2) Promote the use of bear-resistant equipment on private lands where there are no regulations mandating bear-resistant storage.
- 3) Provide information to the public and to agency personnel to facilitate informed decisions when purchasing bear-resistant containers.



Products that are still functional (still in working condition and the bears were not able to access the food reward inside the container) after a minimum of 60 minutes are considered to have “passed” the captive bear test.

The IGBC maintains a list of products that are approved for use on public lands in the Lower 48 States in occupied grizzly bear areas. Using these products is one way to comply with food storage regulations on U.S. Forest Service lands. The list of approved products can be found online at www.igbconline.org.

Photo Gallery



Bear-Resistant Backpacking Containers

Backpacker's Cache (Aka Garcia Machine)

www.backpackerscache.com

Phone 1-559-732-3785



© 1997

Specifications

Weight: 2.7 pounds

Dimensions: 8.8" diameter x 12" long; walls 3/16 thick

Cubic inch displacement: 730 cu in (12 L)

Capacity: holds approximately 6 person-days of food

- Designed to fit into a backpack
- Can be attached to the outside of a backpack or to a pack animal with an optional carrying case (pictured on the right)
- The lid can be opened using a coin, key, thumb nail etc.



© 1998



Photos and Information Courtesy of: www.backcountry-equipment.com

Counter Assault Bear Keg

1.800.695.3394

www.counterassault.com



Specifications

Weight: 3.1 pounds

Dimensions: 8.8" diameter x 12" long; walls 3/16 thick

Cubic inch displacement: 980 cu in

Capacity: holds approximately 8 -12 person-days of food

- Designed to fit into a backpack or can be attached to the outside of a backpack with a 600 denier nylon carrying case
- The lid can be opened using a coin, key, thumb nail etc.

Available online at: www.wyomingoutdoor.com, www.rei.com,
www.sportsmansguide.com and www.cabelas.com.

Bare Boxer

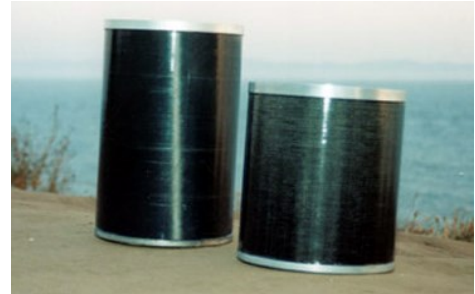
Golf City Products

2426 Townsgate Rd. Unit # 300
Westlake Village, CA 91361www.bareboxer.com**Weight: 1.85 pounds****Dimensions: 7.4" x 8.0"****Capacity: 275 cu in***Photo courtesy of Bear Boxer***Bearikade by
Wild Ideas**www.wild-ideas.net**Bearikade Weekender Mark II**

- Supplies two people for a weekend or one person for up to 6 days
- Weight: 1.9 pounds, 9" diameter base by 10" length
- 650 cubic inch volume

Bearikade Expedition Mark II

- Can supply three people for up to three days or one person up to 9 days
- 2.3 pounds, 9" diameter base by 14" length
- 900 cubic inch volume

Photo Courtesy of: www.wild-ideas.net**Bearvault**www.bearvault.com sales@bearvault.com 1-866-301-3442**BV450 Solo Specifications****Weight:** 2 lbs. 1 oz., **Dimensions:** 8.7" x 8.3"**Interior Space:** 440 cu in**Capacity:** holds approximately 4 person-days of food**BV500 Specifications****Weight:** 2 lbs. 9 oz., **Dimensions:** 8.7" x 12.7"**Interior Space:** 700 cu in**Capacity:** holds approximately 7 person-days of food

Designed to fit into a backpack or can be attached to the outside of a backpack



Lighter 1

Contact Steve Kleen steve@stevekleen.com

www.lighter1.com



- Two Sizes: "Big Daddy" (weighs 2 lb 4 oz) and the "Little Sami" (weighs 1 lb 5 oz)
- Container lid also serves as a cooking pan
- Handle weighs an additional ounce and serves as an internal support

No-Fed-Bear by UDAP Industries Inc.

- Diameter: 8 inches
- Height: 10 inches
- Weight: 2.4 lbs.



*Photo Courtesy of
UDAP Industries*

Bear-Resistant Coolers

Engel USA

561-743-7419 or 888-272-9838

www.i-m-d.com/engel/Plastic%20Coolers%20-%20Main.htm

Models: 65 Quart (ENG 65)

Igloo Products Corp

713-584-6800

www.yukoncoldlockers.com

Models: Yukon 50



Iowa Rotocast Plastics, Inc. / Grizzly Coolers

563-382-9636 or 800-553-0050

www.irpinc.com

www.grizzlycoolers.com

Models: Grizzly 60, Grizzly 150 and Grizzly 400



Outdoor Recreation Company of America (ORCA)

888-640-6722

www.orcacoolers.com

Models: "The Plains"



Pelican Products, Inc.

147 North Main Street

South Deerfield, MA 01373

414-665-2163

www.pelican.com

Models: 35-quart and 250-quart models



YETI

512-394-9384

www.yeticoolers.com

Models: "Tundra Series" 45, 65, 85, 120, 155 and 250-quart coolers

Other Useful Products

LokSak Odor-Proof Bags by Aloksak

Although these odor barrier bags are NOT approved as a means of meeting food storage regulations, they can be very effective at reducing odors and preventing spillage from food, garbage, and toiletries and other items in coolers, backpacking containers, and backpacks. The bags come in several sizes and can be ordered from the manufacturer online at www.loksak.com.

Visit LokSak's web site for a complete list of dealers or to order bags directly from the manufacturer.



1-800-355-1126 or 1-435-649-9009 www.loksak.com Photo courtesy of LokSak

Craftsman Tech Composites

Wise Backpack

Kevlar backpack (harness not shown)

(~3600 cu. inch capacity)

626-448-4045

Photo courtesy of the Grizzly & Wolf Discovery Center



Ursack Bear Bags

Bear-Resistant Stuff Sacks



Ursack TKO 2.0 Specifications

- Made of woven fiber and secured with 5' x 1/8" Kev-Kord
- Size: 8" x 13"
- Capacity: 650 cu in (10.6 L) holds enough food for one person for up to 6 days
- Weight: 6.2 oz
- Also offers protection against mice, raccoons, and squirrels

Aluminum liner to add crush resistance to the bag (14.2 oz)

Go to www.ursack.com for a complete list of retailers who offer Ursack TKO.

Where to Purchase a Bear-Resistant Backpacking Canister

If you're interested in buying a bear-resistant canister, you might want to check with one of the following vendors. They might not offer all of the kinds of canisters presented in this resource guide, but they all offer at least one type of bear-resistant canister. Some national parks and forests rent canisters also. Check with them when you're planning your visit.

Backcountry Equipment
888.779.5075
www.backcountry-
equipment.com

Planet Explorer
877.732.5238
www.bearproof.com

Sunrise Mountain Sports
925.447.8330
www.sunrisemountainsports.com

The Backcountry Store
800.409.4502
www.backcountrystore.com

Outdoor Sportz
www.outdoorsportz.com

Wilson's Eastside Sports
760.873.7520
www.eastsidesports.com

Campmor
800.226.7667
www.campmor.com

REI
800.426.4840
www.rei.com

Mickie's Place Outdoor Gear
www.mickiesplace.com

Mountain Equipment
800.663.2667
www.mec.ca
Canada

Sonoma Outfitters
800.290.1920
www.sonomaoutfitters.com

Backcountry.com
www.backcountry.com

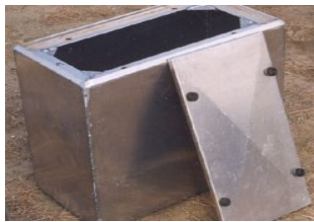
Wilderness Dining
866.576.0642
www.wildernessdining.com

NexTag
www.nextag.com

Lower Gear.com
www.lowergear.com

Bear-Resistant Panniers

Bear-resistant panniers are available from several vendors and these panniers make excellent food and garbage storage boxes. Bear-Resistant panniers can be attached to pack animals to haul gear into the back country or to store food and garbage while "car camping." Some bear-resistant panniers are presented in this section of the resource guide.



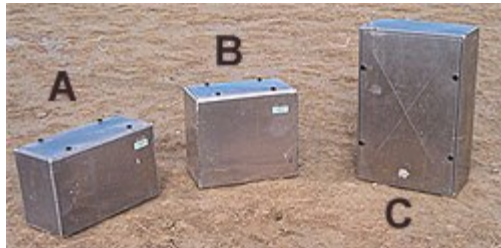
LMI Welding Inc.

P.O. Box 772

Cut Bank, MT 59427

1-800-345-5623 or 406-337-3021

www.lmiwelding.com



- | | | |
|----|-----------------|---------------------------------|
| A. | Morgan Style | 12 1/2 wide x 16 high x 26 long |
| B. | Regular Pannier | 12 1/2 wide x 21 high x 23 long |
| C. | Kitchen Pannier | 12 1/2 wide x 35 high x 24 long |

Photos courtesy of LMI Welding Inc.

WPA126 Bear-Resistant Pack Panniers with Optional Legs

- Made from a hard resin polyethelene—will not break in cold weather
- Have 2" nylon hang straps for use with sawbuck pack saddle or Decker pack saddle
- Accommodates screw-in legs which are sold separately
- Has a recessed lid with eight 5/16" threaded wing bolts



Photo courtesy of Outfitters Supply

Outfitters Supply

7373 US Hwy 2E

Columbia Falls, MT 59912

1-888-467-2256

www.outfitterssupply.com

Bear Country Camping

P.O. Box 38
 Gallatin Gateway, MT 59730
 1-406-763-4432
www.bearcountrycamping.com



Model HTL

- Top-opening, hinged lid
- H-bracket strap holders and reinforced sides
- 24"x18"x12"



Model HFO

- For a hanging load and top pack
- Front-opening, hinged lid
- One removable shelf and H-bracket strap holders
- 24"x18"x12"



Model SFO

- For a sling-load, front-opening, hinged lid
- One removable shelf
- 24"x18"x12"



Camp Cupboards

- Front-opening, hinged lid, one removable shelf in each
- H-brackets, biothane straps, internal leg set

Photos and Information Courtesy of Bearcountry Camping

Bear-Aware Bear-Resistant Food Storage Containers

Jeff Berns 1-800-568-8990 or 1-818-504-3518
www.bear-aware.com



Medium Dry Box

Model#: 241814DRY
Size: 24"x18"x14"
Weight: 18 lbs

Large Dry Box

Model#: 281816DRY
Size: 28"x18"x16"
Weight: 22 lbs



Slim Line Dry Box

Model #: 281814DRY
Size: 28"x18"x14"
Weight: 20 lbs



Medium Ice Chest

Model#: 241814ICE
Size: 24"x18"x14"
Weight: 22 lbs

Large Ice Chest

Model#: 281816ICE
Size: 28"x18"x16"
Weight: 31 lbs



Bear-Resistant Ice Boxes

24" Ice Box

Model#: 241814ICEBOX
Size: 24"x18"x14"
Weight: 28 lbs
NOTE: Holds 36 quart Coleman Cooler

28" Ice Box

Model#: 281814ICEBOX
Size: 28"x18"x14"
Weight: 31 lbs
NOTE: Holds 48 quart Coleman Cooler

Specifications

- All boxes are made from .090 (3/32) thick aluminum and feature all-welded construction (no rivets)
- All ice boxes are insulated top, bottom and sides with 1" thick insulation and come with a removable drainable poly liner and lid for easy cleaning.

KANZ OUTDOORS LLC

P.O. Box 280388
 Northridge, CA 91328-0388
 Tel. 818.894.6589
www.kanzoutdoors.com

Field Pantry

120 quart storage, bear-safe approved, Aluminum and ABS laminated plywood (olive)



Photos Courtesy of Kanz Outdoors LLC

Teton Welding & Manufacturing LLC

P.O. Box 976, 66 Airport Rd.
 Choteau, MT 59422
 (406) 466-2124
tetonwelding@montana.com

Model TL-1: Top-load Pannier



The aluminum top-load pannier has no dividers and is also contoured to fit a pack animal. This box shares the same dimensions as the kitchen pannier but weighs approximately 22 pounds. This pannier includes leather straps and buckles for use on a sawbuck or a Decker pack saddle. This box will hold about 100 pounds of horse cake. Both the kitchen and the top-load panniers feature detachable legs for camp use.

Model KP-1: Kitchen Pannier



The aluminum kitchen pannier is contoured to fit a pack animal. Each box measures 22" high and 24" wide with a top depth of 13" and a bottom depth of 10" and weighs approximately 24 pounds. Each box features one shelf and a hinged door that drops down for easy access and use as a work surface. Each box also includes leather straps and buckles for use with either a sawbuck or a Decker pack saddle. Stovetop sold separately.

Model DS-1: Decker Style



The Decker Style box measures 18" wide X 14" high X 36" long and weighs approximately 32 pounds. This box has no dividers to accommodate oddly shaped and/or large items.

Model KPS-1: Propane Stove



The detachable two-burner propane stove with hose and bottle connection can be removed for easy cleaning. The stove fits onto the kitchen pannier and measures 3 1/2" X 13" X 24" when closed for

Photos and Information Courtesy of Teton Welding and Manufacturing

Other Sources of Bear-Resistant Panniers, Coolers, Dry Boxes & Storage Containers

- **DeCarteret Aluminum Stock Panniers**

Bill DeCarteret
30547 Mehrten Drive
Exeter, CA 93221
(559) 592-2878

- **Berner Bear Box**

Bruce Berner, Westfab Inc.
829 South Bonnie Lane
Watkins, CO 80137
(303) 343-1998

- **Buckstitch Canvas**

531 16th St., Cody, WY 82414
(800) 268-4426
www.buckstitchcanvas.com

- **Outfitters Pack Station**

www.outfitterspackstation.com
- polyethylene boxes
- 16 lbs., 29"l x 17" w x 17.5" d



- **Tee-N-Jay Mfg., Inc.**

9145 Glenoaks Blvd.,
Sun Valley, CA 91352
(818) 504-2961
- 28" Dry Box

- **Wind River Products**

#4 Absaroka Court Sand Creek Lane
Dubois, WY 82513 Alcova, WY 82620
(307) 455-2464 (307) 267-3879
- backpack container and panniers

- **Salem Tent & Awning**

280 Wallace Road NW P.O. Box 5274
Salem, OR 97304
(503) 363-4788 or (800) 892-8659
www.salemtent.com
- Panniers

- **Robertson Enterprises**

P.O. Box 1711
Cody, WY 82414
(307) 587-2925
Email: RE@tritel.net

- **Koffler Boats, Inc.**

90017 Green Hill Road
Eugene, OR 97402
(541) 688-6093
www.kofflerboats.com
- bear-resistant boxes and panniers

- **Mad Cow Metal Works**

(406) 581-9115
<http://madcowmetalworks.com>
- large dry box, aluminum horse pannier

Other Sources of Bear-Resistant Panniers, Coolers, Dry Boxes & Storage Containers

- **Howling Wind Welding**
Steve Kirko
14 Vista Drive
Riverton, WY
(307) 856-3143
- aluminum storage pannier
- **Ziegel Engineering**
2108 Lomina Ave.
Long Beach, CA 90815
(562) 596-9481
- aluminum boxes
- **Evans Feed & Livestock Supply**
24148 Robertson Blvd.
Chowchilla, CA 93610
1-559-665-7891
- plastic pannier and bear box
- **Columbia Construction, Inc.**
455 4th Ave. E.N.
Columbia Falls, MT 59912
(406) 892-3856
-aluminum panniers
- **Metalworks of Montana**
109 North California
Missoula, MT 59801
(406) 728-5070
- aluminum panniers
- **Colorado River and Trails Expeditions Inc.**
P.O. Box 57575
Salt Lake City, UT 84157
1-801-261-1789 or 1-800-253-7328
www.crateinc.com
- rafting dry box
- **Yeti Coolers**
1-512-394-9384
www.yeticoolers.com
- **Engel USA**
1555 Jupiter Park Dr., Unit 5
Jupiter, FL 33458
1-888-272-9838 or 1-561-743-7419
www.i-m-d.com
- plastic cooler
- **Recretec Manufacturing, Inc.**
541-757-7567
www.recretec.com/RecreTec/
index.php
- aluminum dry box



Photo by Patti Sowka

Other Sources of Bear-Resistant Panniers, Coolers, Dry Boxes & Storage Containers

- **Riley Stove Company**

P.O. Box 8117

Townsend, MT 59644

406-266-5525

- Grain storage container
- Food storage container
- Insulated cooler

- **Greif Bros. Steel Drums**

www.greif.com

- 8 and 10 gallon
steel drums



Photo Courtesy of Greif Inc.

- **World Safety Products**

2270 South Service Road West

Oakville, ON L6L 5M9

1-888-847-7190

www.worldsafetyproducts.com

- Plastic cans with twist-on lids.
- Lids have been reinforced with metal.



Hanging Your Food, Garbage and Camping Gear

When camping in the back country, one method of securing your gear is to hang it out of the bears' reach. There are a number of different ways to accomplish this and a few of them are explained in this section of the resource guide. If you are camping in an established campground, there may already be a mounted, locking, food storage box (see picture below on the right) or some kind of an established gear hanging structure for you to secure your gear. Maps showing the various locations of these structures can usually be obtained from a ranger station. Some examples of structures used to hang gear are presented on the next two pages.



Food Storage Locker

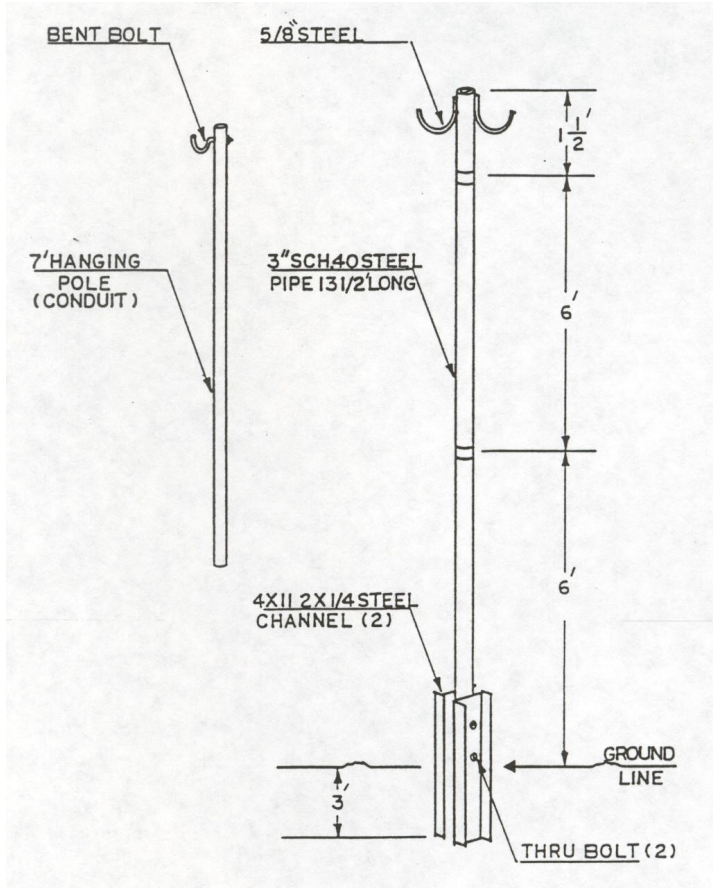
Information About Hanging Gear In Bear Country

For more information on bear-proofing your camp and hanging your gear, please visit the Princeton Outdoor Action Program. They have excellent references and downloadable diagrams of the Marrison Haul System for hanging your gear in bear country.

Princeton Outdoor Action Program Website: www.princeton.edu/~oa/index.shtml

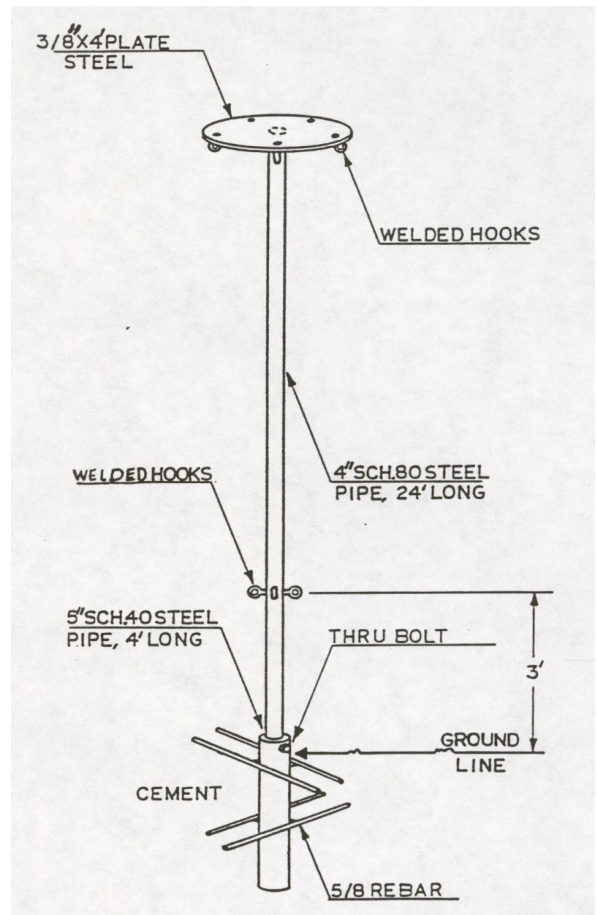
Marrison Haul System: www.princeton.edu/~oa/training/bearbag.html

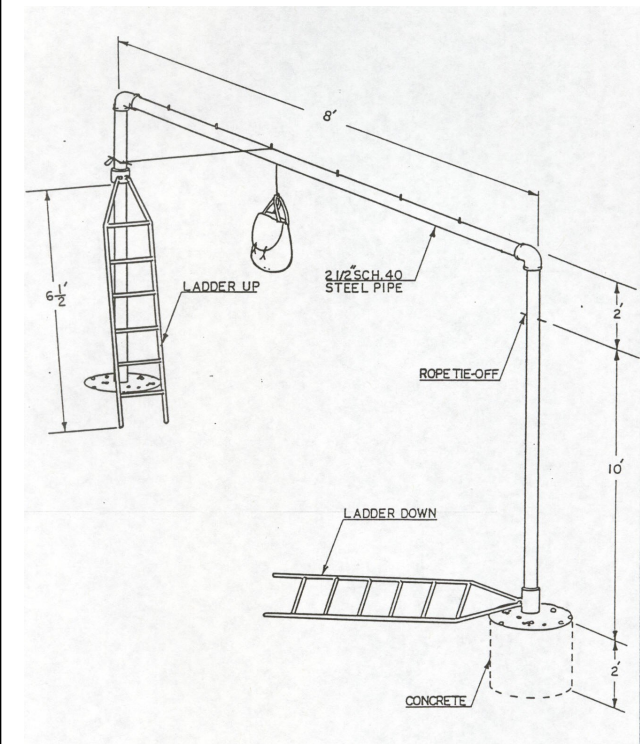
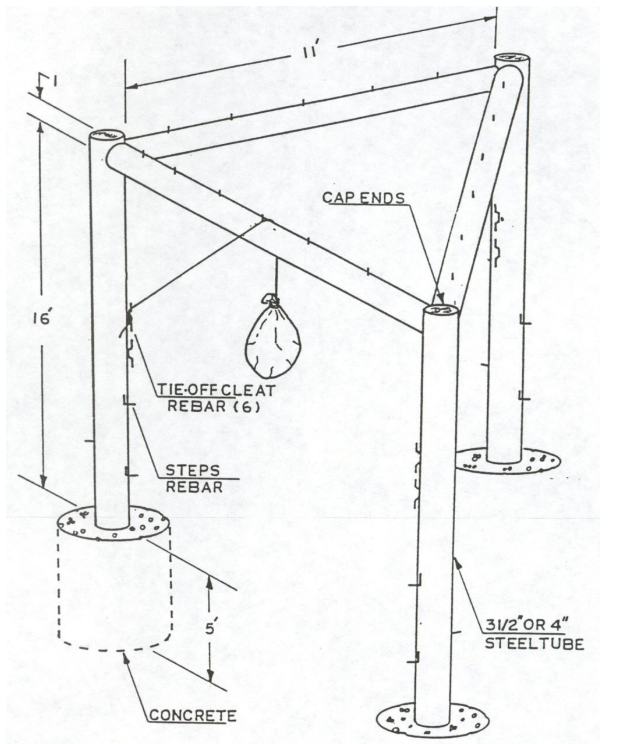
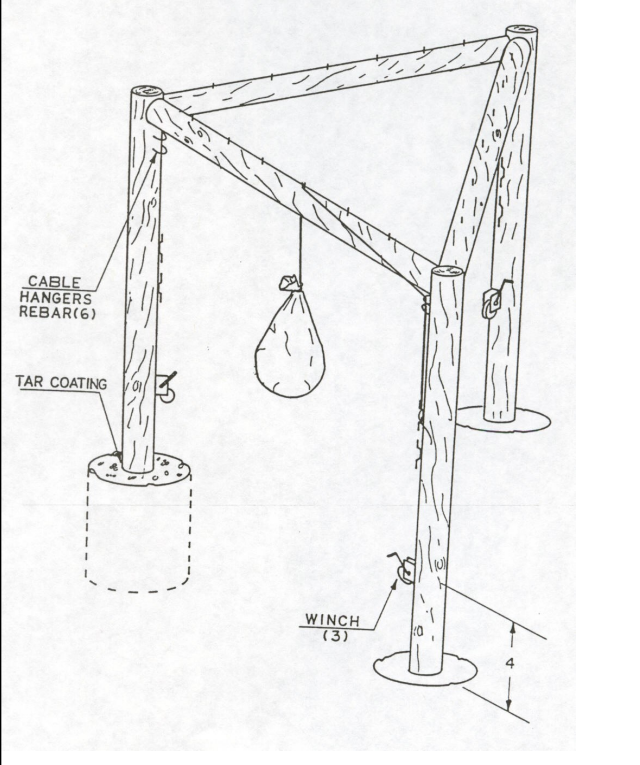
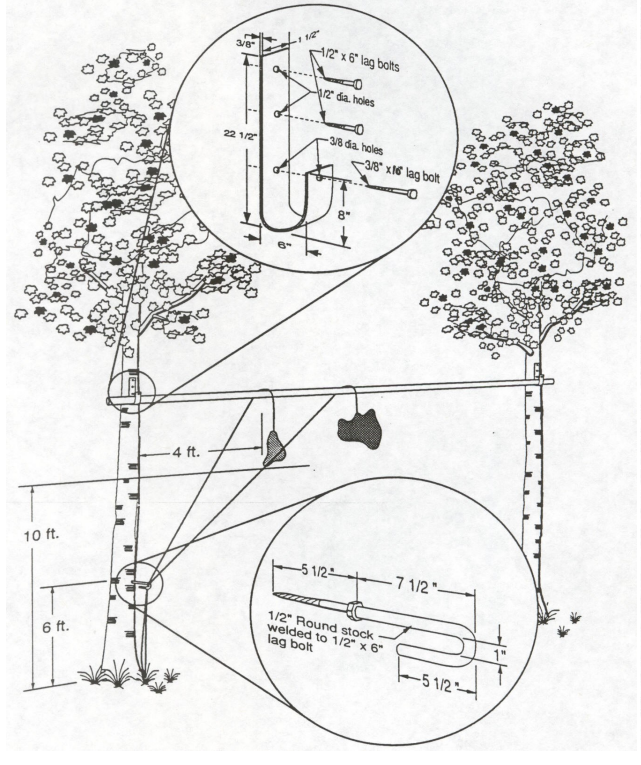
Reprinted from : U.S. Forest Service and U.S. Fish and Wildlife Service, Northern Region. 1991. "Living with Grizzly Bears, Structures that Work."



Hint: Approximately 50 feet of rope is needed to hang a group of items on one of these poles.

Continued on the next page...







Another convenient alternative is to use the “Bear Bag” to toss your line over the tree branch. It’s small and lightweight and fits easily into a backpack. The Bear Bag pictured here can be purchased from several online retailers including www.campsaver.com, LG Outdoors and www.camping.com.



Other Sources of Specialized Products for Hanging Food

Williams Products, Inc.

2825 Rehberg Lane
Billings, MT 59102
406-652-8930
1-800-522-8930

NATPRO, Inc.

Box 1076
Lander, WY 82520
307-332-3068

If you don’t want to purchase throwing weights or pack them on your hike, you can carefully secure a rock to the end of a throwing line and toss the rock over the tree branch.

Electric Fencing

Portable electric fencing is an effective way to secure backpacks, coolers, entire campsites and game carcasses. Studies in Wyoming and Montana have demonstrated that electric fences, when properly constructed and functioning, can be very effective at deterring bears (Brian DeBolt, Wyoming Game & Fish, personal communication). Montana Fish, Wildlife & Parks has been using electric fences to deter bears and other predators from dumpsters, animal pens, calving areas and bee hives with good success.

Several companies sell portable electric fencing that can be packed into the backcountry or set up around front-country campsites. The fences are easy to set up, relatively inexpensive, and can be easily taken down when the bears are hibernating or the attractant has been removed.

Several options for portable electric fencing and electric fence manufacturers are included in this section. The information presented in this guide is meant to provide ideas for securing bear attractants with electric fencing.

For more detailed information on fence designs and specifications, please consult the Living with Predators Resource Guide on electric fencing to deter predators.



Grizzly bear approaching an electric fence.

Photo courtesy of James Jonkel, Montana Fish, Wildlife & Parks

Portable Electric Fencing

Portable electric fencing kits are easy to pack into the backcountry and are generally fast and easy to set up. But before you set out make sure that the portable fence you chose will be an effective way to secure your gear. You also should consult with the land management authority who manages the land you'll be recreating on to see what food storage regulations apply and whether or not the portable fence you purchased or are considering purchasing will meet those requirements.

Sources for Portable electric Fencing:

Counter Assault

120 Industry Court
Kalispell, MT 59901
(406) 257-4740 or 800-695-3394
www.counterassault.com

Wyoming Outdoor

1231 13th Street
Cody, WY 82414
(307) 527-6449
www.wyomingoutdoor.com

Fleming Outdoors

www.Flemingoutdoors.com



The photo above shows an example of a portable electric fence that was used by a hunter in Alaska to deter bears from game meat.

Photo Courtesy of Montana Fish, Wildlife & Parks



This photo shows how an electric fence can be incorporated into a tent to provide an additional physical predator deterrent.

*Photo courtesy of Bill Lavelle,
Living with Wildlife Foundation*



The photo above shows how an electric fence can be used to deter bears from game carcasses and other attractants.

Photo courtesy of Montana Fish, Wildlife & Parks

Manufacturers of Electric Fencing

Fi-Shock Inc.

5360 N. National Drive
Knoxville, TN 37914-6695
865-524-7380 Fax 865-673-4770
www.fishock.com

Gallagher

18940 Redland Road
San Antonio, TX 78259
P.O. Box 708900
San Antonio, TX 78270
1-800-494-0368
www.gallagherusa.com
info@gallagherusa.com

Margo Supplies Ltd.

P.O. Box 5400
High River, Alberta
Canada T1V 1M5
403-652-1932 Fax 403-652-3511
www.margosupplies.com
info@margosupplies.com

Parmak

Parker McCrory Mfg. Co.
2000 Forest Ave.
Kansas City, MO 64108
816-221-2000 Fax 816-221-9879
www.parmackusa.com
info@parmackusa.com

Wyoming Outdoor Industries Inc.

1-800-725-6853
www.wyomingoutdoor.com

Zareba Systems

13705 26th Ave. N., Suite 102
Minneapolis, MN 55441
763-551-1125 Fax 763-509-7450
www.zarebasystems.com

Counter Assault

120 Industry Court
Kalispell, MT 59901
(406) 257-4740 or 800-695-3394
Www.counterassault.com



United States Department of Agriculture
Forest Service



**Technology &
Development Program**

March 1999

2300

9923-2321-MTDC

Electric Fence Systems

Requirements for Meeting the NCDE Food Storage Special Order

Dave Gasvoda, Project Leader

Since 1995, persons using any portion of the National Forests in the Northern Continental Divide Grizzly Bear Ecosystem (NCDE) have been required to store food, garbage, and other attractants (such as horse feed) in a bear-resistant manner (Special Order No. F10014S95). The area includes wilderness and nonwilderness portions of the Flathead, Lewis and Clark, Lolo, and Helena National Forests south and west of Glacier National Park (see attached map).

Electric fence systems are an acceptable means of meeting the requirement for storage in a bear-resistant manner. Electric fence systems can be used alone or to supplement other forms of bear-resistant storage, such as using bear-resistant containers, or suspending attractants from a support.

Inspection

It is the user's responsibility to operate the system in the field at the required levels. Forest Service employees will inspect electric fences when they are set up in the field.

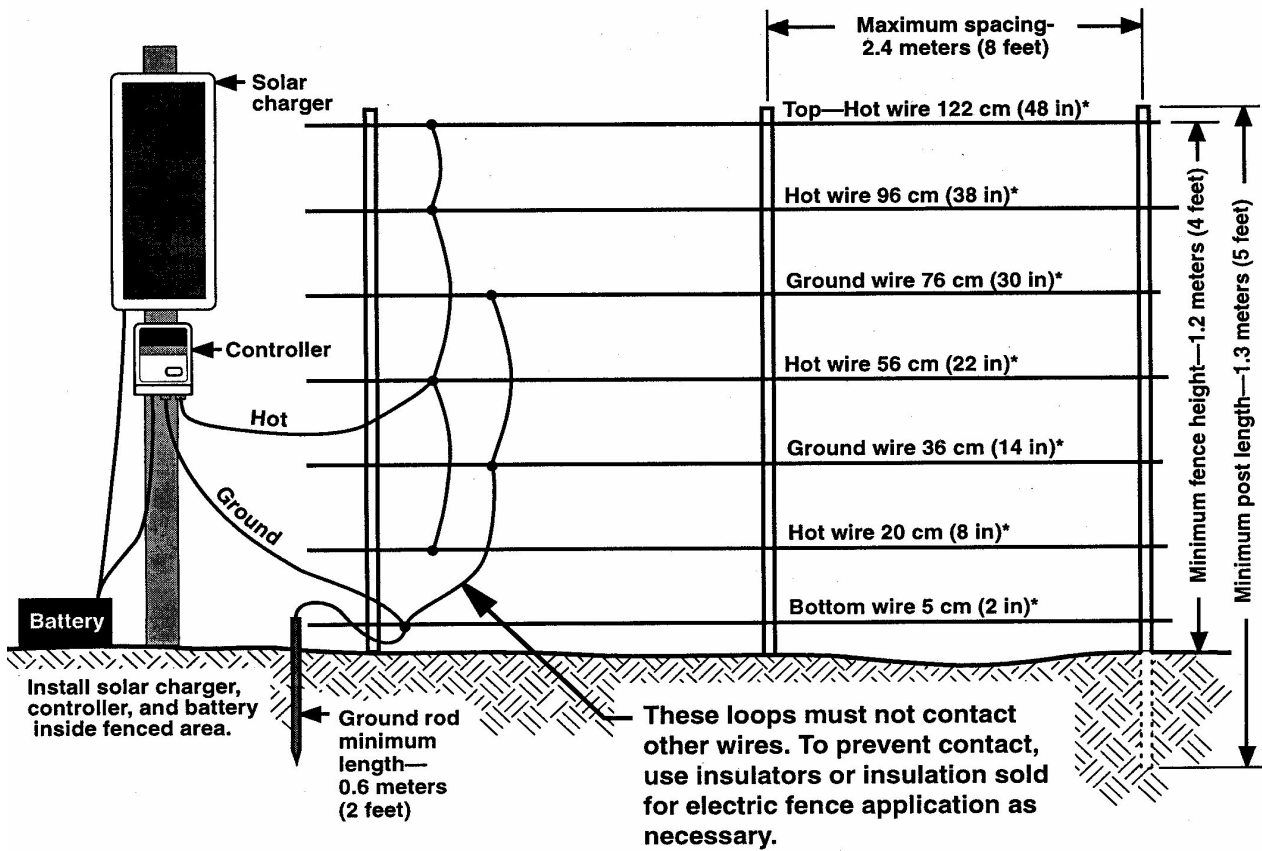
Fence System Requirements

Fence systems must meet the following minimum requirements:

- The minimum height shall be 1.2 meters (4 feet). Posts shall be at least 1.3 meters (5 feet) long and spaced not more than 2.4 meters (8 feet) apart. The fence shall be constructed with seven wires spaced 15 to 25 centimeters (6 to 10 inches) apart as shown in the illustration on page 2. The bottom wire should be no more than 2 inches from the ground and it may touch the ground.
- The conductors (wires) may be either smooth metal fence wire (16 gauge minimum) or Polywire (polyethylene interwoven with at least six strands of stainless steel wire). In order to make the fence more visible, the top wire may be Polytape (polyethylene ribbon interwoven with at least five strands of stainless steel wire and at least 1.2 centimeters (1/2 inch) wide).
- The fence shall be no closer than 1 meter (3 feet) from the items it is protecting.
- A ground wire return fence shall be used. This fence uses alternating hot and ground fence wires. The top two wires are connected to the fence controller's hot terminal. The third wire down connects to the fence controller's ground terminal. The next wire connects to the hot terminal, and so forth. The bottom wire must be a grounded wire and may touch the earth. The ground terminal connects to an earth ground.
- An earth ground shall be constructed using a metal rod 0.6 meters (2 feet) long or longer. The rod should be driven into the earth as deep as practical. Allow a few centimeters (inches) to remain above the ground so the ground lead wire can be attached. The ground rod should be located in a wet spot if one exists.
- Fence conductors (wires) must be under tension, not loose or sagging. Corner supports (posts, trees, etc.) must be sturdy enough to not deflect excessively under the tension. Fiberglass or plastic corner posts may be used, provided that they are

TD

For additional information contact: Dave Gasvoda, Project Leader, Missoula Technology & Development Center, Building 1, Fort Missoula, Missoula, MT 59804-7294. Phone: (406) 329-3986; Fax: (406) 329-3719; IBM: dgasvoda/wo,mtdc



* Height above ground; distance between wires may vary from 6 to 10 inches.

adequately braced. All fence wires connected to the hot terminal of the fence controller must be supported using suitable electric fence insulators. Separate insulators are not required on fiberglass or plastic supports.

- The fence controller must be specified by the manufacturer to have a minimum stored energy of 0.7 joules. Its minimum peak output voltage must be specified as being at least 6000 volts.

- The user must have an electric fence tester on site that is capable of displaying voltage measurements from 600 to 5000 volts. Both multiple glow lamp and digital display types are acceptable. The digital display units are likely to be more accurate and easier to read. The inspection testing shall be made using a Forest Service digital meter. It shall be used to determine that the minimum requirements are met.

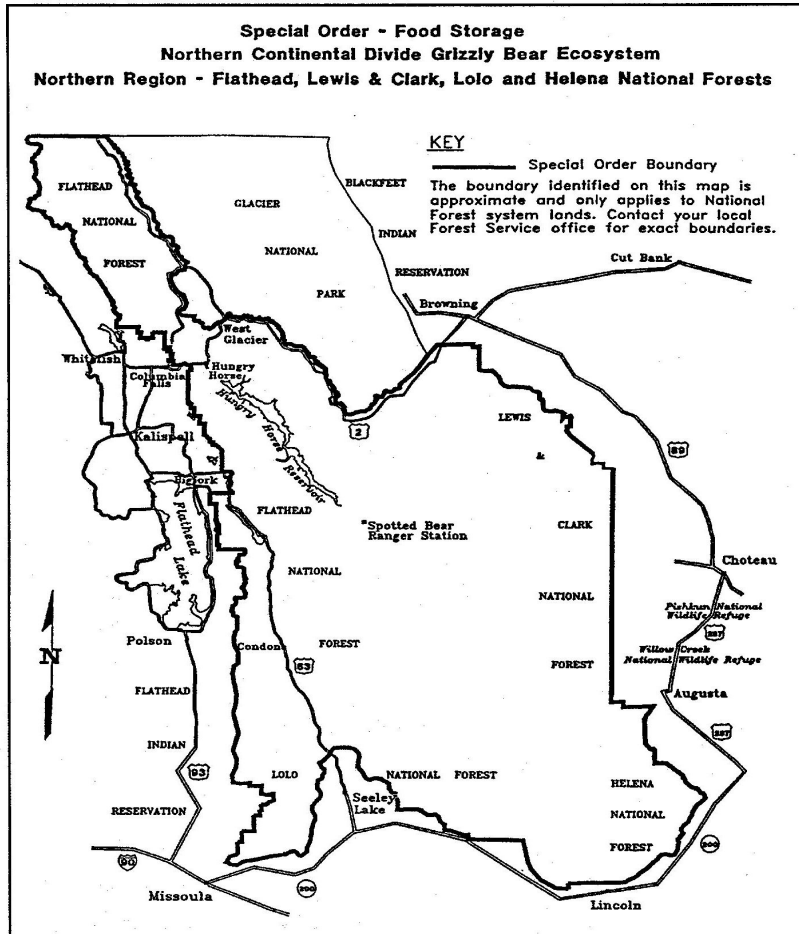
- Test the fence voltage as far as possible from the fence

controller. Connect the meter's ground terminal to one of the fence's ground wires and touch the meter's hot terminal to a hot fence wire. Test each hot wire by touching the meter's hot terminal to the wire. Test each ground wire by connecting the meter's ground terminal to the ground wire being tested while touching the meter's hot terminal to any hot wire.

Each conductor must have a tested minimum of 5000 volts. The voltage must appear at least 40 times a minute.

Summary of Fence Specifications

- Minimum fence height _____ 4 feet
- Minimum post length _____ 5 feet
- Maximum spacing between posts _____ 8 feet
- Conductors must be:
 - Smooth metal fence wire (16 gauge minimum)
 - or
 - Polywire (at least six strands of stainless steel wire)
- For visibility, the top conductor may be Polytape (at least five strands of stainless steel wire, at least 1/2-inch wide)
- Minimum distance between fence and items inside _____ 3 feet
- Ground wire return fence must be used (alternating hot and ground wires)
- Minimum length ground rod (earth ground mandatory) _____ 2 feet
- Minimum stored energy of the fence controller _____ 0.7 joules
- Minimum tested peak output voltage on every conductor _____ 5000 volts
- Minimum shocks per minute _____ 40
- Minimum number of wires _____ 7
- Distance between wires _____ 6 to 10 inches



Acknowledgments

The author would like to acknowledge the contributions of Mike Madel, Bear Management Specialist for the Montana Department of Fish, Wildlife and Parks in Choteau, Montana. Mike's work helped establish the requirements that must be met to successfully deter grizzly bears.

Additional single copies of this document may be ordered from:

USDA Forest Service
 Missoula Technology and Development Center
 Building 1, Fort Missoula
 Missoula, MT 59804-7294
 Phone: (406) 329-3900
 Fax: (406) 329-3719
 IBM: pubs/wo,mtdc
 E-mail: pubs/wo_mtdc@fs.fed.us

For additional technical information, contact Dave Gasvoda at the address above.

Phone: (406) 329-3986
 Fax: (406) 329-3719
 IBM: dgasvoda/wo,mtdc
 E-mail: dgasvoda/wo_mtdc@fs.fed.us

An electronic copy of this document is available on the Forest Service's FSWeb intranet at:

<http://fsweb.mtdc.wo.fs.fed.us>



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Bear Alarm Systems

Margo Supplies Ltd.

Tel. (403) 652-1932 www.margosupplies.com



Bear Alert Alarm System

- Activated when bear touches hot wire
- Bear receives a shock and a siren is activated
- Can be used as a perimeter fence for game or a camp
- Can be rigged with any alarm devices that are activated by a switch closure (i.e. lights, security monitors, etc.)



Trip Wire Fence System

- Kit includes 10 fiberglass posts, wire hangers, 200 m of trip wire, alarm controller, siren and 12-volt power supply
- Kit weighs 16 lbs.



Crittter Gitter

- Uses passive, infrared, body heat and motion detection to detect animals
- Makes ear-piercing sounds—changes its sound and light patterns to prevent conditioning of animals

Photos courtesy of: Margo Supplies

Pack Alarm

P.O. Box 19960 Fountain Hills, AZ 85269

(480) 275-9474

www.packalarm.net

- Warns of a bear that enters the perimeter of the area you have set up
- Consists of a small housing, 330 feet of line, a top knob, a trigger and six sensor line guides
- When the line is bumped, a siren sounds for five minutes to give you warning that a bear has entered the area

Nite Guard Solar[®]

Nite Guard Solar[™] uses a flash of light implies to deter animals that hunt or feed at night. Use the Nite Guard Solar to protect:

POULTRY and LIVESTOCK against coyotes, foxes, bears, mountain lions, wolves, bobcats, owls, hawks, minks, weasels, and skunks

GARDENS (flowers, sweet corn), ORCHARDS, VINEYARDS against deer and raccoons

BIRD FEEDERS, PURPLE MARTIN HOUSES, FISH PONDS against raccoons, hawks, owls, blue herons and bears

CAMPsites, CABINS, and PROPERTY against bears, raccoons, and mountains lions



Dimensions: 2.5" wide x 2" high x 1" deep

Mounting Nite Guard for Large Predators



For predators like fox, coyote, bobcat, wild boar, mountain lion and bear; put the lights approximately 100 feet apart around your entire perimeter (all four sides of the area) and place them eye level to the predators which is approximately 20-25 inches off the ground. If the area has sides longer than 100 feet, more lights should be used on each side. Face lights outward from protected area.

Nite Guard, LLC
PO Box 274 • Princeton, MN 55371
Phone: 1-800-328-6647

www.niteguard.com Email: info@niteguard.com

Information and photos provided courtesy of Nite Guard Solar[®]

Bear Bangers and other Scare Devices

The products listed in this section are being used to deter predators in Canada and Alaska, and some are being used in the Lower 48 States to deter birds, elk and deer from agricultural areas. These products may be helpful in deterring bears and other animals from camp sites and other areas.

Pyrotechnic scare devices might not be legal to use in all areas. Check with local authorities before purchasing or using the items listed in this section.

Kodiak Security Products

Bear or Bird Bangers— 15 mm signal cartridge with audible effect that explodes with a loud bang after traveling 40 meters (131 ft.). Packaged 6 to a box. Height range of approximately 40 meters (131 ft.) with a 0.9–1.0 second time delay. Distance 100 ft. Used with pen launchers. Noise level is 115 db. Weight approximately 12 grams.

Flares— 15 mm signal illuminating center-fire cartridge. Available with a red, green or white flame. Box of 6. Projects at about 45 meters. Produces a plume when launched. Burn time approximately 4.5–6 seconds. Flight height 30-40 metres (93-131 ft.).

Kodiak Wildlife Safety Kit—includes a molded polypropylene kit with detachable cartridge top, 225 gram can of frontiersman bear spray with flip-top nylon holster, pen launcher, 6 bear bangers, 6 red signal flares, 6 screamers, and 1 signal horn.

Pen Launcher—used for launching bear bangers and signal flares

Reed-Joseph International Company

1-800-647-5554

www.reedjoseph.com

15mm Bird Banger

Travels 100 to 150 feet down range before exploding. Fired from a single, double or six-shot launcher with the aid of a 6mm blank.



12ga Shot Tell

Travels 250 to 300 feet down range before exploding. Launched from a 12 gauge shot gun.



15mm Screamer Siren

Travels 250 to 300 feet making a siren-like sound as it flies. Fired from a single, double, or six-shot launcher with the aid of a 6mm blank.



CAPA Long Range Exploders

Travels up to 1200 feet before making a 150db report.

15mm Single or Double Shot Launcher

Double launcher automatically re-cocks after the first 15mm cartridge is fired allowing a second cartridge to be quickly fired. Single shot launcher fires one round.

Six Shot Launcher—fires more rapidly than the double or single shot launcher

- 50mV (class 3 IIIb) laser output, powered by 9V battery
- Effective distance of 1500 feet



Margo Supplies Ltd.
(403) 652-1932
www.margosupplies.com

Launchers for 15 mm Scare
and Signal Cartridges

6 mm Record Single Shot



6 mm Record Double Shot Holds two blanks and two pyrotechnic cartridges. After the first cartridge is launched, the launcher automatically cocks itself and is ready to launch the second cartridge.



6 mm RG-46 Seven Shot Revolver Rapid firing model that features a swing-out cylinder with blank ejector.



6 mm RG-3 Six Shot Clip Magazine Launcher Has a built-in blank probe and requires 6mm hot blanks. Spare magazines are available for speed loading.

9mm Quad Shot Launcher Uses 9mm (.380 cal.) center fire blanks to fire all 15mm scare cartridges. The optional four shot adapter (as shown in the picture) simultaneously fires any combination of scare cartridges producing a bombardment-like effect resulting in aggressive hazing. Can be used without the pyro-cartridges as they deliver a loud sound effect by themselves.



6 mm RG-300 Ten Shot Clip Magazine Launcher

Provides rapid deployment. Available in blue and nickel finish with swing out reaming tool. Spare magazine optional.



Quick Draw Holster The hip holster with hold down flap and cartridge loops keeps launcher secure and close at hand for rapid firing. Fits all launchers.

12 Gauge Signal Flares Red, blue and white flares reaching heights of 80 m.



Bear Deterrent Spray

Bear deterrent spray (aka "bear spray") is considered to be an effective means of protecting one's self against bears. Many wildlife professionals carry bear spray whenever they are in the field. At this point in time, bear spray can only be advertised legally for use against bears. However, some wildlife managers have used bear spray in emergency situations to successfully deter other species, including mountain lions. Bear spray has also been used successfully in attacks by elk and deer.

The following statement was reprinted from the Interagency Grizzly Bear Committee's position paper on bear spray.

No deterrent is 100% effective, but compared to all others, including firearms, bear spray has demonstrated the most success in fending off threatening and attacking bears and preventing injury to the person and animal involved. The proper use of bear spray will reduce the number of grizzly bears killed in self-defense, reduce human injuries caused by bears, and help promote the recovery and survival of the grizzly bear.

People often ask whether or not bear spray really works to fend off a bear, especially a grizzly bear. To address this concern, the US Fish and Wildlife Service produced an information bulletin which compares the use of firearms against bears versus the use of bear spray against bears. This bulletin is reprinted on the next page for your reference.

A lot of research has gone into what makes an effective bear spray, and the Environmental Protection Agency (EPA) regulates and registers all new brands. For more information on choosing and using bear pepper spray, please contact the Center for Wildlife Information at 1.406.721.8985 or visit their web site at www.BeBearAware.org.

Some informative brochures about using and choosing a bear spray are also included in this section. The brochures were provided by and printed with permission by the Center for Wildlife Information.

*Living with Grizzlies***Fact Sheet No. 8**

U.S. Fish and Wildlife Service
 Mountain-Prairie Region, P.O. Box 25486
 Lakewood, Colorado 80225
 phone 303/236-7905, fax 303/236-3815
 website: www.r6.fws.gov

***Bear Spray vs. Bullets*****Which offers better protection?**

At first glance, this question may seem like a no-brainer. After all, aren't guns made to kill, while pepper spray (so-called "bear spray," when it comes in big cans) does not? Unlike an attack by a human assailant, who may be able to use your own weapon against you, that safety/survival argument for using pepper spray doesn't apply to a human-bear encounter... or does it?

When it comes to self defense against grizzly bears, the answer is not as obvious as it may seem. In fact, experienced hunters are surprised to find that despite the use of firearms against a charging bear, they were attacked and badly hurt. Evidence of human-bear encounters even suggests that shooting a bear can escalate the seriousness of an attack, while encounters where firearms are not used are less likely to result in injury or death of the human or the bear. While firearms can kill a bear, can a bullet kill quickly enough -- and can the shooter be accurate enough -- to prevent a dangerous, even fatal, attack?

The question is not one of marksmanship or clear thinking in the face of a growling bear, for even a skilled marksman with steady nerves may have a slim chance of deterring a bear attack with a gun. Law enforcement agents for the U.S. Fish and Wildlife Service have experience that supports this reality -- based on their investigations of human-bear encounters since 1992, persons encountering grizzlies and defending themselves with firearms suffer injury about 50% of the time. During the same period, persons defending themselves with pepper spray escaped injury most of the time, and those that were injured experienced shorter duration attacks and less severe injuries. Canadian bear biologist Dr. Stephen Herrero reached similar conclusions based on his own research -- a person's chance of incurring serious injury from a charging grizzly doubles when bullets are fired versus when bear spray is used.

Awareness of bear behavior is the key to mitigating potential danger. Detecting signs of a bear and avoiding interaction, or understanding defensive bear behaviors, like bluff charges, are the best ways of escaping injury. The Service supports the pepper spray policy of the Interagency Grizzly Bear Committee, which states that bear spray is not a substitute for following proper bear avoidance safety techniques, and that bear spray should be used as a deterrent only in an aggressive or attacking confrontation with a bear.

Like seatbelts, bear spray saves lives. But just as seatbelts don't make driving off a bridge safe, bear spray is not a shield against deliberately seeking out or attracting a grizzly bear. No deterrent is 100% effective, but compared to all others, including firearms, proper use of bear spray has proven to be the best method for fending off threatening and attacking bears, and for preventing injury to the person and animal involved.

Because the grizzly bear is federally protected in the Lower 48 States as a threatened species, it is a violation of the Endangered Species Act (ESA) to shoot one, except in self defense and defense of others during an imminent attack. Penalties under the ESA include up to 6 months in prison and a \$100,000 fine. Additional penalties may also apply to violations of state law. For more information about bear spray and its effectiveness, see:

<http://www.fs.fed.us/r1/wildlife/tshc>

Interagency Grizzly Bear Committee (IGBC) Guidelines for Choosing and Using Bear Pepper Spray

The following information on bear pepper spray was provided by the Interagency Grizzly Bear Committee (IGBC) Please visit the IGBC web site at : www.fs.fed.us/r1/wildlife/igbc or the web site for the Center for Wildlife Information at: www.BeBearAware.org for more information on bear pepper spray.

The following are only recommendations and the IGBC does not guarantee the effectiveness of any product. However, the IGBC does recommend the use of bear pepper spray in addition to following proper bear avoidance safety techniques.

Remember: bear pepper spray is not a substitute for following proper bear avoidance safety techniques.

When to use bear pepper spray

- Bear pepper spray should be used as a deterrent only in an aggressive or attacking confrontation with a bear.
- Bear pepper spray is only effective when used as an airborne deterrent sprayed as a cloud at an aggressive animal. It should not be applied to people, tents, packs, other equipment or surrounding area as a repellent.

How to use bear pepper spray

Each person should carry a can of bear pepper spray when working or recreating in bear habitat. Spray should be carried in a quick, accessible fashion such as in a hip or chest holster. In your tent, keep bear pepper spray readily available next to your flashlight. You should also keep a can available in your cooking area. Spray should be tested once a year. Do not test spray in or near camping area. Be sure to check the expiration date on your can of bear spray.

- Remove safety clip
- Aim slightly down and towards the approaching bear. If necessary, adjust for cross wind.
- Spray a brief shot when the bear is about 50 feet away.
- Spray again if the bear continues to approach.
- Once the animal has retreated or is busy cleaning itself, leave the area as quickly as possible (don't run) or go to an immediate area of safety, such as a car, tree, or building. Do not chase or pursue the animal.

Selecting a bear pepper spray

- Purchase products that are clearly labeled "for deterring attacks by bears."
- Purchase products that are registered with the Environmental Protection Agency (EPA).
- Spray concentration should be 1.0 to 2.0% capsaicin and related capsaicinoids
- Spray should be at least 225 grams or 7.9 ounces net weight
- Spray should be derived from Oleoresin of Capsicum
- Product should spray a minimum distance of 25 feet
- Spray should last at least 6 seconds

The IGBC does not promote or endorse any particular commercial product.

**The EPA bear deterrent web site lists registered bear pepper spray manufacturers:
(http://www.epa.gov/region08/toxics_pesticides/pests/beardeter.html)**

This information is reproduced on the following page for reference.

Environmental Protection Agency (EPA) Registered Bear Pepper Sprays

(As of November 2006)

Counter Assault Bear Deterrent

EPA Reg. No. 55541-2

Bushwacker Backpack & Sup. Co. Inc.
120 Industrial Court, Kalispell MT 59901
Attention: Mr. Pride Johnson
Tel: 1-800-695-3394
E-Mail: original@counterassault.com
Website: counterassault.com

Guard Alaska Bear Repellent

EPA Reg. No. 71545-1

McNeil River Enterprises Inc.
750 West Diamond, Suite 203 Anchorage, AK 99515
Attention: Mr. Randy Prater
Tel: 1-888-419-9695
E-Mail: randy@guardalaska.com
Website: guardalaska.com

Pepper Power Bear Deterrent

EPA Reg. No. 71920-1-72007
[A subregistrant of BearGuard]

Universal Defense Alternative Products (UDAP)
13160 Yonder Road
Bozeman MT 59715
Contact: Mark Matheny
Tel: 1-800-232-7941
E-Mail: bearman@udap.com
Website: udap.com

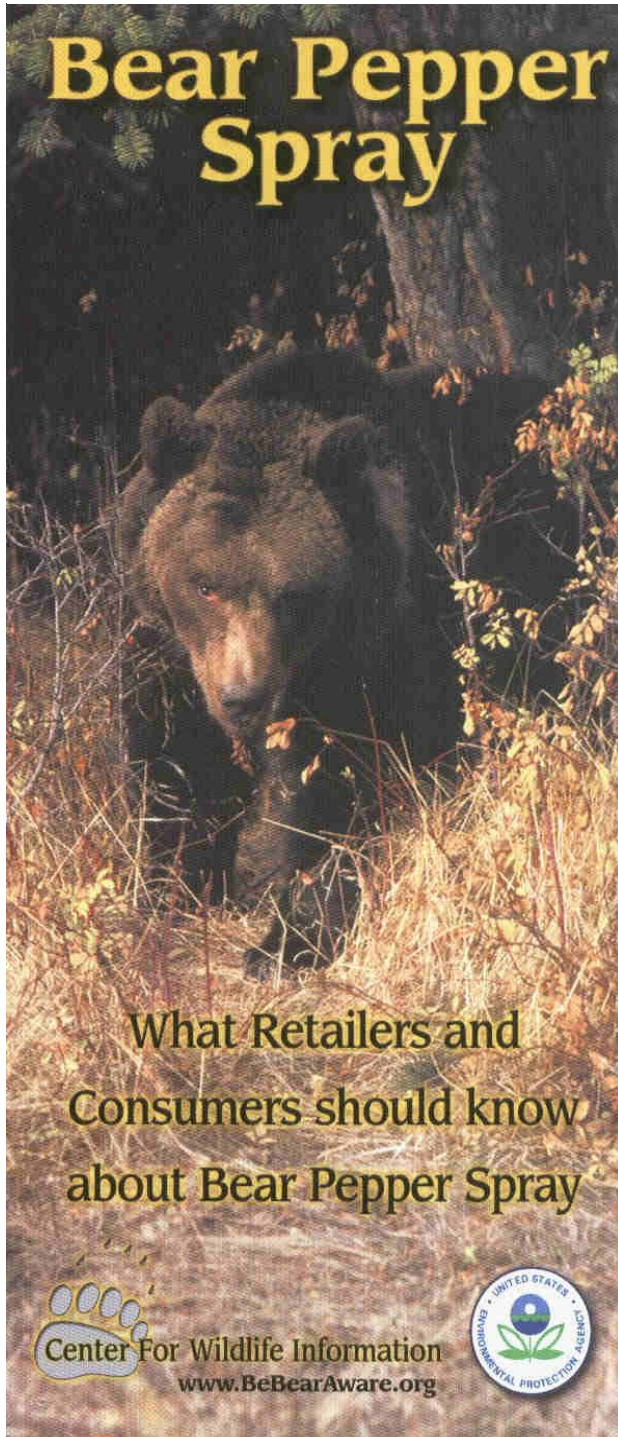
Frontiersman Bear Attack Deterrent

EPA Reg. No. 72265-1
Application received 02/22/99
Registered July 17, 2000

Security Equipment Corp.
330 Sun Valley Circle, Fenton MO 63036
Attention: Mr. Larry Nance
Tel: 1-314-343-2000
E-Mail: sabre@stlnet.com
Website: sabredefensesprays.com


In addition to these four products. EPA allows "distributor products" that are identical to the above products but have a different name, address, and an additional number to the registration number.


The following brochure on bear spray is included in this guide courtesy of the Center for Wildlife Information. For more information on bear pepper spray and staying safe in bear country, please visit their website at www.BeBearAware.org.



Bear Pepper Spray

What Retailers and Consumers should know about Bear Pepper Spray


Center For Wildlife Information
www.BeBearAware.org





Be Bear Aware

Hiking in Bear Country

The Be Bear Aware Campaign

Bear Encounter Series Bear Pepper Spray

We greatly appreciate the participation of state, federal and provincial wildlife and land management agencies, youth groups, conservation organizations, hunting and fishing associations, the graphic arts, printing, pulp and paper industries, and literally hundreds of teachers, youth group leaders and thousands of their students and members.

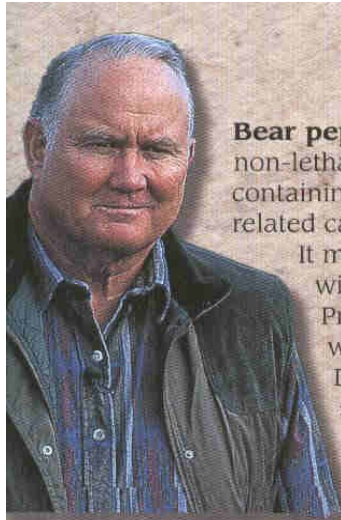
Creative Team:
 Lisa Nicholas, Creative Writing & Editing Mentor;
 Ken Lockwood, Graphic Design Mentor;
 thousands of students across North America;
 and Chuck Bartlebaugh, Project Facilitator

No specific product endorsement is implied by the EPA


Center For Wildlife Information
www.BeBearAware.org
 P.O. Box 8289, Missoula, Montana 59807




The Pittsburgh Foundation,
 Thyrsa W. Amos,
 Helen P. Rush and
 Savina S. Skewis Fund



Bear pepper spray is a non-lethal bear deterrent containing capsaicin and related capsaicinoids.

It must be registered with the Environmental Protection Agency and with the Agricultural Department of each state.

The Environmental Protection Agency and the Center for Wildlife Information

have prepared this brochure to help guide you in becoming an informed consumer when purchasing **bear pepper spray**.

General H. Norman Schwazkopf
National Spokesman for the Be-Bear Aware
and Wildlife Stewardship Campaign
www.BeBearAware.org



Read the Label Carefully

To determine if you are **purchasing or selling an actual bear pepper spray**, read the label carefully. The label provides information unique to and **only allowed on bear pepper spray deterrents**.

The below information must be clearly displayed on the label of the can.

1 **Bear pepper spray** will clearly display on the label identifying terms such as **bear deterrent** or **for use in deterring attacks by bears**. The word "bear" can only be used on EPA registered bear pepper spray.

2 This indicates the amount of the active ingredients, **capsaicin and related capsaicinoids**, which should be between **1% and 2%** of net contents.

These active ingredients cause reduced breathing and irritation to the eyes, nose, mouth, throat and lungs, disabling and distracting the bear from its charge.

3 The **minimum net content** for bear pepper spray is 7.9 ounces or 225 grams.

4 Identifies the owner of the **EPA-registered formula**.

5 Identifies the **actual manufacturer**, the **state** in which it was manufactured, and the **number** indicating the order of registration.

Bear pepper spray also contains inert ingredients, such as oils, propellant and solvents.



1 **Bear Pepper Spray**

To Deter Bears from Attacking Humans
NOT FOR USE ON HUMANS

DO NOT SEEK OUT ENCOUNTERS WITH BEARS. THIS PRODUCT IS A BEAR ATTACK DETERRENT WHICH MAY PROTECT USERS IN SOME UNEXPECTED CONFRONTATIONS WITH BEARS BUT MAY NOT BE EFFECTIVE IN ALL SITUATIONS OR PREVENT ALL INJURIES.

2 Active Ingredient:
Capsaicin and related capsaicinoids* **1% to 2%**

Inert Ingredients 98% to 99%
TOTAL 100%

*Includes Capsaicin and other capsaicinoids. Derived from Oleoresin of Capsicum

3 Net Contents: **7.9 Ounces**
or **225 grams**

4 EPA Registration No: **0000**

5 EPA Est No: **0000-AA-00**

A generic label has been used for educational purposes.

What is Bear Pepper Spray?

Bear pepper spray is a chemical formula designed specifically to deter aggressive or attacking bears. It must be registered with the Environmental Protection Agency and individual states. Bear pepper spray must contain between **1% to 2% of the active ingredients capsaicin and related capsaicinoids.**

Capsaicin and related capsaicinoids are the active ingredients that cause rapid eye closure, heavy watering of the eyes, and severe irritation to the nose, mouth, throat and lungs. This results in difficulty breathing and usually causes a bear to be distracted from its charge.

For backup, consider carrying two cans of bear spray, in case you are charged by more than one bear, have more than one incident, or to compensate for wind. Bear pepper spray should only be used to deter an aggressive or charging bear.



Registration Process

Prior to sale to the public, the Environmental Protection Agency (EPA) and individual states must first **register** each **bear pepper spray** product. EPA Federal registration requires each company to submit or reference extensive and acceptable chemistry, toxicity and effectiveness data. It is also required that the canister label informs the user of the product's active ingredients, as well as how to store, use and dispose of the product properly without exposing the user or the environment to unreasonable adverse effects.

EPA and states do not register personal defense or law enforcement spray. It is illegal to sell such products for bears. Such untested products may contain insufficient active ingredients and propellant force to be an effective bear deterrent.

Enforcement Monitoring

EPA and the states monitor the sale of bear spray products. Companies selling **unregistered** bear spray will have the product "stop sold" and recalled immediately to protect unsuspecting potential buyers. Companies selling **registered** bear spray will have their products sampled from retail outlets or manufacturing establishments periodically to verify that the product has the approved amount of active ingredients and approved labeling.

The manufacturer must maintain records verifying that the bear spray actually contains the active ingredients **capsaicin and related capsaicinoids**.



When in bear country, bear spray should be carried on your person at all times and should **only** be used to deter **charging or attacking bears**

How and When to Use Bear Pepper Spray

Prior to entering bear country, make sure that everyone:

- knows basic bear safety techniques
- reads all bear spray instructions carefully
- understands how and when to use bear spray
- has an individual can of bear spray
- has bear spray quickly accessible (e.g., in a holster, not in a pack)

When to use:

- use only to deter charging or attacking bears

How to use:

- point container at bear, aiming slightly downward
- if possible, give bear a short warning blast about 40 feet away (bear must pass through the cloud created)
- if bear continues to charge, keep spraying until bear changes direction
- leave area at once, but do not run

How not to use:

- **do not** apply to people, tents, packs or ground as a repellent

Reference Books and Videos

Books

Bear Attacks—Their Causes and Avoidance by Stephen Herrero. Published by Lyons Press, 1985 and revised in 2002. ISBN 1-58574-557-X. Contact Lyons Press at www.lyonspress.com.

Bear Aware—A Falcon Guide by Bill Schneider. Published by The Globe Pequot Press in 2001 and revised in 2004. ISBN 0-7627-1188-4 (2001 Edition) and ISBN 0-7627-3108-7 (2004 Edition). Contact The Globe Pequot Press at www.falcon.com.

Videos

Staying Safe in Bear Country was produced by the Safety in Bear Country Society and provides information about bear behavior and how to prevent bear attacks. Available in VHS or DVD format from Distribution access at www.distributionaccess.com.

Bear Attack: The Predatory Black Bear and ***Bear Attack: Encountering Grizzlies*** were produced and are sold by Ellis Vision, Toronto, Canada. Call 416-924-2186 or e-mail sales@ellisent.com.

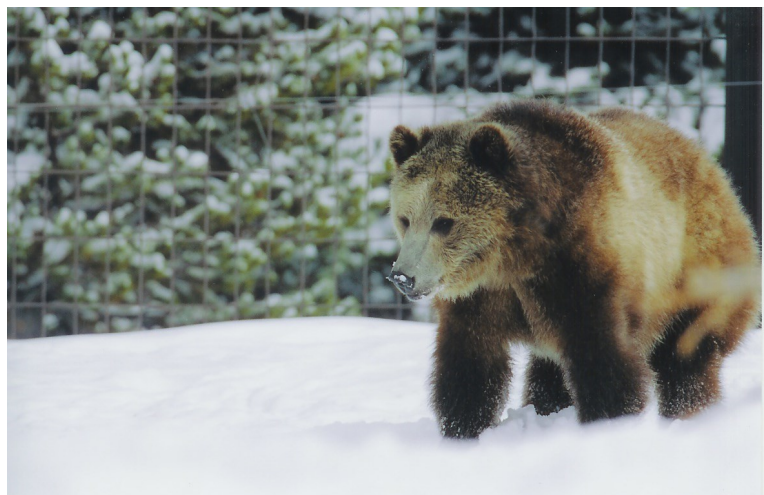
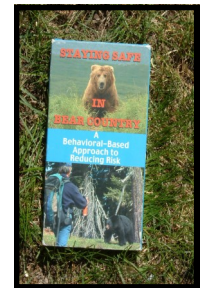


Photo courtesy of the Living with Wildlife Foundation

Other Sources of Information

Montana Fish, Wildlife, and Parks

www.fwp.state.mt.us

Interagency Grizzly Bear Committee

www.fs.fed.us/r1/wildlife/igbc

Alaska Department of Fish and Game

www.state.ak.us/adfg/adfghome.htm

The Tahoe Donner Association

www.tahoedonner.com

Pitkin County Government, Roaring Fork Bear Awareness Team

www.pitkingov.com/sitepages/pid154.php

Northwest Territories Resources, Wildlife and Economic Development

www.nwtwildlife.rwed.gov.nt.ca

Govt. of British Columbia, Ministry of Water, Land and Air Protection, Bear Smart Program

<http://wlapwww.gov.bc.ca/wld/bearsmart/bearsmintro.html>

U.S. Forest Service

- www.southernregion.fs.fed.us/resources/features/Feature-bears-p2.htm
- www.fs.fed.us/r3/coronado/scrd/nathist/nature/blackbear.htm

Colorado State University Cooperative Extension

www.coopext.colostate.edu/wildlife/vendors_of_supplies.html

Bear Aware Initiative

C/o Sierra Club

P.O. Box 263

Jackson, WY 83001

Center for Wildlife Information

www.BeBearAware.org

Brown Bear Resources

406-549-4896

www.brownbear.org

Bear Info. Site

www.bearinfosite.com

Defenders Of Wildlife

www.defenders.org

Get Bear Smart Society

www.bearsmart.com

City of Juneau, Alaska

www.juneau.org

Grizzly Bear Outreach Project

www.bearinfo.org

Sierra Interagency Black Bear Group

www.sierrawildbear.gov



Photo courtesy of Derek Reich, Zöoprax Productions