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Explore Your World

Maroon Bells-Snowmass Loadout Package 2021



Maroon Bells/Snowmass Backpacking Expedition via the 4 Pass Loop

Information Compiled by the AcadianX Outdoor Adventure Group



Maroon Bells-Snowmass Wilderness

Maroon Bells-Snowmass Wilderness

The Maroon Bells–Snowmass Wilderness is a U.S. Wilderness Area located in the Elk Mountains of central Colorado. The 181,535-acre (734.65 km²) wilderness was established in 1980 in the Gunnison and White River national forests. Within its boundaries are 100 miles (160 km) of trails, 6 of Colorado's fourteeners and 9 passes over 12,000 feet (3,700 m). The wilderness is named after the two peaks known as the Maroon Bells as well as Snowmass Mountain. Maroon Bells-Snowmass Wilderness was one of five areas in Colorado designated as wilderness in the original Wilderness Act of 1964. The Wilderness area surrounds the extremely popular Maroon Bells Scenic Area, which is a major access point for Wilderness travel.

The Maroon Bells Peaks

The Maroon Bells are two peaks in the Elk Mountains, Maroon Peak and North Maroon Peak, separated by about half a kilometer (one-third of a mile). The mountains are on the border between Pitkin County and Gunnison County, Colorado, United States, about 12 miles (19 km) southwest of Aspen. Both peaks are fourteeners. Maroon Peak, at 14,163 feet (4317 m), is the 27th highest peak in Colorado. North Maroon Peak, at 14,019 feet (4273 m), is the 50th highest (depending on how they are counted). The view of the Maroon Bells to the southwest from the Maroon Creek valley is very heavily photographed. The peaks are located in the Maroon Bells–Snowmass Wilderness of White River National Forest.

Ecosystems

In the Central Rockies, coniferous forest occurs wherever there is ample moisture in the soil to sustain trees. This occurs throughout the middle and higher elevations, ending at the timberline (The elevation in a mountainous region above which trees do not grow), which here is about 11,500 feet above sea level.

Geology

The Sawatch Range and Elk Mountains form the principal ranges of the Continental Divide in central Colorado. Between them, there are dozens of “fourteeners,” or peaks that rise above 14,000 feet in elevation. Both ranges were heavily glaciated during the Pleistocene ice ages. During this epoch, great rivers of ice coursed down many of the major valleys, gouging out the bedrock to form U-shaped basins with broad floors and steep walls. Some of the large, lowland lakes found along the Arkansas River valley owe their origins to the great walls of debris, called moraines, pushed up by the glaciers. High on the shoulders of the peaks, smaller montane glaciers were carving the summits into sharp horns. Some of these glaciers scooped out natural amphitheatres, called cirques, into the sides of the high peaks. Many of these cirques bear sparkling alpine lakes, another legacy of past glaciation. With the warmer climate of recent centuries, the glaciers have melted away, and today none of these permanent icefields can be found in the Collegiate Peaks or Elk Mountains.

Fees & Permits

In order to provide quality recreation experiences and to protect the wilderness lands the Forest Service must gather data regarding visitor use and travel patterns. Each party overnighing in the Maroon Bells-Snowmass Wilderness is required to self-register at the Trailhead and to carry a copy of the registration with them during their visit. There is no fee charged and no limit to the number of permits issued.

Regulations and Safety Considerations

The Colorado Wilderness is home to a variety of wildlife, including some animals and plants with the potential to harm humans. Weather poses the greatest danger to hikers. Check the forecast and heat indexes before departing. Prepare for a variety of conditions -- from chilling rains to blistering heat. With all the beauty that this treasure has to offer there are many considerations you need to be aware of. Refer to the regulations and safety section of this loadout to make yourself fully aware of what to expect and rules you need to follow in order to preserve the beauty of the backcountry.

Routes and Topography

We have packed into this loadout a trove of maps and detailed descriptions for you to educate yourself on the layout of the trail. Study and review the details so that you may know your way in case you are separated from your team.

Camping Essentials and Gear

A complete list of essential gear and clothing are included in this loadout. To further assist you we have also included a checklist so that you may keep track of your acquired gear.

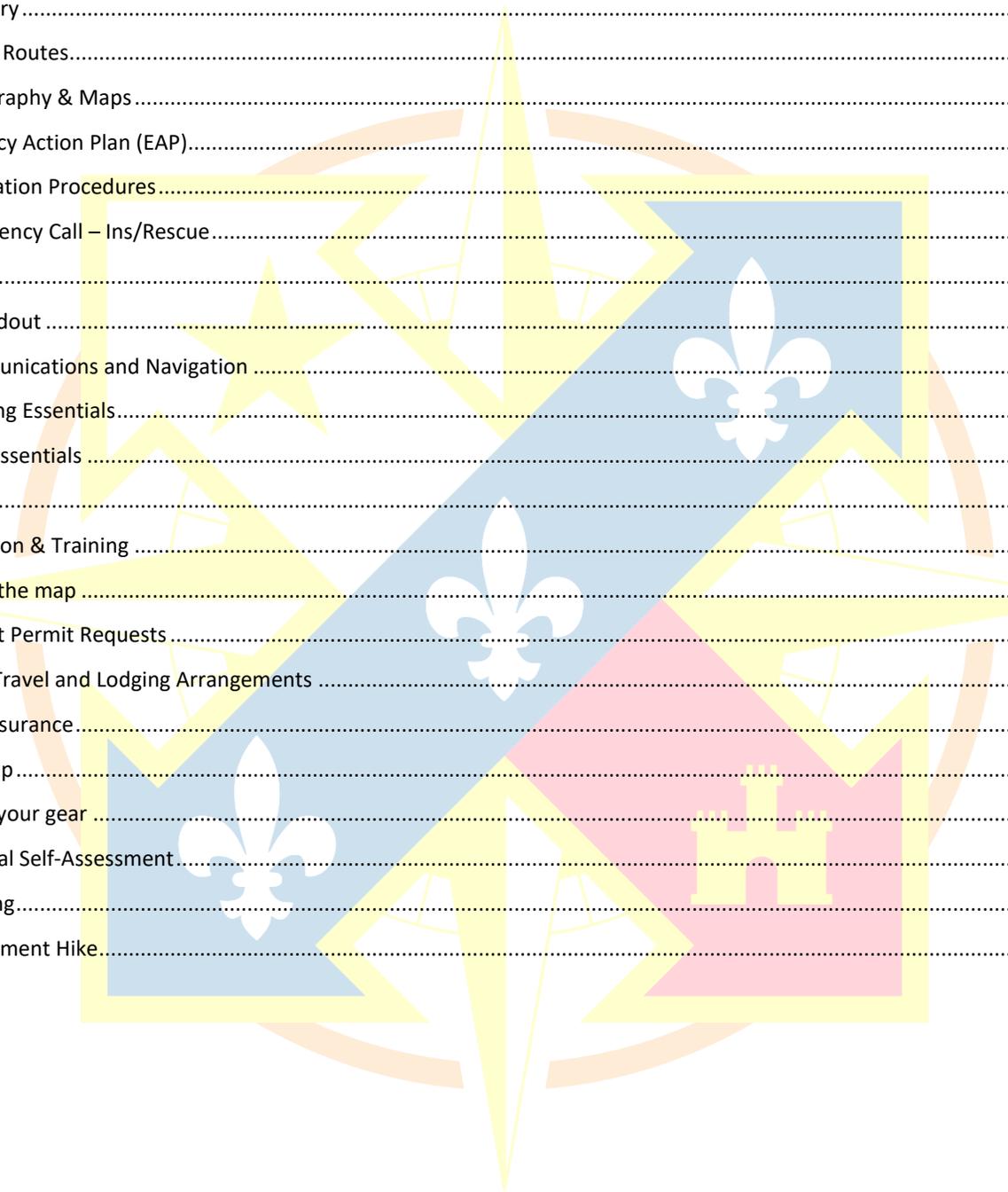
Logistics

The logistics section provides spaces for you to inter the relevant logistics information when they become available. This information can include flight details, hotel information, and car rental details.

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About Maroon Bells-Snowmass Wilderness

General Information

The United States Congress designated the Maroon Bells-Snowmass Wilderness (map) in 1964 and it now has a total of 181,535 acres. All of this wilderness is located in Colorado and is managed by the Forest Service.

You'll have plenty of human company in Colorado's fourth largest Wilderness. They come because this area may exemplify Rocky Mountain splendor better than any other Wilderness: 100 miles of trail lead over nine passes above 12,000 feet; vast regions lie above the tree line; long glacial valleys point the way to glistening alpine lakes. With six peaks rising above 14,000 feet, this area draws mountaineers by the thousands every year. The awesome, jagged symmetry of the Maroon Bells, reflected in Maroon Lake, is perhaps Colorado's most often photographed mountain scene. A non-Wilderness road punches into the area to Maroon Lake, creating traffic jams in summer. Climbers come in herds, despite the fact that these peaks are among the most difficult to scale in the state. Caution and skill are advised, but the rewards are stupendous. The Snowmass Creek Trail travels 16 miles to Maroon Lake and provides some of the best views of the Wilderness. Hot springs steam at the head of Conundrum Creek and attract many hikers. In midsummer, the wildflowers are arguably the best anywhere. Although elk and deer still abound in the Elk Mountains, development around Aspen and Snowmass threatens their habitat. The march of people is having a great impact on this area, especially the more accessible northern trails.

The Maroon Bells-Snowmass Wilderness was established with 1964 Wilderness Act and total size now is approximately 183,500 acres. Due to the popularity of recreation in the Maroon Valley, shuttle buses operate during the summer months (approximate mid-June through Labor Day, plus weekends in September) to Maroon Lake Wilderness Portal.



Figure 1: The Maroon Bells in Aspen, Colorado, with Maroon Lake in the foreground.

Recreation

Trails

The Maroon Bells are an increasingly popular destination for the day and overnight visitors; around 300,000 people visit the Bells every season. Due to the large volume of visitors, a bus service runs every day from 8am-5pm from mid-June through the first weekend in October. During these times, and with just a few exceptions, personal vehicle access is limited to those with handicap placards or disability license plates. The bus runs from Aspen Highlands to Maroon Lake every 20 minutes. The Maroon Bells scenic area features several hiking trails ranging from short hikes near Maroon Lake to longer overnight backpacking trips into the Maroon-Snowmass Wilderness. Not only is the use of trails and other outdoor recreational space growing, the overall population of Colorado is growing as well. It is expected that 100,000 people will move to Colorado each year for the next two decades. By 2050, the population of Colorado is expected to increase from 5.5 million to 8.5 million, and with this population growth recreational tourism will continue to grow. In 2017, 1 in 4 of Colorado's 86 million visitors spent most of their trip in mountain towns and resorts. This rapid growth poses challenges for Forest Services to properly maintain natural areas, and if changes are not made to how the

recreational space is utilized, wilderness areas like the Maroon Bells–Snowmass Wilderness trails will feel the impacts of human traffic.



Figure 2: Maroon Bells, two peaks in the Elk Mountains that are less than half-mile apart, are reflected on Maroon Lake.

History

The valleys and peaks of the Arkansas River and Roaring Fork were originally the territory of the Mountain Ute tribe. Tribal people hunted buffalo along the Arkansas River and in Taylor Park, and blazed a number of trails over the high passes of the Continental Divide to link favorite hunting and gathering areas. The first visitors of European descent came in 1779, when explorer Juan Bautista de Anza led 200 Spaniards and several hundred Indians over Poncha Pass into the Arkansas River valley, claiming the region for Spain. In the years that followed, the region saw a few trappers who filtered through the mountains in search of beaver, but the cold winters and brief, dry summers discouraged permanent settlement.

In the 1870s a rush of prospectors surged into the Colorado high country, establishing mining camps such as Leadville and Twin Lakes. At this time, the Roaring Fork valley belonged legally to the Mountain Utes as part of their reservation, and the tribe’s aggressive defense of its lands initially discouraged prospecting activity in the valley that now bears Aspen. But in 1879 prospectors made their way into the Mountain Ute reservation, and on July 4th of the same year, John Williams struck the Belden

vein high in the headwaters of the Roaring Fork, and the rush was on.

The town of Independence soon grew up around Williams’s claim, boasting forty businesses and its own stamp mill. Other mining towns were quick to follow: The first silver mines in the Gothic area were discovered in 1879, and the following year saw the establishment of boomtowns such as Ruby, Crystal, and Schofield. Gold was found in the hills above Castle Creek in 1881, and Ashcroft became the second boomtown in the Aspen mining district. Before long, enterprising builders were blasting toll roads across the high mountain passes. The Independence Pass Road was completed in 1882, and a daily stage ran from Aspen to the larger town of Leadville until 1887. The Pearl Pass road was completed the same year, providing a route for hauling ore to the stamp mills and railheads of Crested Butte. Nor were precious metals the only treasure the prospectors found among the lofty remote peaks: William Wood and W.D. Perry discovered marble beds beside the Crystal River in 1882, and soon the town of Marble was established.

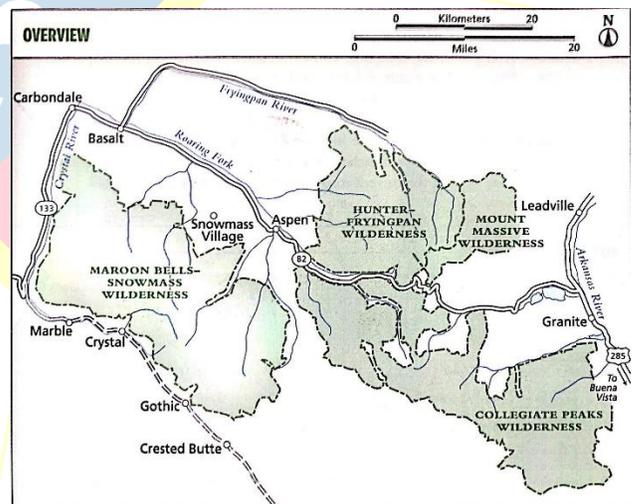


Figure 3: Area Map

In the years that followed, people flooded into the Colorado high country, swelling the newly established mining towns. Incursions onto Mountain Ute lands led to escalated tensions between the tribe and whites, leading to the Meeker Massacre, in which the Utes killed their government agent and his family. This incident led to the dissolution of the Mountain Ute reservation, and the tribe

was exiled to a small and impoverished reservation in the desert of the Four Corners area. With the rightful owners of the land out of the way, the door was opened full-scale development along the Arkansas and Roaring Fork.



Figure 4: Leadville, CO in the 1880s.

The town of Aspen was booming by 1885, and between 1887 and 1893 the mines of the Aspen district produced \$40 million in silver. The Colorado Midland Railway arrived in Aspen in 1889, surmounting a steep climb over the Continental Divide to link the Roaring Fork with the nearby mining center of Leadville. The railroad marked the end of the mule train and freight wagon business but ushered in a decade of intensive timbering activity at Norrie, on the Fryingpan River. The influx of miners to the high mountains had a far-reaching impact: In 1889, for example, human-caused forest fires burned vast acreages of timber in the Hunter Creek valley and in the mountains surrounding Crystal and Marble. The signing of the Sherman Silver Act in 1890 established a silver standard for the US dollar, and silver prices shot up in the wake of massive purchases by the federal government.

However, things did not last. The silver boom went bust in just three years when the silver standard was abandoned. Silver prices dropped from \$1.10 to 62 cents an ounce, rendering most of the small mines unprofitable.

Mining settlements such as Independence, Gothic, and Ashcroft quickly became ghost towns, and hard times settled over the larger commercial centers of Aspen, Leadville, and Crested Butte. Logging continued to play a limited role in the local economy, and mining syndicates began to form, consolidating the many smaller claims in hopes of turning a profit through high volume. These big syndicates provided brief local booms, but inevitably continued until the 1930s, when the last of the big mines fell silent.

This was not to be the last big industrial development in the high country of the central Rockies. The 1930s ushered in an era of big government programs, as President Franklin D. Roosevelt struggled to pull the nation out of the Great Depression by means of massive public works projects. In Colorado, these took the form of a series of aqueducts and tunnels that siphoned off water from the rivers west of the divide and piped it eastward to sustain the growth of cities like Denver on the arid High Plains. The nation was just beginning to discover the pastime of downhill skiing, and by the 1960s Aspen and Crested Butte were booming once again under a flood of winter tourism. The boom has continued right up to the present. The silver miners and claim speculators of the past have given way to the modern entrepreneurs, who mine the tourists and speculate in real estate. As a result, much of the Roaring Fork valley has been overwhelmed by condominiums and vacation homes.

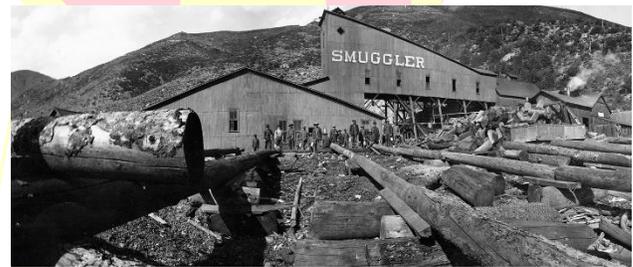


Figure 5: Smuggler Mining facility in Aspen, CO during the 1890s.

Forests of the Continental Divide

In the Central Rockies, coniferous forest occurs wherever there is ample moisture in the soil to sustain trees. This occurs throughout the middle and higher elevations, ending at the timberline (The elevation in a mountainous region above which trees do not grow), which here is about 11,500 feet above sea level.

The types of trees found in any given location are closely tied to the microclimate of the local area. Douglas fir occupies drier slopes and is fairly shade tolerant. Subalpine fir can be found near the timberline, where its conical shape makes it well adapted to deep snows. Engelmann and blue spruce require cool sites with ample groundwater, in spots that remain free from fire for long periods of time. Aspen also prefers damp soils but grows best in open sunlight. In this part of the Rockies, aspen grows particularly on south-facing slopes and often indicates a history of past forest fires. Cottonwood grows in warm, low-elevation sites with completely saturated soils; it requires the bare gravels found after floods to become established. Finally, lodgepole pine thrives in a broad range of conditions, but its seedlings require direct sunlight, and it specializes in colonizing after forest fires.



Figure 6: Aspen trees in the Central Rockies

Fire is a natural and integral agent of change in the forests of the high mountains, and it is the single most important factor accounting for the forest distributions that we see today. Lightning storms are a frequent occurrence throughout the summer, and if the weather has been hot and dry, small wildfires will often result. Before the arrival of Europeans, natural fires were commonplace in the Rocky Mountains, and the native peoples even set fires to lay bare the bedrock and make it easier to find rich veins of quartz. It is only within the last century that forest fires have been suppressed systematically.



Figure 7: Conifer trees in the Central Rockies

In the absence of human interference, wildfires burned small areas, creating mosaic of conifer stands of various ages and species. Since old stands contain lots of downed wood and deep layers of dry needles, they burned readily; young stands are virtually fireproof through their lack of dry fuel and formed natural firebreaks. Wildfire occurred in a self-regulating cycle, burning out the old stands and stopping at the edges of young ones. With modern fire suppression, however, all the stands have been allowed to reach maturity. As a result, any fire that gets started during the dry season spreads quickly and has a good chance to reach catastrophic proportions.

Animal Life

The White River national forest provides significant habitat for deer, elk, mountain sheep, mountain goat, bear, mountain lion, bobcat, lynx, moose, raptors, waterfowl, trout and many other species of wildlife.

Black bears

Black bears are the most common bear species in the Rocky Mountains, ranging widely through the forested regions of the range. In Colorado, the largest populations of black bears live in habitats with Gambel oak and aspen as well as chokecherry and serviceberry. They can be seen feeding on berries, grasses, and small animals. Colorado has a population of 19,000 of the bears, up from 12,000 in the early 2000s.

Grizzly bears

Grizzly bears once roamed throughout the Rocky Mountains and the western Great Plains. They were hunted relentlessly by European settlers in the 19th century and early 20th century. The last known grizzly bear in Colorado was killed in 1979. The decline of the bears to just 2% of their original range tells of the human-caused extirpation of large predators in the Rocky Mountain region. Only 700-900 grizzly bears may be alive today in the conterminous United States, with 300 grizzlies alive in the Canadian Rockies. During the last 20 years, about 88% of all grizzly bears studied in the northern Rocky Mountains were killed by humans. The U.S. Fish and Wildlife Service is considering delisting the grizzly in Montana, Idaho, and Wyoming.

Cougars

Cougars are one of the most important carnivores in the ecosystems of the Rockies. They prefer to prey on mule deer, but occasionally kill elk, white-tailed deer, and bighorn sheep, and in Alberta, moose kills have been documented. Recently, cougars have recolonized many areas where they were eliminated in the 1800s and early

1900s, and have greatly increased in number. The highest densities of cougars are in foothill and montane areas, which are more diverse and rich than subalpine or alpine environments.



Figure 8: Grizzly bear and cub in the Shoshone National Forest, Wyoming

Cervidae

Members of the deer family (Cervidae) are relatively common in the Rocky Mountains, and include North American elk, mule deer, white-tailed deer, woodland caribou, and moose.



Figure 9: Elk at the Opal terrace at Mammoth Hot Springs, Yellowstone National Park

Population trends in North American elk and deer (mule deer and white-tailed deer combined) may be heading in opposite directions. The number of elk has increased steadily in Colorado and Wyoming, whereas the abundances of deer are showing signs of decline. Elk on U.S. Forest Service lands in the Rocky Mountains increased from 268,000 in 1965 to 372,000 in 1984.



Similarly, the number of elk on Bureau of Land Management lands rose from 35,000 in 1966 to 114,000 in 1985. Meanwhile, the number of deer on U.S. Forest Service lands declined from 1,742,000 in 1965 to 1,197,000 in 1984. Deer populations also declined on Bureau of Land Management lands. Thus, in some areas in the last 20 years, the abundances of elk have increased by about 40%, whereas deer have decreased by about 30%. Possible reasons for the increase in elk populations include mild winters, range extension into lowlands and highlands, increased adaptability to human-modified landscapes, and lack of predation in spite of increased hunting. The causes of the deer population declines remain unknown but may include excessive harvest in the 1970s and habitat overlap with elk, intensifying competition for similar resources. Note, however, that deer population in the rest of the United States has increased fiftyfold between 1900 and 2005, as hunting has been limited and open space has been preserved.

Figure 10: A pronghorn in Montana

Management lands rose from 35,000 in 1966 to 114,000 in 1985. Meanwhile, the number of deer on U.S. Forest Service lands declined from 1,742,000 in 1965 to 1,197,000 in 1984. Deer populations also declined on Bureau of Land Management lands. Thus, in some areas in the last 20 years, the abundances of elk have increased by about 40%, whereas deer have decreased by about 30%. Possible reasons for the increase in elk populations include mild winters, range extension into lowlands and highlands, increased adaptability to human-modified landscapes, and lack of predation in spite of increased hunting. The causes of the deer population declines remain unknown but may include excessive harvest in the 1970s and habitat overlap with elk, intensifying competition for similar resources. Note, however, that deer population in the rest of the United States has increased fiftyfold between 1900 and 2005, as hunting has been limited and open space has been preserved.

Moose populations have increased 50% since 1980 in Wyoming and have been rapidly increasing since the reintroduction into Colorado beginning in 1978 and 1979. Colorado currently has a thriving population of approximately 2,500 moose. However, in Yellowstone National Park, moose have declined from 1,000 animals in the 1970s to 200 in 1996.

Pronghorn

Many areas of the Rocky Mountains, notably Yellowstone and Grand Teton national parks, have significant populations of pronghorn. Many of these are migratory. Grand Teton's population migrates all the way from the Green River Basin each year, through many developed areas. Efforts have been made to preserve its migration route.

Bighorn sheep

Populations of bighorn sheep are at only about 2% to 8% of their sizes at the time of European settlement. Causes for the rapid decline from 1870 through 1950 included unregulated harvesting, excessive grazing of livestock on rangelands, and diseases transmitted by domestic sheep. In recent years, more than 115 translocations were made to restore bighorn sheep into the Rocky Mountains and into many national parks. Only 39% of the 115 bighorn sheep translocations are persisting in 6 Rocky Mountain states. Populations of 100 or more sheep now occur in 10 national park units, populations of 100-200 sheep in 5 units, and populations of more than 500 sheep in 5 units. Populations of fewer than 100 animals exist in 5 other park units.



Figure 11: A bighorn ram near Jasper, Alberta

Geography and Geology

Geography

The park The Elk Mountains are a high, rugged mountain range in the Rocky Mountains of west-central Colorado in the United States. The mountains sit on the western side of the Continental Divide, largely in southern Pitkin and northern Gunnison counties, in the area southwest of Aspen, south of the Roaring Fork River valley, and east of the Crystal River. The range sits west of the Sawatch Range and northeast of the West Elk Mountains. Much of the range is located within the White River National Forest and the Gunnison National Forest, as well as the Maroon Bells-Snowmass Wilderness and Raggeds Wilderness. The Elk Mountains rise nearly 9,000 ft. above the Roaring Fork Valley to the north.

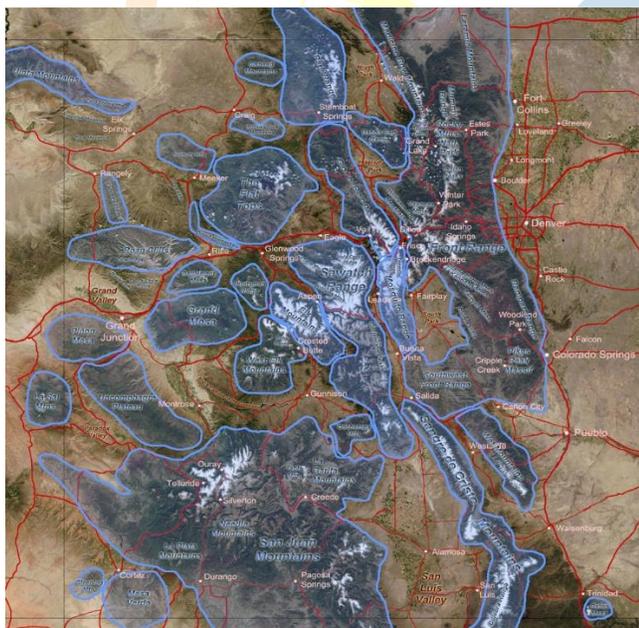


Figure 12: Colorado Mountain Ranges

The highest peaks in the range are its fourteeners, Castle Peak (14,265 ft), Maroon Peak (14,156 ft), Capitol Peak (14,130 ft), Snowmass Mountain (14,092 ft), Pyramid Peak (14,018 ft), and North Maroon Peak (14,014 ft). Maroon Peak and North Maroon Peak are collectively known as the Maroon Bells, a popular destination for recreation alpinism. Mount Sopris (12,953 ft) sits at the northwest

end of the range and dominates the skyline of the lower Roaring Fork Valley and the town of Carbondale, Colorado, serving as an unofficial symbol of the area.

Additional notable peaks in the range include:

- Cathedral Peak, 13,943 ft (4,250 m), near Pyramid Peak
- Hagerman Peak, 13,841 ft (4,219 m), near Snowmass Mountain
- Snowmass Peak, 13,620 ft (4,151 m), near Hagerman Peak
- Clark Peak, 13,580 ft (4,139 m), near Capitol Peak
- Treasure Mountain, 13,528 ft (4,123 m), southwest of the Maroon Bells
- Mount Owen, 13,058 ft (3,980 m), high point of the Ruby Range
- Mount Sopris, 12,965 ft (3,952 m), north west of Capitol Peak
- Chair Mountain, 12,721 ft (3,877 m), high point of The Raggeds
- Crested Butte, 12,162 ft (3,706 m), home of Crested Butte Mountain Resort
- Whitehouse Mountain, 11,975 ft (3,650 m), northwest of Treasure Mountain

The range provides a formidable barrier to travel and is traversed only by backroad passes and trails, including Schofield Pass, Pearl Pass, and Taylor Pass. State Highway 133 traverses McClure Pass, at the western end of the range. The range has been the site of mining activity since the days of the Colorado Silver Boom, which saw the founding of mining towns such as Aspen and Ashcroft. In the late 19th century, the western and southern flank of the range became the site of intense coal mining activity which continues to the present day. Treasure Mountain, overlooking the town of Marble, is home to the famous Yule Marble Quarry. Quarried marble was used to create The Tomb of the Unknowns, the Lincoln Memorial, Denver Post Office and other buildings. The range receives a great deal of snowfall due to its position to the west of the continental divide and the westerly origin of many winter

storms. This is exploited by the ski areas in the vicinity of Aspen, which are located on the flanks of smaller mountains alongside the Roaring Fork Valley.

Geology

The Sawatch Range and Elk Mountains form the principal ranges of the Continental Divide in central Colorado. Between them, there are dozens of “fourteeners,” or peaks that rise above 14,000 feet in elevation. Both ranges were heavily glaciated during the Pleistocene ice ages. During this epoch, great rivers of ice coursed down many of the major valleys, gouging out the bedrock to form U-shaped basins with broad floors and steep walls. Some of the large, lowland lakes found along the Arkansas River valley owe their origins to the great walls of debris, called moraines, pushed up by the glaciers. High on the shoulders of the peaks, smaller montane glaciers were carving the summits into sharp horns. Some of these glaciers scooped out natural amphitheataters, called cirques, into the sides of the high peaks. Many of these cirques bear sparkling alpine lakes, another legacy of past glaciation. With the warmer climate of recent centuries, the glaciers have melted away, and today none of these permanent icefields can be found in the Collegiate Peaks or Elk Mountains.

Early explorer and naturalist Ferdinand Hayden visited the area in 1873. He viewed the geology of the Elk Mountains as the most complicated geologic problem in North America, with its strata having been lifted and thrust in many different directions. The bedrock of the range falls into two basic categories. The Maroon formation is made up of blood-red sandstone interbedded with light gray trachyte. This formation makes up the eastern half of the Elk Mountains, forming such brilliantly colored summits as the Maroon Bells, Pyramid Peak, and Cathedral Peak. Farther west and north, the range is typified by igneous intrusions of granite rock, which formed when a pool of molten magma welled up from the Earth’s mantle, then cooled and hardened before it reached the surface. This rock forms such summits as White Rock Mountain, Snowmass Mountain, Capital Peak, and Mount Sopris.

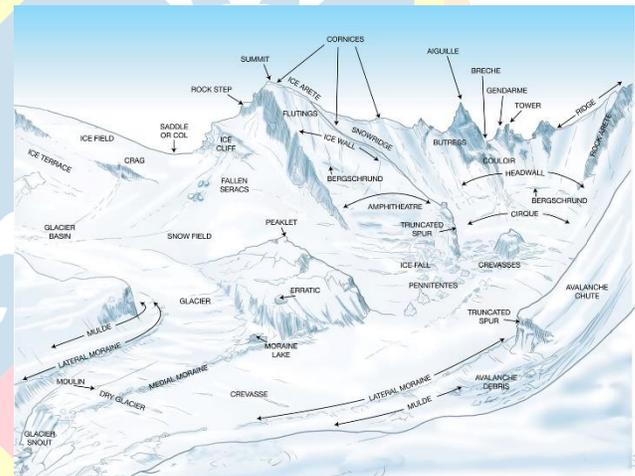


Figure 14: Mountain features diagram

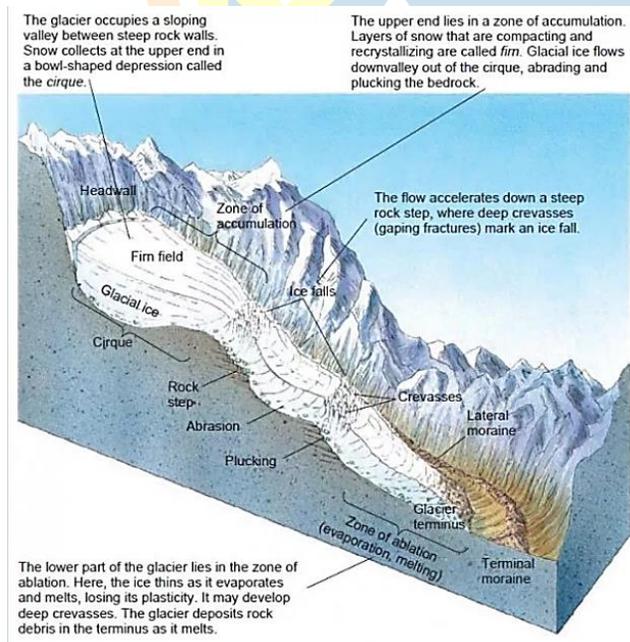


Figure 13: Glacier Cross Section

The Sawatch Range included summits that rise within the Hunter-Fryingpan, Collegiate Peaks, and Mount Massive wilderness areas. It has more straightforward origin than that of the Elk Mountains, being a fault-block range trending along north-south faults. To the east, the Arkansas River Valley occupies a graben, a long depression that forms when a section of bedrock bounded on two sides by faults sinks downward as the blocks to either side rise up. Most of the summits of the Sawatch Range are made up of metamorphic schist and gneiss, while a minority are composed of granite or volcanic rocks. Grizzly and New York Peaks are among the summits that are thought to be extinct volcanoes.

The Maroon Bells are composed of the Maroon Formation - mudstone. Mudstone is weak and fractures readily, giving rise to dangerously loose rock along almost any route. A US Forest Service sign on the access trail warns would-be climbers of "downsloping, loose, rotten and unstable" rock that "kills without warning". The mudstone is also responsible for the Bells' distinctive maroon color. The Bells got their "deadly" reputation in 1965 when eight people died in five separate accidents.

Maroon Lake elevation 9,580 ft (2,920 m) occupies a basin that was sculpted by Ice-Age glaciers and later dammed by a landslide and rockfall debris from the steep slopes above the valley floor.

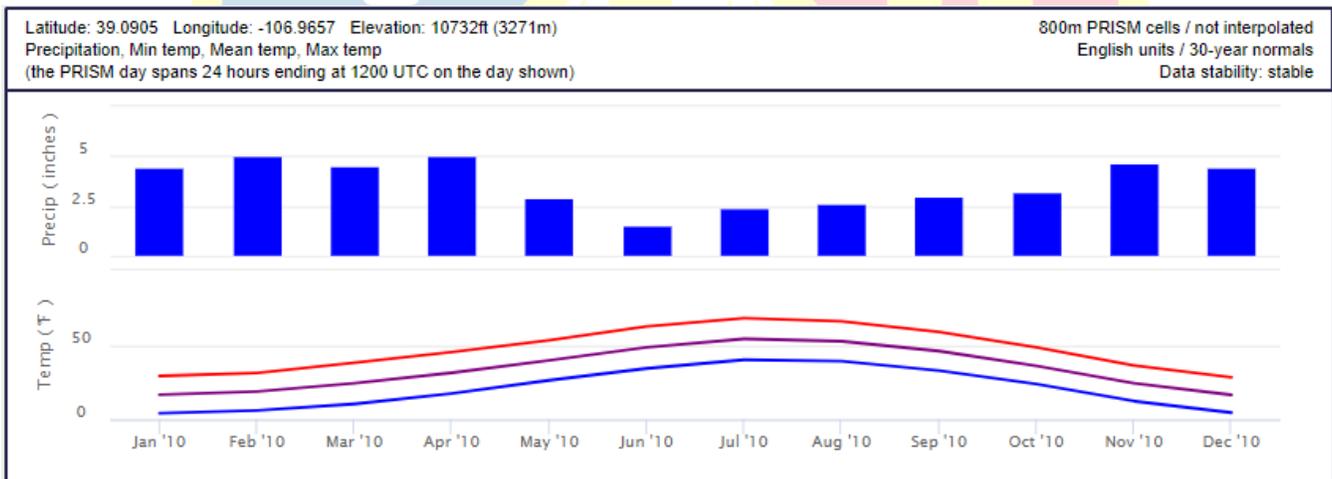


Average Climate

Average Temperatures and Precipitation

The table below is based on average temperatures and precipitation based on the Prism Climate Group. At the higher mountain elevations temperatures average 5–10 degrees cooler during the day and 0-5 degrees cooler at night. The mountains also receive more precipitation.

Date	Avg. Precipitation (inches)	Avg Min. Temp. (°F)	Avg. Mean Temp. (°F)	Average Max Temp. (°F)
January	4.41	4.2	16.7	29.2
February	4.99	6.1	18.7	31.2
March	4.54	10.4	24.3	38.1
April	5	17.5	31.3	45.1
May	2.94	26.3	39.7	53.1
June	1.54	34.2	48.3	62.4
July	2.38	40	54	67.9
August	2.62	39.1	52.4	65.7
September	2.96	32.8	45.8	58.6
October	3.2	23.8	36	48.3
November	4.67	12.3	24.2	36.1
December	4.47	4.6	16.5	28.3
Annual	43.72	20.9	34	47



Conditions Through the Year

Winter (December - March) Lower elevations on the east slope of Rocky Mountain National Park are usually free of deep snow. At higher elevations, arctic conditions prevail. Sudden blizzards, high winds, and deep snowpack are common. The west side of the park experiences more snow, less wind, and clear cold days during these months. Most high country overnight trips require gear suitable for -35 degrees or below. Skiing and snowshoeing conditions are best in January, February, and March.

Spring (April - May) Spring comes to the montane area - elevations 8,000' to 9,500' (2,438 - 2,895 m) - in late April, although snowfall is not uncommon at this time of year. Unpredictable weather alternates between warm and cold, wet and dry. In June, spring is just reaching the subalpine country - 9,500' to 11,500' (2,895 - 3,505 m), while summer is on the plains. Wildflowers begin blooming at lower elevations in late April or early May. Many trails are still snow-covered. In late May,

Summer (June - August) On the alpine tundra -- 11,500' to 13,000' (3,505 - 3,962 m) wildflowers bloom from late June to early August. Afternoon thunderstorms and wind are normal patterns. Always be prepared for temperature drops of 10-20 degrees Fahrenheit.

Fall (September - November) September and October bring clear, crisp air, blue skies, and generally dry weather. An early snowstorm may occur. Aspen leaves start changing colors in mid-September. Elk mating season begins in September and continues through most of October. Trail Ridge Road usually closes for the winter by mid-October.

Elevation is Everything

Air temperature changes by five degrees for every 1,000 feet of elevation you gain or lose; temperatures in the high Elk Mountains can be 20+ degrees cooler than temperatures along the Aspen valley. Be prepared for this kind of variation during your trip.

Access & Fees

Entrance Fee by vehicle
\$10.00

Drive 1/2 mile west of Aspen on Highway 82 to the Roundabout . Go around the Roundabout and turn right onto Maroon Creek Road. Drive 9-1/2 miles on Maroon Creek Road to the overnight parking lot just below Maroon Lake. This is located on the left side of the road. To access the trailhead at Maroon Lake, you must enter the Maroon Bells Scenic Area before 8am or after 5pm before the shuttle busses begin for the day. A \$10 entrance fee is required for all vehicles.

Backcountry Permits

In order to provide quality recreation experiences and to protect the wilderness lands the Forest Service must gather data regarding visitor use and travel patterns. Each party overnighing in the Maroon Bells-Snowmass Wilderness is required to self-register at the Trailhead and to carry a copy of the registration with them during their visit. There is no fee charged and no limit to the number of permits issued.

PLAN AHEAD

Detailed information on backcountry campsites in the Elk Mountains and the White River National Forest area are available on the park's website at: <https://www.fs.usda.gov/main/whiteriver/home>

GROUP SIZE LIMITS

An organized group or individual party may not exceed a 10-person limit.

Contact Information

Forest Supervisor
Scott Fitzwilliams

Deputy Forest Supervisor
Lisa Stoeffler

Mailing Address
Aspen Ranger Station (open July-October)
806 West Hallam
Aspen, CO 81611

Carbondale Office
620 Main Street
Carbondale, CO 81623

Park Information
Aspen Ranger Station
(970) 925-3445

Carbondale Office
(970) 963-2266

Email
angela.stasewich@usda.gov

Website
<https://www.fs.usda.gov/main/whiteriver/home>

Emergencies
911

Trip Planning

Traveling into the wilderness, even on short trips, can be challenging and risky and requires careful planning before you begin. Each year, people are injured or die while exploring the backcountry. Your safety depends on your own good judgment, adequate preparation, and constant observation. Speak with park rangers at park visitor centers or visit the links below for current conditions, weather forecasts, and flash flood potential ratings.

An ambitious backpacking trip located in the beautiful Maroon Bells/Snowmass Wilderness that is routed over four mountain passes (West Maroon - 12,500 ft.; Frigid Air - 12,415 ft.; Trail Rider - 12,420 ft.; Buckskin - 12,500 ft.). The variety of terrain encompasses scenic forests, mid to late summer wildflowers, challenging river crossings, and provides spectacular views of the Maroon Bells and numerous other peaks of the Elk Mountain Range. When camping in the Wilderness, campsites must be located 100 feet from any body of water or trail or at a designated campsite. Start your hike early as thunderstorms are common on the passes in early afternoon. Wading rivers or streams in early summer can be treacherous. Sandals or boat shoes are strongly recommended. Wading barefoot can be extremely dangerous. Be sure to unbuckle your pack when navigating any stream crossing.

- Take action to ensure that your group is self-reliant and aware of the risks involved with backpacking in the Wilderness.
- Be aware of the weather. Continuously evaluate the weather and adjust plans to keep you and your group safe. Have a back-up plan.
- Have a route description, map, compass, and the ability to use them.
- Familiarize yourself with the water sources in the area. Do not drink untreated water.
- Plan your wilderness transportation to and from the trailhead.
- Everyone in the group should have the proper equipment, skill level, and physical ability to successfully complete each overnight trip.

- Know that rescue is not a certainty. Your safety is your responsibility.

Seasons

Winter (December - March)

Lower elevations on the east slope of Rocky Mountain National Park are usually free of deep snow. At higher elevations, arctic conditions prevail. Sudden blizzards, high winds, and deep snowpack are common. The west side of the park experiences more snow, less wind, and clear cold days during these months. Most high country overnight trips require gear suitable for -35 degrees or below. Skiing and snowshoeing conditions are best in January, February, and March.

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Spring comes to the montane area - elevations 8,000' to 9,500' (2,438 - 2,895 m) - in late April, although snowfall is not uncommon at this time of year. Unpredictable weather alternates between warm and cold, wet and dry. In June, spring is just reaching the subalpine country - 9,500' to 11,500' (2,895 - 3,505 m), while summer is on the plains. Wildflowers begin blooming at lower elevations in late April or early May. Many trails are still snow-covered. In late May,

Summer (June - August)

On the alpine tundra -- 11,500' to 13,000' (3,505 - 3,962 m) wildflowers bloom from late June to early August. Afternoon thunderstorms and wind are normal patterns. Always be prepared for temperature drops of 10-20 degrees Fahrenheit.

Fall (September - November)

September and October bring clear, crisp air, blue skies, and generally dry weather. An early snowstorm may occur. Aspen leaves start changing colors in mid-September. Elk mating season begins in September and continues through most of October. Trail Ridge Road usually closes for the winter by mid-October.

Activities

What activities you will engage in will decide how you will need to prepare. Here is a list of activities required for this trip and a list of possible activities if you should choose to do so:

Required Activities

- Long Distance Hiking
- Overnight Camping
- Stream Crossing

Winter Related Activities

- Long Distance Hiking
- Overnight Camping
- Snow Shoeing
- Traversing Over Ice

Optional Activities

- Mountaineering

Route Planning

The Elk Mountain Range offers excellent year-round hiking options, whether you're looking for a short day-hike or an overnight experience. When planning your trip, consider your interests, time, and ability. There is no perfect trail. Use the Wilderness Guide, other guidebooks, and topographic maps to plan the best trip for you during your visit. Refer to the map for campsite locations.

Maroon Bells-Snowmass Wilderness Trail System

Maroon/Snowmass Trail #1975- BUCKSKIN PASS

Distance

4.8 miles one-way to Buckskin Pass.

Elevation Change

2,882 feet

Water Sources

Minnehaha Gulch, Snowmass Creek

Season

Summer and Fall

Seasonal Conditions

Seasonal rain/snow may cause trail to be muddy or snow covered.

Trailheads

Maroon Snowmass Trailhead.

Description

A very popular but steep day hike often used as a starting point for extended backpacking trips into the wilderness. Great views of Maroon Bells, Pyramid Peak, and Snowmass Lake are offered. Overnight camping is available in Minnehaha Gulch. Camping is prohibited in the alpine meadow and not available until the other side of Buckskin Pass.

Camping Options

Several campsites beyond the pass on the way to Snowmass Lake.

Geneva Lake Trail #1973

Distance

From Snowmass Lake- 3.5 miles one-way

Elevation Change

1,420 feet

Water Sources

Snowmass Lake

Season

Summer, Fall

Seasonal Conditions

Trail is wet and often muddy. Seasonal rain/snow may cause trail to be extra muddy or snow covered.

Trailheads

Maroon Snowmass TH, Geneva Lake/North Fork TH.

Description

The trail begins above the lake on the south side of the outlet. The trail climbs steeply for 1 1/2 miles to Trail Rider Pass and then descends for 2 miles to Geneva Lake.

Camping Options

Camping is available around Snowmass Lake and two more on the other side of Trail Rider Pass.

North Fork Cutoff Trail #1976**Distance**

1.1 miles

Elevation Change

90 feet

Water Sources

Look for small creeks on the trail

Season

Summer, Fall

Seasonal Conditions

Trail can be very muddy following rain events. Snow covered in winter.

Trailheads

Links the Geneva Lake Trail and the North Fork Trail

Description

This trail starts at the junction with the North Fork Trail and winds with the junction to the trail which connects with Geneva Lake and continues over Trail Rider Pass. It has a nice view of the north fork of the Crystal River Valley and Lead King Basin. It is a short cut for travelers going to Snowmass Lake, but it is very steep. The trail is heavily used by horses and backpackers. Please give horses the right-of-way to prevent erosion near the trails.

Camping Options

None.

North Fork Trail #1974**Distance**

8.0 miles

Elevation Change

2,700 feet

Water Sources

North Fork Creek

Season

Summer, Fall

Seasonal Conditions

Creek crossings can be difficult during or following heavy rain events. Seasonal rain/snow may cause trail to be muddy or snow covered.

Trailheads

Geneva Lake/North Fork TH, East Fork of West Maroon TH

Description

Love's Cabin is a well-known landmark at the junction of Hasley Basin and the North Fork of the Crystal. The trail follows the North Fork of the Crystal until it goes over Frigid Air Pass. One large waterfall can be seen about a mile east of Love's Cabin. Fravert Basin along the way is a wide, open, scenic valley. The back of the Maroon Bells can be viewed from the basin. This trail begins at the same spot as the Geneva Lake trail. The grade is gentle until the waterfall and is again gentle until the ascent over Frigid Air Pass. It can be part of a loop trail connecting West Maroon Pass and Snowmass Lake.

Camping Options

Camping is permitted in designated sites only. There are 12 sites along the trail.

West Maroon Trail #1970**Distance**

6.5 miles one-way

Elevation Change

2,920 feet

Water Sources

West Maroon Creek, East Fork

Season

Summer, Fall

Seasonal Conditions

Seasonal rain/snow may cause trail to be muddy or snow covered. Snow melt can continue well into summer, making trails wet and muddy.

Trailheads

Maroon Snowmass TH, East Fork TH.

Description

The trail starts at the Maroon Lake parking area traversing through a meadow to the far end of the Lake and a Forest Service bulletin board. The Maroon-Snowmass Trail is to the right. It climbs 1.8 miles through aspen trees to Crater Lake. Take the left fork at the Crater Lake bulletin board. The West Maroon Trail skirts the right side of Crater Lake. After the lake the trail follows the stream for a short distance and then enters the forest. Upon emerging from the forest you will cross a rocky scree field. The first stream crossing is in a little over three miles. This crossing is fairly wide and can be extremely dangerous during high spring runoffs. The trail on the other side is not always visible before crossing. The trail climbs through forest and willow before reaching another stream crossing in an open area. After crossing, the trail angles to the right and climbs steadily through willow and then tundra. This area is very open and the pass can be seen in the distance. The trail continues to climb steeply through switchbacks followed by a long traverse that ends at the top of the Pass. The views are spectacular on a clear day. From the top of the pass the trail descends on the other side to the East Fork Creek Trail and Schofield Park into Crested Butte or Frigid Air Pass.

Camping Options

Camping is permitted in designated sites only. There are 12 sites along the trail.

Check the [Map Section](#) of this guide for a map of the 4 Pass Loop Trail System.

Designated Campsites

There are 49 designated backpacking campsites along the trail system in the 4 Pass Loop Trail.

Select Campsites - Four Pass Loop					
Dispersed Camping Regulations - Maroon Bells Snowmass Wilderness					
> 100 ft. from trails and water		Pack out all trash		Bear proof food storage required	
Dispose of human waste properly		Fires not appropriate		Designated sites only at Crater and Geneva Lake	
Camp Number	Trail Zone	Number of Tent Pads	CAMPFIRES	Longitude	Latitude
0	Minniehaha	2	DISCOURAGED	106°58'32.488"W	39°0'16.31"N
1	Minniehaha	2	DISCOURAGED	106°58'35.939"W	39°0'31.469"N
2	Minniehaha	4	PROHIBITED	106°58'52.265"W	39°0'43.897"N
3	Minniehaha	4	PROHIBITED	106°58'54.399"W	39°0'45.744"N
4	Upper Snowmass Creek	3	PROHIBITED	106°59'0.99"W	39°0'45.117"N
5	Upper Snowmass Creek	2	PROHIBITED	107°0'17.317"W	39°0'23.435"N
6	Upper Snowmass Creek	3	PROHIBITED	107°0'15.618"W	39°0'22.763"N
7	Upper Snowmass Creek	5	DISCOURAGED	107°0'47.091"W	39°0'28.043"N
8	Upper Snowmass Creek	2	DISCOURAGED	107°0'50.257"W	39°0'28.975"N
9	Snowmass Lake	2	DISCOURAGED	107°1'2.489"W	39°0'30.15"N
10	Snowmass Lake	5	DISCOURAGED	107°1'30.221"W	39°7'10.112"N
11	Snowmass Lake	5	DISCOURAGED	107°1'30.061"W	39°7'9.262"N
12	Snowmass Lake	4	PROHIBITED	107°1'47.723"W	39°7'5.731"N
13	Snowmass Lake	4	PROHIBITED	107°1'46.326"W	39°7'7.544"N
14	Snowmass Lake	5	PROHIBITED	107°1'47.623"W	39°7'11.847"N
15	Snowmass Lake	3	PROHIBITED	107°1'46.376"W	39°7'2"N
16	Snowmass Lake	5	PROHIBITED	107°1'47.59"W	39°7'11.12"N
17	Trail Rider Pass	2	PROHIBITED	107°1'40.509"W	39°0'59.098"N
18	Trail Rider Pass	2	PROHIBITED	107°1'46.534"W	39°0'57.921"N
19	Trail Rider Pass	4	PROHIBITED	107°1'53.044"W	39°0'51.215"N
20	Trail Rider Pass	2	PROHIBITED	107°2'4.513"W	39°0'46.236"N
21	Trail Rider Pass	2	PROHIBITED	107°3'12.604"W	39°0'51.619"N
22	Fravert Basin	3	PROHIBITED	107°3'25.551"W	39°0'51.619"N
23	Fravert Basin	4	DISCOURAGED	107°3'23.947"W	39°0'20.307"N
24	Fravert Basin	5	DISCOURAGED	107°3'14.957"W	39°0'16.859"N
25	Fravert Basin	2	DISCOURAGED	107°2'27.789"W	39°4'56.622"N
26	Fravert Basin	3	DISCOURAGED	107°1'52.456"W	39°4'48.443"N
27	Fravert Basin	2	DISCOURAGED	107°1'40.583"W	39°4'51.979"N
28	Fravert Basin	2	DISCOURAGED	107°1'26.832"W	39°4'52.428"N
29	Fravert Basin	2	DISCOURAGED	107°1'23.038"W	39°4'49.709"N
30	Fravert Basin	4	DISCOURAGED	107°1'17"W	39°4'45.519"N
31	Fravert Basin	4	DISCOURAGED	107°1'9.939"W	39°4'39.209"N
32	Fravert Basin	2	DISCOURAGED	107°0'53.793"W	39°4'12.451"N
33	Fravert Basin	3	PROHIBITED	107°1'0.191"W	39°4'6.225"N
34	Fravert Basin	3	PROHIBITED	107°1'0.362"W	39°4'2.879"N
35	East Fork	3	PROHIBITED	107°0'41.144"W	39°2'12.737"N
36	East Fork	3	PROHIBITED	107°0'38.856"W	39°2'9.662"N
37	East Fork	2	PROHIBITED	107°0'39.477"W	39°2'7.291"N
38	West Maroon	2	PROHIBITED	106°59'10.031"W	39°2'30.484"N
39	West Maroon	2	PROHIBITED	106°59'10.889"W	39°2'31.059"N
40	West Maroon	3	PROHIBITED	106°58'51.937"W	39°2'57.407"N
41	West Maroon	3	PROHIBITED	106°58'30.222"W	39°3'22.878"N
42	West Maroon	2	DISCOURAGED	106°58'23.303"W	39°3'31.363"N
43	West Maroon	2	DISCOURAGED	106°58'26.266"W	39°3'33.999"N
44	West Maroon	5	DISCOURAGED	106°58'24.956"W	39°3'36.377"N
45	West Maroon	3	DISCOURAGED	106°58'17.269"W	39°3'41.978"N
46	West Maroon	2	DISCOURAGED	106°58'14.111"W	39°3'37.097"N
47	West Maroon	2	DISCOURAGED	106°58'20.587"W	39°3'37.477"N
48	West Maroon	3	DISCOURAGED	106°58'14.435"W	39°4'23.542"N
49	West Maroon	2	DISCOURAGED	106°58'17.335"W	39°4'28.657"N

All campsites are accessible only by foot. You must be prepared and equipped to backpack.

Estimated Travel Times

As you plan your day to day you will want to get an estimate on how long it will take you to hike from point A to point B. You will never be truly accurate because of the all the factors that affect your pace (amount of weight carried, your physical conditioning, trail condition, elevation gain/loss, etc.), but your estimates will get better as you will begin to understand your limitations over time. A good source for getting as much information about the trail are guidebooks.



In order to help you calculate and estimate of your travel time, here is a general formula as presented by Rick Curtis in his book "The Backpackers Field Manual". Remember that this is only an estimate of what you will do.

General Travel Time Guidelines

- **Average Speed** – The average hiking speed with all your gear on flat terrain is typically 30 minutes per mile or 2 mph. You can adjust the formula if you know your average speed to be faster or slower.
- **Ascent Adjustment** – Add 1 hour for each 1,000 feet of ascent.
- **Rest Adjustment** – Plan for about 5 minutes of rest for each hour of hiking. The more people you have, the more rest stops, bathroom breaks, photo ops, and equipment adjustments there will be, so adjust accordingly.

$$\left(\frac{8 \text{ mi.}}{2 \frac{\text{mi.}}{\text{hr.}}}\right) + \left(\frac{2000 \text{ ft.}}{1000 \text{ ft.}}\right) + \left\{\left(\frac{5 \text{ min.}}{60 \frac{\text{min.}}{\text{hr.}}}\right)\right\} \times \left[\left(\frac{8 \text{ mi.}}{2 \frac{\text{mi.}}{\text{hr.}}}\right) + \left(\frac{2000 \text{ ft.}}{1000 \text{ ft.}}\right)\right] = 6.498 \text{ hrs.} \approx 6.5 \text{ hours}$$

Calculating Total Time

The basic formula for this is to divide the number of miles hiked (**x**) by 2. Then calculate the total elevation gain (**y**) in feet and divide that number by 1000. Next you want to take the total hours traveled and add your rest adjustment (**z**) for every hour.

x = total distance traveled in miles

y = total elevation gain in feet

z = total time of rest per hour in minutes

$$\text{Travel Time} = \left(\frac{X \text{ mi.}}{2 \frac{\text{mi.}}{\text{hr.}}}\right) + \left(\frac{Y \text{ ft.}}{1000 \text{ ft.}}\right) + \left\{\left(\frac{Z \text{ min.}}{60 \frac{\text{min.}}{\text{hr.}}}\right)\right\} \times \left[\left(\frac{X \text{ mi.}}{2 \frac{\text{mi.}}{\text{hr.}}}\right) + \left(\frac{Y \text{ ft.}}{1000 \text{ ft.}}\right)\right]$$

Example: A group hikes for 8 miles per day with an ascent of 2000 feet per day with a plan to rest 5 minutes for every hour. The estimated travel time would be:

Check for Updates

Call Aspen Ranger Station (970) 925 3445 to check current conditions. **Note:** The Four Pass Loop is often snow-bound from October through June.

<https://www.fs.usda.gov/alerts/whiteriver/alerts-notice>

Also check the weather, flash flood and road conditions for any relevant conditions that may affect your trip:

Weather

[7-Day Forecast for Latitude 39.59°N and Longitude 106.5°W \(Elev. 9560 ft\) \(weather.gov\)](#)

Be Realistic

- Choose the appropriate trail for your abilities or consider walking the Rim Trail for an easier hike.
- Check the weather and adjust plans; avoid summer heat. Remember the weather can change suddenly.
- Leave your itinerary with someone who will notice if you are overdue and report it to 911.
- Hydrate, but don't force fluids. Eat a good meal and get a good night's sleep. If you do not feel well, do not hike.
- Prepare yourself for a faster hike down with high impact on your joints and a slow, strenuous hike out that may take twice as long or longer.

Water Sources

You need to stay well hydrated so you consume enough water, one gallon per person per day. Do not drink untreated water. Information on the flow of natural springs, based on the best available data, can be found by contacting the ranger's office. Plan ahead and prepare, your safety is your responsibility.

Water in the Mountains

The mountains offer an abundance of creeks and streams to resupply your water. You just need to be sure to treat your water properly.

Springs and Seeps

A spring is a place where water naturally flows out of the ground. Water flow magnitude at natural springs can vary throughout the park and may not always be reliable.

- Never drink untreated spring water.
- Springs should be used as an emergency source for water, not as a primary source.
- Overnight camping is not permitted within a ¼ mile of any spring.

Water Treatment

CDC Guide to Water Treatment for Backcountry & Travel Use:

https://www.cdc.gov/healthywater/drinking/travel/backcountry_water_treatment.html

Water collected in the Wilderness is not safe to drink without proper treatment. Except for boiling, few water treatment methods are 100% effective in removing all pathogens.

Boiling can be used as a pathogen reduction method that should kill all pathogens. For most elevations in Zion, water should be brought to a rolling boil for 3 minutes.

Filtration can be used as a pathogen reduction method against most microorganisms. Manufacturer's instructions must be followed.

Disinfection can be used as a pathogen reduction method against microorganisms. However, many factors can

impact the effectiveness of chemical disinfection. The length of time and concentration of disinfectant varies by manufacturer and effectiveness of pathogen reduction depends on the product. 100% effectiveness may not be achieved.

If boiling water is not possible, a combination of filtration and chemical disinfection is the most effective treatment method for drinking water in the Wilderness.

Travel Logistics

Automobiles

Drive 1/2 mile west of Aspen on Highway 82 to the Roundabout . Go around the Roundabout and turn right onto Maroon Creek Road. Drive 9-1/2 miles on Maroon Creek Road to the overnight parking lot just below Maroon Lake. This is located on the left side of the road. To access the trailhead at Maroon Lake, you must enter the Maroon Bells Scenic Area before 8am or after 5pm before the shuttle busses begin for the day. A \$10 entrance fee is required for all vehicles.

Shuttle Services

From mid-June through September, Maroon Creek Road is restricted to vehicles from 8:00 a.m. to 5:00 p.m. beyond the T-Lazy 7 Ranch. Take the shuttle from Aspen Highlands Ski Area, which leaves every 20 minutes; dogs are allowed on the bus.

The Maroon Bells Scenic Area is a recreation fee area; there is a mandatory fee. The Interagency, Senior & Golden Access Passes are honored. From the Hwy 82 roundabout just west of Aspen, take the Maroon Creek Road turn. In approximately 1 mile is Aspen Highlands, turn left here for the shuttle! If arriving during non-bus hours, continue another 4 miles to the Welcome Station. The use fee will be collected here, or in the fee tube immediately behind the station if un-manned; continue another 5 miles to the parking lot at Maroon Lake.

Equipment

10 Essentials for Your Day Pack

1. Water: bring a sufficient amount and extra in case of emergency; always bring a water treatment method
2. Salty snacks and high-calorie meal(s)
3. First aid kit, prescriptions, blister care, duct tape, and pocket knife
4. Map or trail guide
5. Flashlight or headlamp with spare batteries
6. Sunscreen, wide-brimmed hat, and sunglasses
7. Whistle, signal mirror, and cell phone
8. Lightweight tarp or emergency shelter
9. Broken-in hiking shoes with good soles and hiking poles
10. Layers of clothing

Overnight Essentials

Below is a list of basic equipment needs for this trip. You will find a more in-depth list in the [Gear Essentials](#) section of this report.

Required Activities

- **Long Distance Hiking**
 - Hiking Shoes
 - Trekking Poles
 - Navigation
- **Overnight Camping**
 - Pack
 - Shelter
 - Sleep System
- **Stream Crossings**
 - Water Shoes

Winter Related Activities

- **Long Distance Hiking**
 - Hiking Shoes
 - Trekking Poles
 - Navigation
- **Overnight Camping**
 - Pack
 - Shelter

- Sleep System
- **Snow Shoeing**
 - Snowshoes
- **Traversing Over Ice**
 - Traction

Optional Activities

- **Mountaineering**
 - Rope
 - Helmet
 - Harness
 - Runners
 - Carabiners

Outfitter Services

Local outfitter services may be required in order to shuttle your group, guiding unfamiliar terrain or technical climbs, rent specialized gear needed for the trip, and/or training for skills not possessed by your team. All services must have a current Commercial Use Authorization (CUA) with Big Bend National Park. Here is a list of local outfitters that have been verified as of the printing of this document. Keep in mind that businesses may lose their license or go out of business so you should follow up to be sure.

UTE Mountaineer

Services

Equipment Rental, Guiding Services, Gear Sales

Phone

(970) 925-2849

Email

mountainexpert@utemountaineer.com

Website

<https://www.utemountaineer.com/>

Blazing Adventures

Services

Equipment Rental, Guiding Services, Biking Tours & shop, Shuttle

Phone

(970) 923-4544

Email

info@blazingadventures.com

Website

<https://www.blazingadventures.com/>

MEAL PLAN			
Meal Type	Breakfast	Dinner	Snacks
# of Days	4	4	5

Meal Planning

You should plan to have enough food for the duration of your time in the backcountry with enough nutrition to keep you at full capacity. It is important to have food that is both nourishing and edible. On long trips, with specialized activities, or in different climates, it may be necessary to plan a menu that supplies a specific number of calories per day and stresses certain food groups over others.

The 4 Pass Loop with a summit attempt of South Maroon Bells Peak requires 5 days and 4 nights to complete. We usually plan for a hot meal in the morning, a hot meal in the evening and snacks throughout the day. So your meal plan may look as follows:

Skill Development

Based on the activities planned there may be certain skill sets that are needed to successfully complete this trip. Ensure that you have the base knowledge you need in order to give yourself the best experience. If you find yourself lacking, then take the time to educate yourself. For instance, if you plan on canyoneering but have never done so in the past you should schedule a training program with a local outfitter. If you lack the basics in backcountry skills, AcadianX now offers a training program known as AcadianXU that will ensure you possess all the base knowledge you need.

Special skills that may be needed for Big Bend are:

- Mountaineering
- Rock Climbing

Regulations and Safety

Backcountry Regulations

It is the responsibility of a backcountry permit trip leader to ensure that all participants know and obey the following regulations. The trip leader and/or participants can be cited for violating these regulations.

1. A backcountry permit is required for all overnight backcountry use and **MUST** be in the trip leader's possession while in the backcountry. Permittees must abide by all trail closures and activity or use restrictions.
2. Feeding, touching, teasing, or intentionally disturbing wildlife is prohibited. Be aware that wild animals can be unpredictable. Do not approach or attempt to move sick or injured wildlife. Please report any encounters with aggressive, sick, or injured animals to a park ranger.
3. Throwing or rolling rocks or other items down hillsides or mountainsides, into valleys or canyons, or inside caves is prohibited.
4. Possessing, destroying, injuring, defacing, removing, digging, or disturbing from its natural state any plants, rocks, animals, mineral, cultural or archeological resources natural features, or signs is prohibited. Walking on, entering, traversing, or climbing an archeological resource is prohibited.
5. **Pack out all litter.** Help preserve the park's natural beauty by packing out all litter, including cigarette butts and toilet paper.
6. **Do not cut switchbacks on trails.** Although cross-country hiking is allowed, help prevent trail erosion by staying on marked trails.
7. **Collecting any natural or historical feature or object is prohibited.** Leave park features intact for others to enjoy.
8. **Contaminating natural water sources and their surroundings is prohibited. Camp at least 100 yards (91 m) from any water source.** Desert water sources and springs are fragile and vital for the plants and animals that depend on them for survival. Soaps, oils, skin lotions, and food residues from bathing and washing can seriously impact water quality. Minimize your impact to areas surrounding springs, seeps, and other temporal water sources.
9. **Camp within designated sites.** When camping in a designated site prevent resource damage by camping within the area outlined by rocks, logs, or brush.
10. **Do not feed wildlife.** Feeding wildlife is illegal; it often results in having to destroy the animal. Keep food in a hard-sided vehicle or food storage locker where provided.
11. **Permit Required.** Overnight permit required (order) for overnight stays within the Conundrum Hot Springs Zone (map).
12. **Bear Canister Required.** Food, refuse and any scented items must be stored in an IGBC approved bear resistant container. Human food habituated bears are a threat to human safety. Visitors without approved bear resistant containers will be ticketed and required to leave. Find a local bear canister provider.
13. **You must have a plan for human waste.** Human waste bags (WAG) bags are highly recommended and are available free of charge at the Conundrum Creek and Snowmass Lake trailheads. WAG bags must be packed out. Learn more about how to use a WAG bag. If a WAG bag

is not used, visitors are required to deposit solid human waste in holes dug 6 to 8 inches deep at least 200 feet (70 paces) from water, camp and trails.

14. **Limited Group Size.** Group size is limited to 10 with no more than 15 stock animals in one group. Large groups multiply impacts to the wilderness and disrupt the solitude of others.
15. **Dogs Permitted.** Dogs are prohibited in the Conundrum Creek Valley from Silver Dollar Pond to Triangle Pass, including the hot springs. Everywhere else, dogs must be leashed.
16. Campfires are prohibited at all designated sites at Conundrum Hot Springs, within ¼ mile of Crater Lake and above 10,800 feet. Campfires consume wood, accumulate trash, kill fragile alpine vegetation, sterilize the soil and scar the land.
17. Campers must camp in designated sites at Conundrum Hot Springs, Copper Lake, Crater Lake, Geneva Lake, and Capitol Lake. Everywhere else campers should set up more than 100 feet from lakes, streams and trails and use previously impacted campsites. Help provide a feeling of solitude, camp out of sight of others and fragile areas.
18. As with all designated Wilderness, motorized and mechanized equipment is prohibited including bicycles, motorbikes, chainsaws, ATVs, carts, drones, hang gliders and paragliders. This equipment is prohibited to provide visitors with a primitive recreational experience and to preserve outstanding opportunities for solitude.

Overnight Camping (Etiquette)

"At-large" camping is allowed in some areas of the park. Follow these guidelines when camping overnight.

Prepare: Plan Ahead

- Backpackers planning to camp overnight must obtain a backcountry permit before starting their hike. Attach the permit visibly to your backpack. Camp only in campgrounds, not along the trail. No campfires allowed.
- In addition to the 10 essentials listed above, bring a stove, fuel, and matches; blanket or sleeping bag with ground pad; and ground cloth, tarp, or tent.
- Pack weight should not be more than 15–20% of your body weight. In summer, pack light—replace your sleeping bag with a liner or sheet; bring ready-to-eat foods and leave the stove behind.

While at Camp

- Choose your campsite. Sites are first-come, first-served with the required permit. Large group sites are reserved for parties of 7–11 hikers.
- Immediately place all food, toiletries, and plastic bags and keep away from rodents and small mammals.
- Keep your backcountry permit with you at all times. If approached by park rangers be prepared to produce it for them.
- Use headlamps with red lights to preserve your night vision, minimize light pollution, and avoid disturbing other campers.

When Leaving Camp

- If you start early, remember to maintain a quiet camp and let fellow campers sleep.
- Do not leave any trash, gear, or extra food behind. Check your site for micro-trash—look for bandages, twist ties, fruit peels, etc.

Leave No Trace Principles



Developed by the National Outdoor Leadership School, the principles of Leave No Trace are an extension of the National Park Service mission to preserve a vast system of resources “unimpaired for the enjoyment of future generations” that challenge individuals to become active stewards in its preservation. The Program builds awareness, appreciation, and respect for the land, and provides a foundation for applying minimum-impact techniques.

Plan Ahead and Prepare

- Know the regulations and restrictions for the area you visit.
- Prepare for extreme weather, hazards, and emergencies.
- Select terrain and mileage based on what your group can handle.
- Schedule your trip to avoid times of high use.
- As you look through the campsite list in this planner, please note the party size limit that pertains to each campsite. If your group size exceeds these limits, you will need to camp and cook as smaller groups in separate campsites with separate permits.
- Repackage food to minimize waste.

Travel and Camp on Durable Surfaces

- To prevent erosion, avoid shortcuts and switchbacks.
- Walk single file in the middle of the trail, even when wet or muddy.
- Camp in designated campsites.
- Protect riparian areas by camping at least 100 feet from lakes and streams.
- Keep campsites small. Focus activity in areas where vegetation is absent. Avoid leveling the tent site.

Dispose of Waste Properly

- Pack it in, pack it out. Inspect your campsite and rest areas for trash or spilled foods. Never bury it or dump it in pit toilets. Pack out all trash, leftover food, and litter.
- To wash yourself or your dishes, carry water 100 feet away from streams or lakes and use small

amounts of biodegradable soap. Scatter strained dishwater.

- Deposit solid human waste in catholes dug 6 to 8 inches deep at least 100 feet from water, camp, and trails. Cover and disguise the cathole when finished.
- Pack out toilet paper and hygiene products.

Respect Wildlife

- Do not approach wildlife. All wild animals are potentially dangerous. Observe Wildlife from a distance. If your presence causes an animal to move away, you are too close.
- Never feed or harass animals. Feeding wildlife damages their health, alters natural behaviors, and exposes them to predators and other dangers.
- Protect wildlife and your food by storing rations and trash securely.
- Avoid wildlife during sensitive times: mating, nesting, raising young, or winter.

Minimize Campfire Impacts

- Campfires can cause lasting impacts to the backcountry. Use a lightweight stove for cooking and enjoy a candle lantern for light.
- Where fires are permitted, use established fire rings, fire pans, or mound fires. Campfires are only permitted in specified campsites in designated fire rings.
- Keep fires small. Burn only small diameter dead and down wood. Do not break, cut or saw branches from any standing tree (dead or alive).
- Burn all wood and coals to ash, put out campfires completely. Fires must be completely extinguished before you leave the site.

Leave What You Find

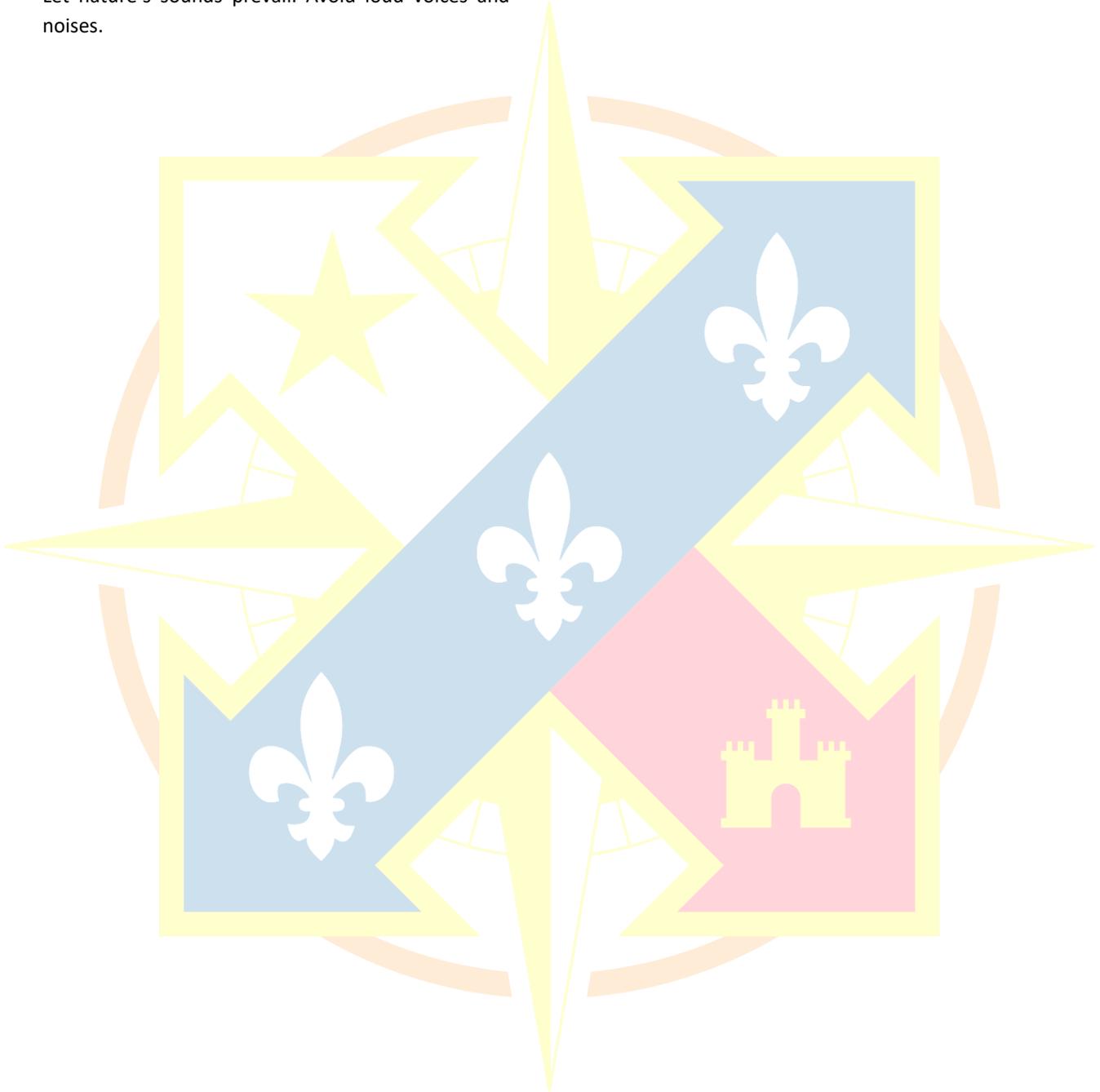
- Avoid introducing or transporting non-native species.
- Do not build structures, furniture, or dig trenches.
- Federal law prohibits: collecting antlers; removing any plant, animal, or mineral substance; and disturbing or removing archeological or historical items. Leave natural objects as you find them.

Be Considerate of Other Visitors

- Respect other visitors and protect the quality of their experience.
- Be courteous. Yield to other users on the trail.

- Step to the downhill side of the trail when encountering pack stock.
- Take breaks and camp away from trails and other visitors.

Let nature's sounds prevail. Avoid loud voices and noises.



Backcountry Safety

Wildlife Hazards

You will encounter wildlife while in the wilderness. Be aware that wild animals can be unpredictable. Do not approach or attempt to move sick or injured wildlife. Please report any encounters with aggressive, sick, or injured animals to a park ranger.

Please keep all animals wild and healthy by viewing them from a safe distance. Do not feed or touch wildlife. Store food and trash responsibly.

Bears

It is quite reasonable to fear bears, but be aware that many bear stories are greatly exaggerated. Your chances of being injured on the way to the backcountry are actually far greater than being injured by a bear. However, people have been injured and killed by bears in the wild. Your safety is not guaranteed. Read the information below to learn good bear avoidance behavior. Most attacks are caused by surprising a bear, getting between a mother bear and her cubs, or getting too close to a bear with food. The chances of being attacked by a bear can be reduced by avoiding the above situations and taking the following precautions:

- Be alert. Watch for tracks, excrement, diggings or other bear sign. Carry binoculars and scan ahead periodically. If you see a bear cub, the mother is close by.
- Don't hike alone or at night. Bears travel (often on the trails) and feed mainly at dawn, dusk, and at night. Statistics show that parties of three or more are safer than solo hikers. Groups tend to make more noise and appear more formidable to a bear. Also, if there is an attack, members of the group can assist the injured while others go for help.
- Make noise. Talk, sing, clap your hands, shake pebbles in a can, anything to let a bear know you are present. Don't rely on bells; usually they are too quiet. Shout often, especially when traveling upwind, near streams, or in thick brush.

- Stay on designated trails. You increase your risk of surprising a bear when hiking off-trail.
- Avoid carcasses. Never camp in a campsite that has a carcass nearby. It is very risky to approach a carcass; a bear may be out of sight guarding its food. Report dead animals near a trail or campsite to the nearest ranger station.
- Avoid bringing smelly food. A bear's acute sense of smell can detect odors from great distances. Leave bacon, tuna, ham, scented deodorants and other odorous items behind. Dry foods are lighter to carry and not as aromatic.

If you encounter a bear:

- Stay calm
- Do not run or make sudden movements
- Back away slowly
- Talk quietly to the bear, do not shout
- Do not drop your pack
- Avoid looking directly at the bear

If you encounter a bear and it does not see you, keep out of sight and detour as far away as possible behind and downwind of the bear. Climbing a tree is popular advice, but not always practical. All black bears, all grizzly cubs, and some adult grizzlies can climb trees if the spacing of the branches is right. Climb a tree only if the bear is far away, the tree is nearby, and one in which you can climb at least 15 feet. Running to a tree may provoke a bear to chase you. You cannot outrun a bear!

If the bear charges you, stand your ground and use bear spray if you have it. Some bears may bluff charge, then veer off or stop abruptly, allowing you to slowly back away. If the bear makes physical contact, drop to the ground, lie face down, and clasp your hands behind your neck; your pack may shield your body. It may take all the courage you have, but lie still and remain silent, resistance will only provoke the bear. Before moving listen and look around carefully to make sure that the bear is no longer nearby.

In exceptionally rare circumstances a bear may come to view humans as prey. This is often a hiker's biggest fear, but this type of encounter is extremely rare. If you feel

that a bear has been following you, be firm and aggressive, look big, yell, throw rocks or sticks, and use bear spray.

Night attacks on tents are extremely rare, but if this happens you should defend yourself aggressively. Any bear entering your tent at night doesn't have good intentions; if it attacks fight back with any resource you have available to show that you are not easy prey.

Food and Bears

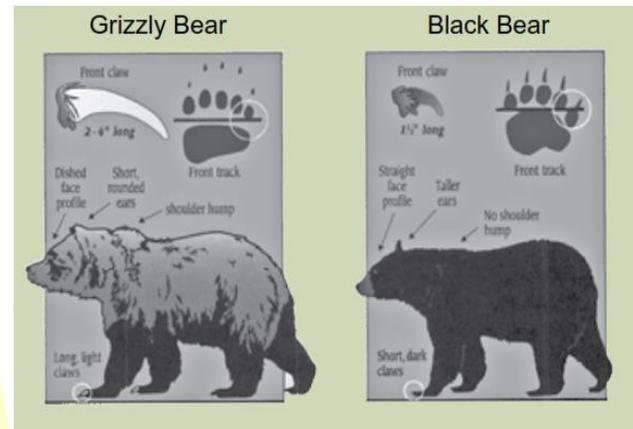
Don't let your actions cause a bear or other animal to be destroyed. A bear has an acute sense of smell. If you leave food out and unattended, you are inviting a bear into your camp. Just one incident of a bear obtaining human food may mean a dead bear. Why? A bear conditioned to human food is more likely to be aggressive and, subsequently, to injure or kill people in an attempt to obtain this easy source of food. When such a bear poses a risk of injuring someone, it is often necessary to destroy that bear.

Samples of odorous items which you are required to hang include all food, garbage, empty or full beverage cans, coolers, lip balm, sunscreens and lotions, toothpaste, food panniers, horse feed, some medications, clothes worn while cooking, eating utensils which have not been properly cleaned, and any article that has an odor. Keep all food and odorous items out of sleeping bags, tents, and their stuff sacks.

Before starting a day hike or backcountry trip check at a Visitor Center or Ranger Station for any recent bear sightings or warnings. Look for posted warning signs at the trailhead. Report bear sightings or encounters to the nearest Ranger Station or Visitor Center.

Do You Know Your Bears?

A line drawn under the big toe across the top of the pad runs through the top half of the little toe on black bear tracks and through or below the bottom half of the little toe on grizzly tracks.



Bear Pepper Sprays

The best way to avoid being injured by a bear is to take all the necessary precautions. However, if these measures fail and you are charged by a bear, your reactions can, in many cases, defuse the situation. Bear spray is a good last line of defense that has been highly effective in the reported cases where it was used. The use of bear spray is especially appropriate if you are attacked in your tent at night. If you successfully used pepper spray to stop a bear, leave the area immediately. The spray is effective for a short time and is less effective the second time around. Bear Spray is effective only at distances of 10 – 30 feet and is adversely affected by wind, cold temperatures, and age. Carefully read the instructions, know how to use the spray and aware of its limitations. Be sure to check the expiration date. If you decide to carry bear spray the canister must be immediately available, not in your pack.

In choosing a pepper spray please consider the following: Purchase only products clearly labeled "for deterring attacks by bears." Concentration should be between 1 and 2% capsaicin. The minimum net weight should be 225 grams or 7.9 oz. The spray should be delivered in a shotgun-cloud pattern at a minimum range of 25 feet and EPA approved.

Although bear sprays have been highly effective at stopping charging bears, there are some indications that the residue from some oil-based sprays may possibly act as a bear attractant. Use your spray only as a last ditch deterrent on the bear. Do not spray around your campsite, tent, camping gear, or in any bear habitat.

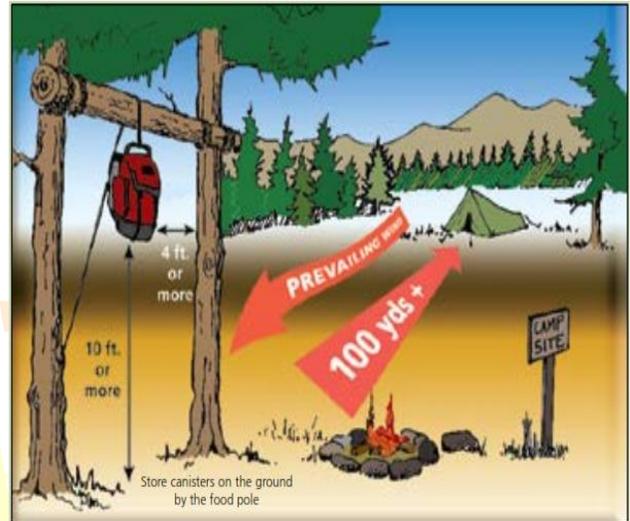
Recommended Camp Set Up in Bear Country

Keep your sleeping area at least 100 yards from the cooking and food-storage area. A food storage pole is provided at most campsites, so that food and other attractants can be suspended. You need to provide your own rope (35 feet recommended).

- Suspend items 10 feet above ground and 4 feet out from tree trunks.
- Certain portable bear resistant food containers (BRFCs) may be used for food storage in lieu of hanging. A list of approved containers is available from park backcountry offices.
- BRFCs must be left on the ground underneath the food pole or in the cooking area.
- Make sure all food and odorous items will fit into a container before starting your trip. Store your food immediately upon entering camp and keep all food and trash secured any time they're not in use.
- Store all odorous items including food, trash, toothpaste, deodorant and lotion.
- Keep a clean camp; remove any food scraps and trash from the fire pit. Pack out all trash.
- Strain food particles from dishwater and pack out with trash. Scatter dishwater at least 100 yards from tent site.
- Never eat or store food in your tent. Sleep in a tent, not under the stars.
- Avoid placing your tent near dead standing trees.

Mountain Lions

Mountain lions are wild animals and can be dangerous. They have been seen in the park. An attack is unlikely, and the park has never had a reported attack on people or pets. However, mountain lions have attacked in other wilderness areas.



- Watch children closely, and never let them run ahead or lag behind.
- Solo hiking is not encouraged.
- Never approach a mountain lion. Most will avoid a confrontation. Always give them a route to escape.
- Do not run. Try to look large and put your arms up.
- If a mountain lion approaches, wave your arms, shout, and throw rocks or sticks at it.
- If attacked, fight back.

Terrain Safety

Steep Cliffs

Falls from cliffs on trails have resulted in deaths. Loose sand or pebbles on stone are very slippery. Be careful of edges when using cameras or binoculars. Never throw or roll rocks, as there may be hikers below you. Trails can be snow and ice covered in winter.

- Stay on the trail.
- Stay back from cliff edges.
- Observe posted warnings.
- Please watch children.

Water Safety

The desert is an extreme environment. Carry enough water, one gallon per person per day, and drink it. Water

is available at visitor centers, campgrounds, and the Zion Lodge. Water flow at natural springs can vary, check for information at visitor centers. Do not drink untreated water. Water collected in the wilderness is not safe to drink without treatment.

Stream Crossings

Few rivers or streams have bridges, and many cannot be crossed until July or later. Even in late summer, water levels can rise quickly after rainstorms or from snowmelt in the high country on warm afternoons. The water can be cold, fast, and more than thigh-deep, making any attempt to cross perilous. Trying to ford deep, swift water has resulted in loss of gear, injury, and death. Carefully check your itinerary on a topographic map for stream crossings, and ask about river conditions at a ranger station before beginning your trip. Don't be afraid to turn around if conditions are dangerous. Before you ford a river, make sure everyone in your group is comfortable doing so.

Drowning

Sudden immersion in cold water (below 80° F, 27° C) may trigger the "mammalian diving reflex." This reflex restricts blood from outlying areas of the body and routes it to vital organs like the heart, lungs, and brain. The colder the water, the younger the victim, and the quicker the rescue, the better the chance for survival. Some cold-water drowning victims have survived with no brain damage after being submerged for over 30 minutes.

Giardia

Giardiasis is caused by a parasite (*Giardia lamblia*) found in lakes and streams. Persistent, severe diarrhea, abdominal cramps, and nausea are symptoms of this disease. If you experience any symptoms, contact a physician. When hiking, carry water from one of the park's treated water systems. If you plan to camp in the backcountry, follow recommendations received with your permit. Bring water to a boil or use an approved filter.

Fire Safety

Fire is a normal part of a healthy natural environment. During your stay in the backcountry there is a possibility of a wildland fire starting due to lightning or a human cause. Please be aware of this and take precautions. As

you hike, note directions of possible escape routes if evacuation becomes necessary.

It is not uncommon to see clouds hanging over the mountains that may look like smoke. These clouds are called rain dogs and are often mistaken for smoke from a wildland fire.

In order to prevent an unnecessary evacuation, ask two questions:

- Do you smell smoke?
- Is there obvious movement/buildup of smoke from top to bottom?

In case of fire or smoke:

- Remain calm, do not panic.
- Do not investigate area of smoke.
- Watch for fixed-wing aircraft or helicopters. These aircraft may try to drop messages with further instructions.
- Checkout with park personnel to prevent an unnecessary search.

Safety Tips

Plan Ahead

Whether hiking solo or in a group, you need to become familiar with the area you will be hiking, the hazards, and the expected weather. The process of getting ready will include obtaining maps to review the area you will hike, briefing all members of the group on route selection, having a turnaround time, and developing alternate route selections. Let someone know where you are going, when, your departure point, your planned route and expected time of return.

Carry proper equipment, clothing and food

Test your equipment before leaving. Having a little extra clothing, especially for inclement weather, may weigh a bit more, but it is worth it when things go sour. The same rule of "a little extra can't hurt" applies to food and drink. During the hotter summer months, extra water is especially important, even on shorter hikes and even in areas of high humidity. Dehydration comes on quickly and leads to other, more serious, problems. Better to lug

around more than to be stranded with less than you need to survive.

Know your limits—and those of the other individuals in your group

A military unit travels at the speed of its slowest member, and that is a good way to think about how to hike. Constant communication is also key: If traveling in a group, you should use a buddy system. Checking your partner for energy levels, blisters, food consumption and fatigue can prevent problems down the trail.

Always bring along proper emergency equipment

When hiking by yourself, ensure that you have, at minimum, a first aid kit. Some recommended items include adhesive bandages, medical tape, over-the-counter pain relievers, moleskin, antibacterial ointment, a compress or two, and spare headlamp batteries. If traveling in a group, have a “community” first-aid kit with additional splints, pads and braces.

Learn in advance what to do if things go bad

Park rangers typically encourage hikers in genuine distress to “hug a tree,” which means staying where you are until help comes to you. You can last a long time with the gear you have with you. Whistles and mirrors are priceless. *Cellphones are not generally reliable.*

Be Kind to Yourself

KNOW YOUR ABILITIES; CHOOSE AN APPROPRIATE HIKE.

You will be hiking at high elevation in hot, dry desert conditions with a steep climb out at the end of the day. Everyone who hikes in the canyon for the first time reports that it was more difficult than they expected. Be conservative in planning your hike!

If you have asthma, diabetes, a heart condition, knee or back problems, or any other health or medical issue, limit both your exertion and your exposure to the heat. The altitude, strenuous climbing, dehydration, and intense inner canyon heat will combine to make any medical problem worse. Stay within your training, physical limitations, and abilities.

Be a Lightweight

THE LESS YOU CARRY, THE MORE ENJOYABLE THE HIKE.

Travel as light as possible. The heaviest items in your pack should be food and water. Use hiking sticks to take stress off your legs. Wear well-fitting and broken-in hiking boots. Bring a small lightweight flashlight and a change of batteries and bulb. Wear sunscreen, sunglasses, and a hat. Bring a map, compass, signal mirror or whistle, first aid kit, and water purification tablets. Keep in mind that all trash (including biodegradable) needs to be carried out of the canyon.

Avoid Huffing and Puffing

IF YOU CAN TALK WHILE YOU ARE WALKING, YOU ARE WALKING THE PERFECT SPEED.

When you huff and puff your body is not getting enough oxygen. Walking at a pace that allows you to be able to walk and talk means that your legs and your body are getting the oxygen needed to function efficiently.

When your body generates fewer metabolic waste products, you enjoy your hike more and you feel better at the end. At times it may seem like you are walking too slow, but at an aerobic pace (sometimes even baby-sized steps when the trail is steep) your energy reserves will last longer. You will also feel much better that night and the next day.

Take a Break

TAKE A TEN-MINUTE BREAK AT LEAST ONCE EVERY HOUR.

A break of ten minutes helps remove the metabolic waste products that build up in your legs while hiking. Take a break at least every hour. Sit down and prop your legs up. Eat some food, drink some fluids, and take this time to enjoy and appreciate the view. These efficient breaks can recharge your batteries. In the long run, breaks will not slow you down.

No Food, No Fuel, No Fun

EAT OFTEN AND DON'T FORCE FLUIDS.

Eat more than you normally do, ensuring you eat before, during, and after your hike. No matter what the temperature, you need water and energy to keep going. Every hour hiking in the canyon can be likened to the physiological equivalent of shoveling wet sand. Plan

accordingly when determining how much food and water you should consume during your hike.

Keeping yourself cool while hiking in the canyon takes a large amount of energy (food). Food is your body's primary source of fuel while hiking in the canyon. You need to eat about twice as much as you normally would to meet your energy needs while hiking in the Grand Canyon. Salty snacks and water or sports drink should be consumed on any hike lasting longer than 30 minutes.

Your best defense against illness and exhaustion is to eat a healthy breakfast, and eat regularly throughout your hike.

Summer Hiking

The National Park Service urges SPECIAL CAUTION for all hikers during the summer months.

Every year, scores of unprepared hikers, lured by initially easy downhill hiking, experience severe illness, injury, or death from hiking in the canyon.

Be aware that efforts to assist you may be delayed during the summer months due to limited staff, the number of rescue calls, employee safety requirements, and limited helicopter flying capability during periods of extreme heat or inclement weather.

Do not rely on physical strength alone, hiking smart will take you much farther. Rangers respond to heat exhausted hikers every day during the summer — don't let yourself become one of them! Use the information below to hike smart.

10 Summer Hiking Essentials

1. **Water** - plain and some with electrolyte replacement.
2. **Food** - especially salty foods. Eat twice as much as normal.
3. **First Aid Kit** - bandaids, ace wrap, antiseptic, moleskin, etc.
4. **Map** - while many trails are well-marked, maps are helpful tools.
5. **Pack** - to carry the essentials.
6. **Flashlight/Spare Batteries** - allows you to hike out during the cool of the evening.
7. **Spray Bottle** - fill with water for your own personal air conditioning system.
8. **Hat/Sunscreen** - to keep the sun off you and protect your skin.
9. **Whistle and/or Signal Mirror** - for emergency use.
10. **Waterproof Clothing** - poncho or jacket; especially useful during monsoon season (mid-July to early September).

Don't Force Fluids. Drink When You Are Thirsty. Rest and Eat Often.

Ambient temperature, elevation, and exercise intensity and duration increase the physiological strain, calorie and water demands on our bodies. This makes canyon hiking more difficult than traveling the same distance on level ground or in cooler temperatures.

Fluid/electrolyte loss can exceed 2 quarts per hour if you hike uphill in direct sunlight and during the hottest time of the day. Because inner canyon air is so dry and hot, sweat evaporates instantly, making its loss almost imperceptible. Keep an eye out for salt rings on your clothes.

Even a mild level of dehydration can make hiking a lot less fun. The more dehydrated you become, the less efficient your body is at self-cooling. This puts you at greater risk for heat related illness. Over-hydration and lack of salty foods can be equally as dangerous, as this may lead to a life-threatening electrolyte disorder called hyponatremia.

The sensations of thirst and hunger are influenced by many factors, and should not be used as the only guide to replenishment. Eat and drink enough throughout your hike to replace the calories and fluid your body is using. Make sure that you balance your food and fluid intake, to avoid the risk of becoming exhausted, debilitated, or severely ill.

Wait for the Shade

AVOID HIKING BETWEEN 10AM AND 4PM!

Even if you are eating and drinking correctly you still need to avoid hiking in direct sunlight during the hottest part of

the day. Sun temperatures are 15F to 20F (9C-11C) degrees hotter than posted shade temperatures. And keep in mind, the farther into the canyon you go the hotter it gets!

Plan your day so you are not hiking between the hours of 10am and 4pm. Take a break near shade and water to avoid the worst heat of day. Enjoy a predawn start and a late afternoon finish. Experienced desert hikers know that the timing of their hike is the most important factor in avoiding hazards. Most of the people who need emergency medical help in the canyon due to heat illness are hiking between 10am and 4pm.

Always bring a lightweight flashlight to give yourself the option of hiking out after dark in the event that illness, injury, or enjoyment should slow you down.

Stay Wet and Stay Cool

KEEP YOURSELF SOAKING WET TO STAY COOL.

This is one of the best things that you can do for yourself, it will help decrease your core body temperature. Whenever you are near water, make sure that you wet (actually soak) yourself down. If you hike while soaking wet you will stay reasonably cool. This will make a wonderful difference in how well you feel, especially at the end of the day!

The Hazardous H's

WATCH OUT FOR THESE HEALTH HAZARDS!

HEAT EXHAUSTION

- The result of dehydration due to intense sweating. Hikers can lose one or two quarts (liters) of water per hour. Rangers at Phantom Ranch and Indian Garden treat many cases of heat exhaustion each day in summer.
- *Symptoms:* pale face, nausea, vomiting, cool and moist skin, headache, cramps.
- *Treatment:* drink water with electrolytes, eat high-energy foods (with fats and sugars), rest in the shade for 30-45 minutes, and cool the body by getting wet.

HEATSTROKE

- A life-threatening emergency where the body's heat regulating mechanisms become overwhelmed by a combination of internal heat production and environmental demands. Your body loses its ability to cool itself. Grand Canyon has two to three cases of heatstroke a year. Untreated heat exhaustion can lead to heatstroke.
- *Symptoms:* flushed face, dry skin, weak and rapid pulse, high core body temperature, confusion, poor judgment or inability to cope, unconsciousness, seizures.
- *Treatment:* the heatstroke victim must be cooled immediately! Continuously pour water on the victim's head and torso, fan to create an evaporative cooling effect. Immerse the victim in cold water if possible. Move the victim to shade and remove excess clothing. The victim needs evacuation to a hospital. Someone should go for help while attempts to cool the victim continue.

HYPONATREMIA (water intoxication)

- An illness that mimics the early symptoms of heat exhaustion. It is the result of low sodium in the blood caused by drinking too much water and losing too much salt through sweating.
- *Symptoms:* nausea, vomiting, altered mental states, confusion, and frequent urination. The victim may appear intoxicated. In extreme cases seizures may occur.
- *Treatment:* have the victim eat salty foods, slowly drink sports drinks with electrolytes, and rest in the shade. If mental alertness decreases, seek immediate help!

HYPOTHERMIA

- A life-threatening emergency where the body cannot keep itself warm, due to exhaustion and exposure to cold, wet, windy weather.
- *Symptoms:* uncontrolled shivering, poor muscle control, careless attitude. Look for signs of the "umbles" - stumbling, mumbling, fumbling, grumbling.
- *Treatment:* remove wet clothing and put on dry clothing, drink warm sugary liquids, warm victim

by body contact with another person, protect from wind, rain, and cold.

- Avoid hypothermia by checking at Canyon View Information Plaza or the Backcountry Information Center for the latest weather and trail conditions, taking layered clothing for protection against cold and wet weather, eating frequently, replacing fluids and electrolytes by drinking before feeling thirsty, and avoiding exposure to wet weather.

Winter Hiking

Every year, scores of unprepared hikers, lured by initially easy downhill hiking, experience severe illness, injury, or death from hiking in the canyon. Travel in Grand Canyon National Park's backcountry has inherent risks and involves unavoidable hazards. Your safety depends upon your judgment, your experience, and a realistic assessment of your abilities.

A successful and safe winter hike depends on weather and routes, but realize that any hike can be affected by unforeseen natural occurrences. Routes and trails are susceptible to deterioration from rockslides. Weather, at any time of the year, can compromise an individual's ability to cope with the psychological challenges of backcountry travel. Always be sure you have adequate food, water, and equipment to deal with the unexpected.

If you have doubts as to your ability to hike safely in the Grand Canyon, do not attempt to do so! All visitors should be aware that efforts to assist them may be delayed and limited due to weather, rescuer safety, and incident urgency.

Do not rely on physical strength alone, hiking smart will take you much farther. Use this information to hike smart.

10 Winter Hiking Essentials

1. **Food** – especially salty foods. Eat twice as much as normal.
2. **First Aid Kit** – bandaids, ace wrap, antiseptic, moleskin, etc.

3. **Map** – while many trails are well-marked, maps are helpful tools.
4. **Water** – plain and some with electrolyte replacement.
5. **Pack** – to carry the essentials.
6. **Flashlight/Spare Batteries** – allows you to hike out at night.
7. **Appropriate Footwear** - waterproof boots, gaiters to keep snow and mud out of your boots.
8. **Over-the-shoe traction devices** - it will only take a short and unexpected stretch of ice to make you glad you have extra traction.
9. **Hiking Poles** – to help with footing on icy trails.
10. **Whistle and/or Signal Mirror** – for emergency use, know how to use your equipment.
11. **Waterproof/Warm Clothing** – parka, hat, gloves for the snow and rain, plus an extra set of dry clothing – in case you get wet.

The Hazardous H

WATCH OUT FOR THIS HEALTH HAZARD!

HYPOTHERMIA

- A life-threatening emergency where the body cannot keep itself warm, due to exhaustion and exposure to cold, wet, windy weather.
- *Symptoms:* uncontrolled shivering, poor muscle control, careless attitude, confusion, exhaustion (even after rest). Look for signs of the "umbles" - stumbling, mumbling, fumbling, grumbling.
- *Treatment:* remove wet clothing and put on dry clothing, drink warm sugary liquids, warm victim by body contact with another person, protect from wind, rain, and cold. If re-warming is unsuccessful - seek help.
- Avoid hypothermia by checking at the Visitor Center or the Backcountry Information Center for the latest weather and trail conditions, taking layered clothing for protection against cold and wet weather, eating frequently, replacing fluids and electrolytes by drinking before feeling thirsty, and avoiding exposure to wet weather.

Trail Conditions

KNOW TRAIL CONDITIONS BEFORE YOU START!

Some trails are more difficult than others to navigate in the winter. Stop by the Backcountry Information Center prior to your hike for a trail update. Pay close attention to the weather forecast. Winter travelers are reminded that precipitation patterns in Southern Utah are quite variable. Just because it is the winter season doesn't mean it looks or feels like winter on the ground.

Weather Dangers

Lightning

- Go to low-lying areas away from cliff edges, lone trees, poles, or metal objects. Make sure the area is not subject to flash floods. Do not seek shelter in caves or alcoves.
- Become a smaller target by squatting low on the ground. Place hands on knees or back of neck with head between knees. Do not lie down or touch the ground with your hands. Minimize contact with the ground and nearby rocks to minimize ground current effects caused by a nearby strike.
- Lightning can strike 10 miles across the canyon, so being below the rim does not make you at a low spot.

Rock Falls

- Watch and listen for rock falls and slides, especially during and after downpours.
- Do not stand at places where rocks have obviously fallen before.

Flash Floods

All narrow canyons are potentially hazardous. Flash floods, often caused by storms miles away, are a real danger and can be life threatening. By entering a narrow canyon you are assuming a risk.

During a flash flood, the water level rises quickly, within minutes or even seconds. A flash flood can rush down a canyon in a wall of water 12 feet high or more. You cannot outrun or outswim a flash flood.

Know the weather and flash flood potential forecasts before starting your trip. If bad weather threatens, do not enter a narrow canyon. Whether hiking, climbing, or

canyoneering, your safety depends on your own good judgment, adequate preparation, and constant attention to your surroundings. Your safety is your responsibility.

Watch for these indications of a possible flash flood:

- Any deterioration in weather conditions
- Buildup of clouds or sounds of thunder
- Sudden changes in water clarity from clear to muddy
- Floating debris
- Rising water levels or stronger currents
- Increasing roar of water upcanyon

If you observe any of these signs, seek higher ground immediately. Even climbing a few feet may save your life. Remain on high ground until conditions improve. Water levels usually drop within 24 hours. Flash floods do occur in the park during periods of low flash flood potential. A moderate or higher flash flood potential should be a serious cause for concern.

Altitude Sickness

Altitude sickness, the mildest form being acute mountain sickness (AMS), is the negative health effect of high altitude, caused by rapid exposure to low amounts of oxygen at high elevation. Symptoms may include headaches, vomiting, tiredness, trouble sleeping, and dizziness. Acute mountain sickness can progress to high altitude pulmonary edema (HAPE) with associated shortness of breath or high-altitude cerebral edema (HACE) with associated confusion. Chronic mountain sickness may occur after long term exposure to high altitude.

Altitude sickness typically occurs only above 2,500 meters (8,000 ft), though some are affected at lower altitudes such as 6,000 feet. Risk factors include a prior episode of altitude sickness, a high degree of activity, and a rapid increase in elevation. Diagnosis is based on symptoms and is supported in those who have more than a minor reduction in activities. It is recommended that at high-altitude any symptoms of headache, nausea, shortness of breath, or vomiting be assumed to be altitude sickness.



Prevention is by gradually increasing elevation by no more than 300 meters (1,000 ft) per day. Pre-medicating with the drug acetazolamide (trade name Diamox) may help some people making a rapid ascent to sleeping altitude above 2,700 meters (9,000 ft), and it may also be effective if started early in the course of AMS. Acetazolamide can be taken before symptoms appear as a preventive measure at a dose of 125 mg twice daily. Consult with your doctor to explore this option. Being physically fit does not decrease the risk. Treatment is generally by descending to a lower altitude and sufficient fluids. Mild cases may be helped by ibuprofen, acetazolamide, or dexamethasone. Prior to the onset of altitude sickness, ibuprofen is a

suggested non-steroidal anti-inflammatory and painkiller that can help alleviate both the headache and nausea associated with AMS. Severe cases may benefit from oxygen therapy and a portable hyperbaric bag may be used if descent is not possible.



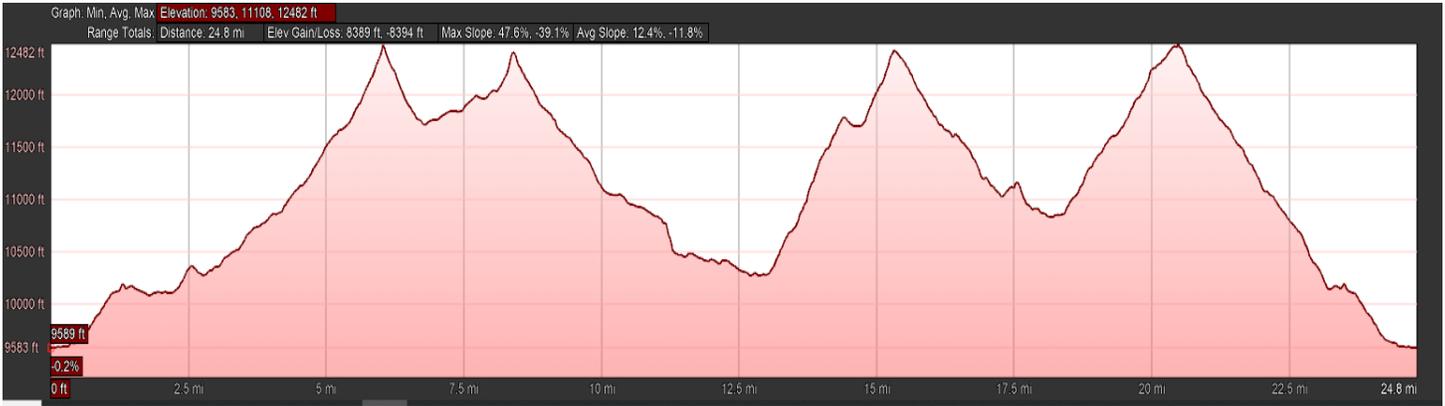
AMS occurs in about 20% of people after rapidly going to 2,500 meters (8,000 ft) and 40% of people going to 3,000 meters (10,000 ft). While AMS and HACE occurs equally frequently in males and females, HAPE occurs more often in males.

The Expedition

An ambitious backpacking trip located in the beautiful Maroon Bells/Snowmass Wilderness that is routed over four mountain passes (West Maroon - 12,500 ft.; Frigid Air - 12,415 ft.; Trail Rider - 12,420 ft.; Buckskin - 12,500 ft.). The variety of terrain encompasses scenic forests, mid to late summer wildflowers, challenging river crossings, and provides spectacular views of the Maroon Bells and numerous other peaks of the Elk Mountain Range. When camping in the Wilderness, campsites must be located 100 feet from any body of water or trail or at a designated campsite. Start your hike early as thunderstorms are common on the passes in early afternoon. Wading rivers or streams in early summer can be treacherous. Sandals or boat shoes are strongly recommended. Wading barefoot can be extremely dangerous. Be sure to unbuckle your pack when navigating any stream crossing.

Itinerary

Maroon Bells-Snowmass Wilderness Itinerary for July of 2021							
Date	Day/Activity	Night/Camp	Distance	Positive Gain	Negative Gain	Overall Gain	Travel Times
7/3/2021	Guide will fly into Denver. Pick up trip vehicle.	Denver					
7/4/2021	Guide will meet with group in Denver and transport them to the Aspen area. Pick up supplies. Take care of any permit issues. Check into lodging.	Aspen area					
7/5/2021	Drive to Trailhead at Maroon Bells. Hike to Snowmass Lake.	Snowmass Lake #10	8.81 mi.	3610 ft.	2305 ft.	1305 ft.	8.68 hrs.
7/6/2021	Hike to Fravert Basin	Fravert Basin #31	7.12 mi.	2640 ft.	2527 ft.	113 ft.	6.71 hrs.
7/7/2021	Hike to West Maroon	West Maroon #46	7.94 mi.	2404 ft.	2875 ft.	-471 ft.	6.90 hrs.
7/8/2021	Summit South Maroon Peak and back to campsite.	West Maroon #47	4.06 mi.	4022 ft.	4022 ft.	0 ft.	6.55 hrs.
7/9/2021	Hike out to trailhead. Celebrate in Aspen	Aspen area	3.58 mi.	345 ft.	1226 ft.	-881 ft.	2.31 hrs.
7/10/2021	Drive back to Denver. Conclude trip.	Denver					
7/11/2021	Guide to fly back to Louisiana						
Totals			31.51 mi.	13021 ft.	12955 ft.	66 ft.	31.16 hrs.

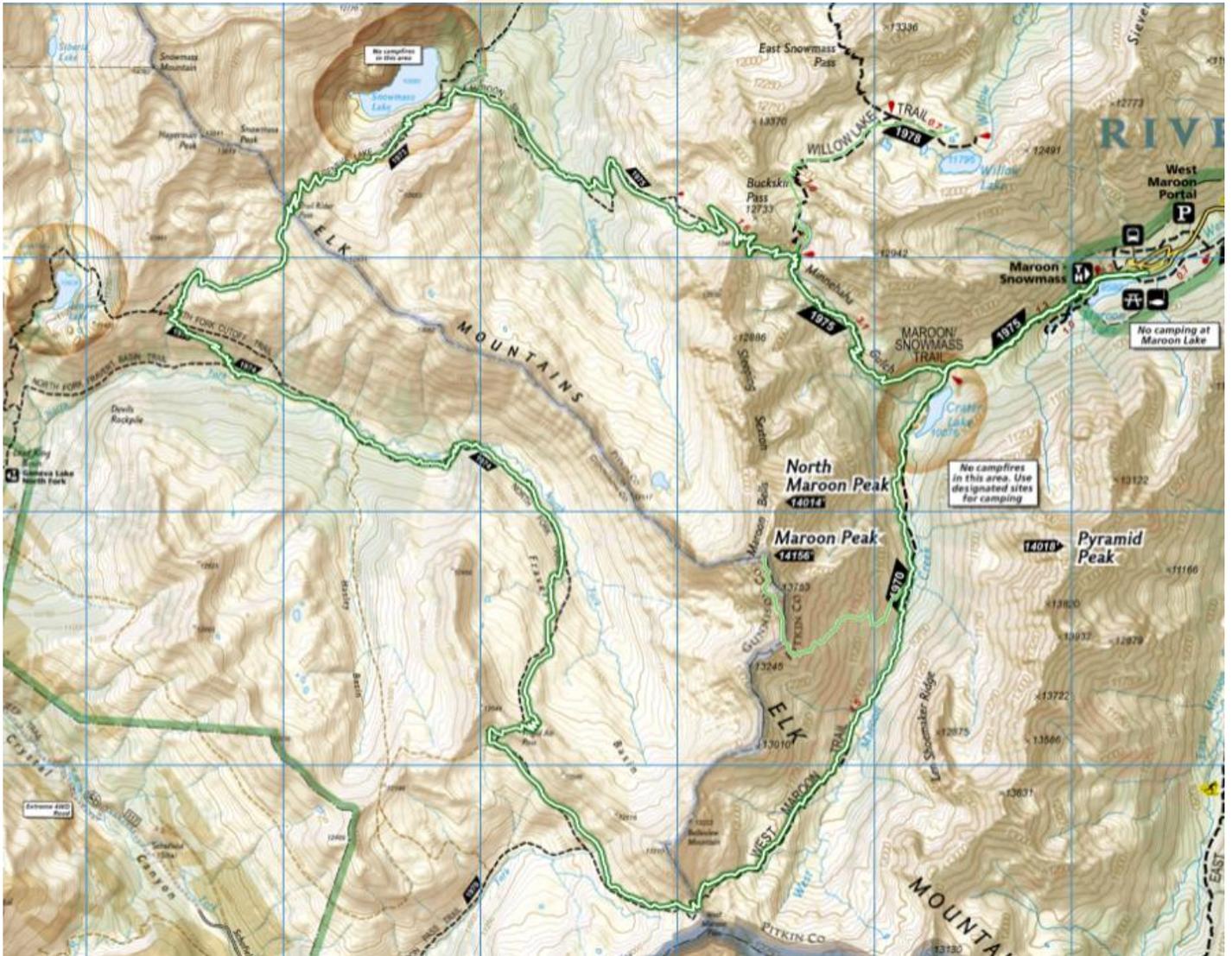


Elevation Profile

Satellite Map of the 4 Pass Loop



Topographic Map of the 4 Pass Loop

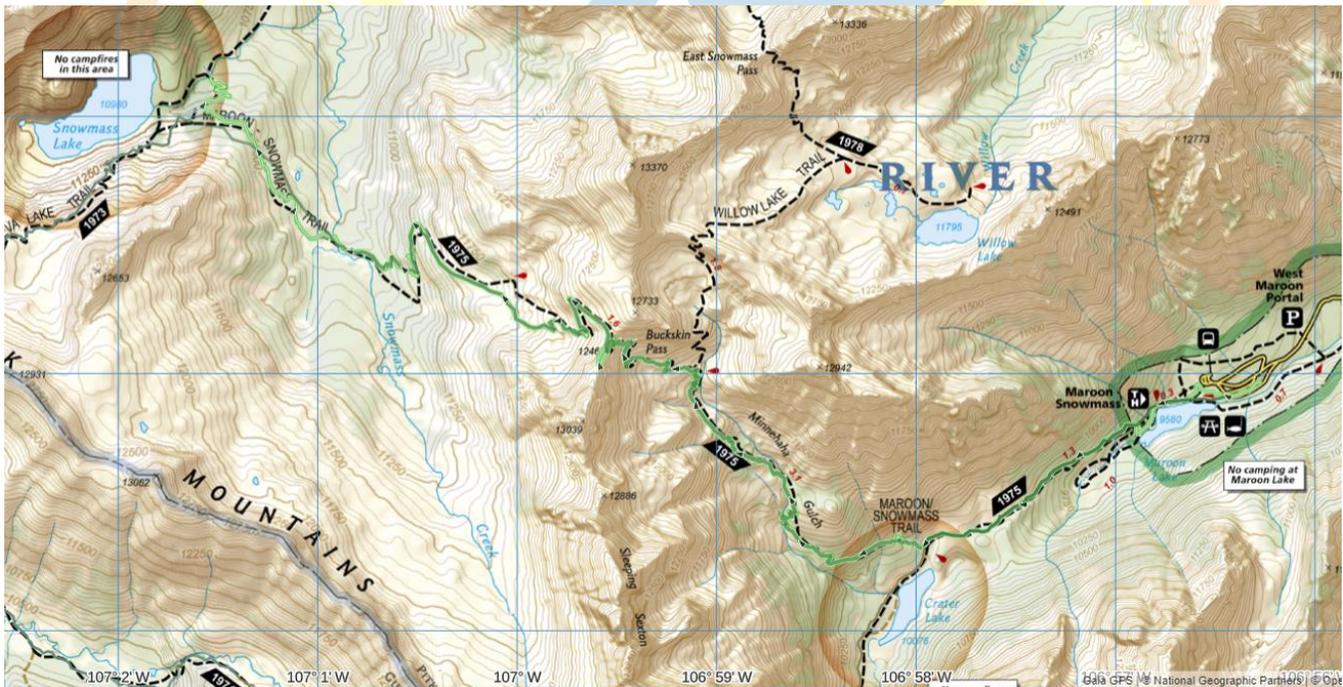


Hiking Routes

Day 1

Trailhead:	Maroon Snowmass TH	Elevation Gain:	3610 ft.
Campsite:	Snowmass Lake #10	Elevation Loss:	2305 ft.
Mileage:	8.81 mi.	Travel Time:	8.68 hrs.
Water Locations: Minnehaha Gulch, Snowmass Creek			
Emergency Access: Return to Maroon Snowmass TH			

The trail starts at Maroon Lake and follows lakeside until it reaches the Forest Service bulletin board at the far end of the lake. Stay on the Maroon-Snowmass Trail which ascends on rocky paths through the aspens to the top of a rocky rise before it descends to Crater Lake. At the Crater Lake bulletin board, the trail forks to the right and climbs steeply through aspen and spruce forest for 1 mile to Minnehaha Gulch. A stream divides the nearly one mile long gulch in half with campsites available before and after the stream crossing. The trail continues its steep ascent exiting the gulch into an alpine meadow with Buckskin Pass looming ahead. A trail sign for the Maroon-Snowmass /Willow Lake junction appears in another 1/2 mile. Take the left fork which continues to follow the Maroon-Snowmass Trail through the meadow to a series of switchbacks that climb steeply to Buckskin Pass. If hiking beyond the pass, the next available campsites are 2 miles ahead.



Day 2

Trailhead: Snowmass Lake to Fravert Basin

Elevation Gain: 2640 ft.

Campsite: Fravert Basin #31

Elevation Loss: 2527 ft.

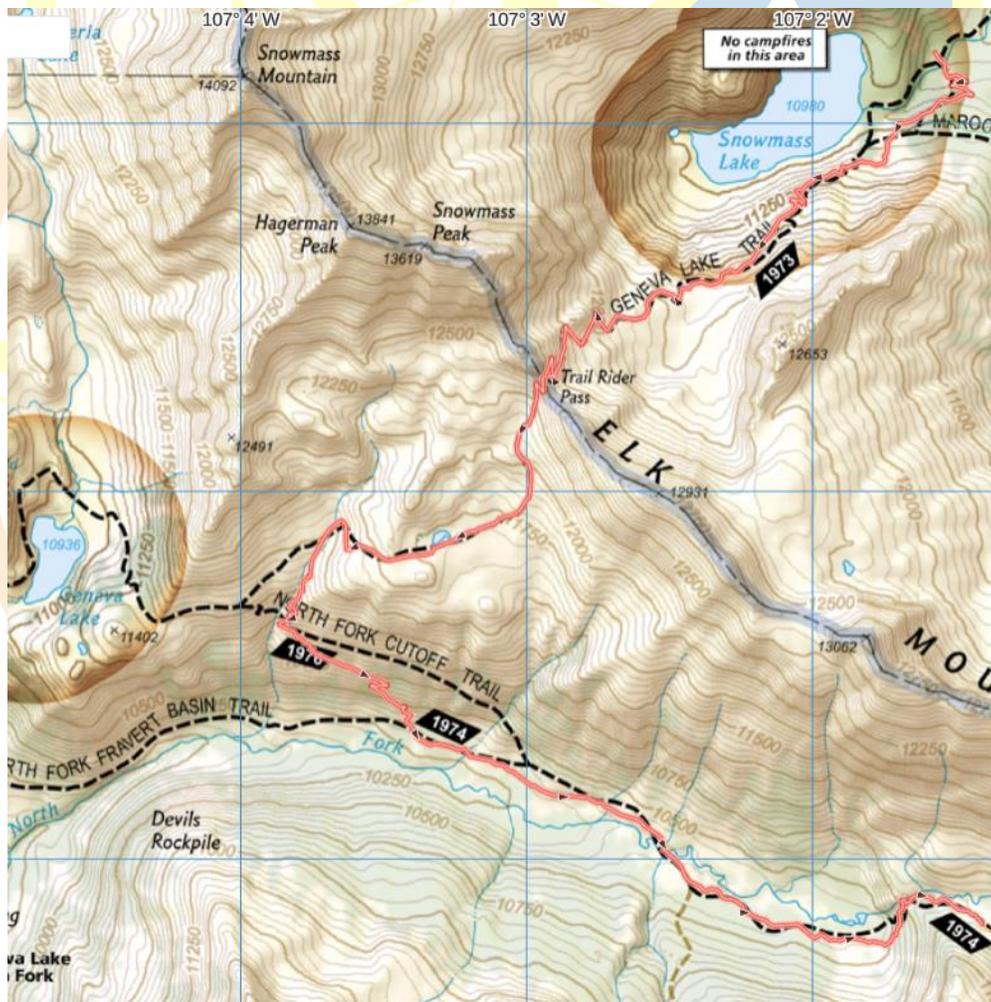
Mileage: 7.12 mi.

Travel Time: 6.71 hrs.

Water Locations: North Fork, Snowmass Lake

Emergency Access: Geneva Lake/North Fork TH

From Snowmass Lake: The trail begins above the lake on the south side of the outlet. The trail climbs steeply for 1 1/2 miles to Trail Rider Pass and then descends for 2 miles to Geneva Lake. Then take the North Fork Cutoff Trail to the North Fork Trail. This trail is very steep and is heavily used. Then connect with the North Fork trail and progress up the valley crossing open meadows and willow lined tributaries. Near the red summit there is a knee deep ford to reach the Hasley Basin Trail junction. Continue on the trail until you reach your campsite.



Day 3

Trailhead: Fravert Basin to West Maroon

Elevation Gain: 2404 ft.

Campsite: West Maroon #46

Elevation Loss: 2875 ft.

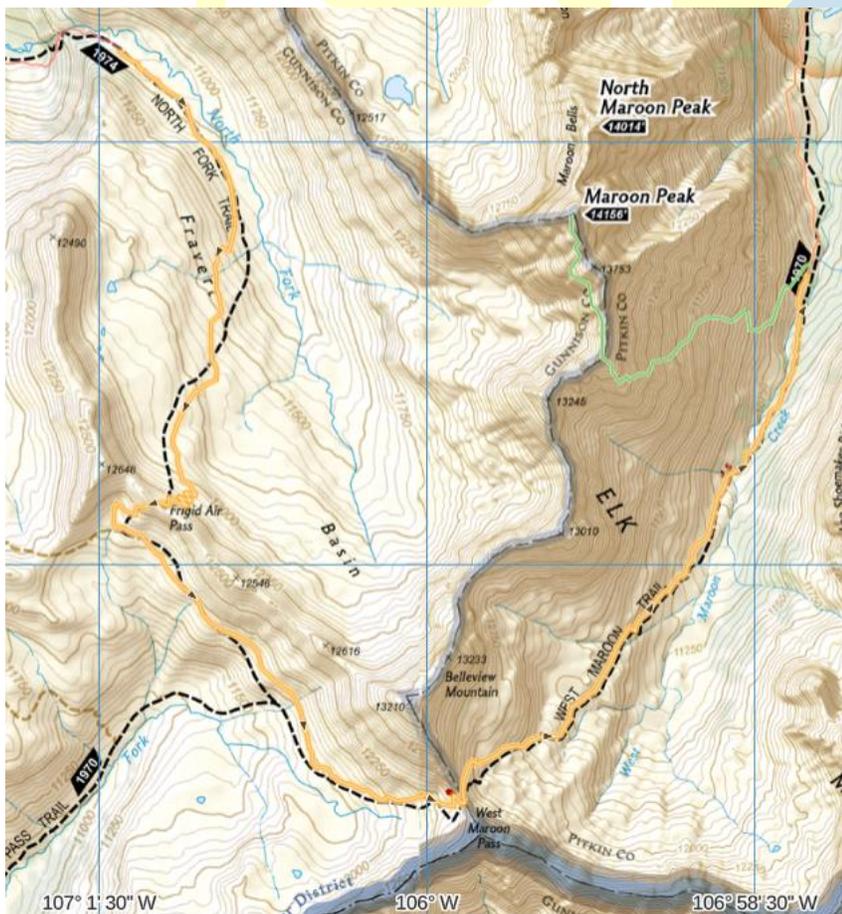
Mileage: 7.94 mi.

Travel Time: 6.90 hrs.

Water Locations: North Fork of Crystal River, West Maroon Creek

Emergency Access: East Fork/ West Maroon TH

Continue on the North Fork Trail as it wanders up into a forest. It then merges at the base of a stunning waterfall, where the North Fork plummets 300 feet down a cliff. The trail now zigzags steeply upward. The trail now follows the bend in the valley, climbing steadily among low hillocks as it enters the Fravert Basin. The red summit of Belleview Mountain towers above. Soon the path turns south climbing vigorously through scattered trees. When you emerge from the trees you will see the summits of the Maroon Bells. Keep climbing up the south basin wall to a series of switchbacks. At the top of this climb you will have reached Frigid Air Pass. Follow the trail as it descends until you reach the junction for the West Maroon Pass. Follow the West Maroon Creek trail for several miles crossing two fords until you reach your campsite.



Day 4

Trailhead: Summit of South Maroon Peak

Campsite: West Maroon #46

Mileage: 4.06 mi.

Water Locations: West Maroon Creek

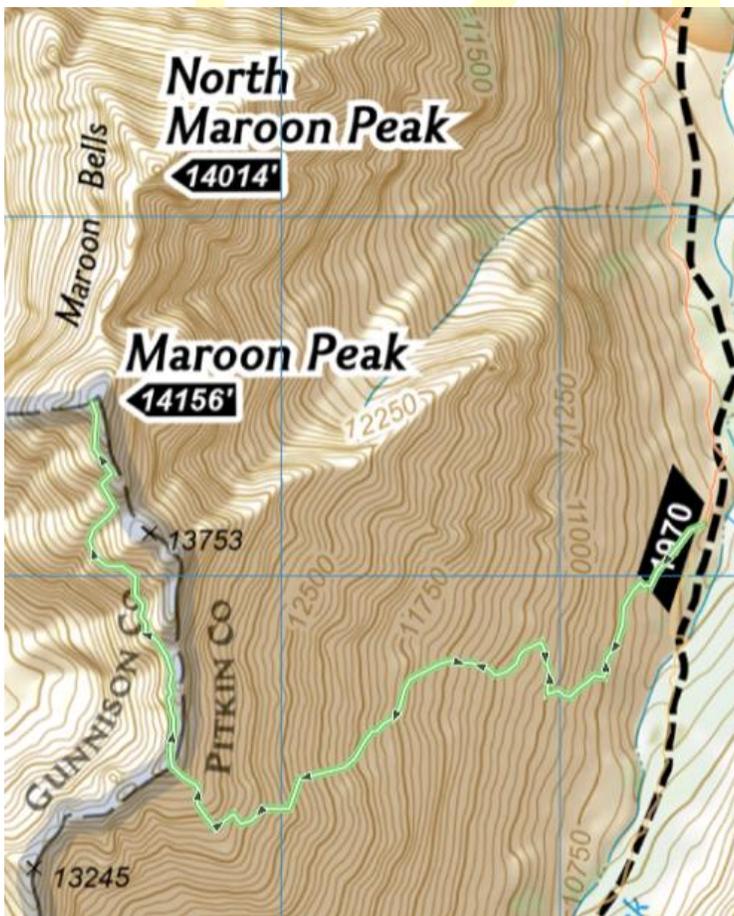
Emergency Access: Maroon Snowmass TH

Elevation Gain: 4022 ft.

Elevation Loss: 4022 ft.

Travel Time: 6.55 hrs.

To climb South Maroon, take the trail to Crater Lake (1 ½ miles and 400’ gain). Take the left fork at the lake and head to West Maroon Pass. Follow the trail to where it crosses West Maroon Creek the first time (approximately 1 ½ miles and 500’ gain). Turn right (north) and follow the ridge to the summit. Keep left (west) when the ridge looks bad. Be careful, because it is easy to get in trouble. Do not try to descend the snow gully just below the top. It is steep, dangerous and icy.



Day 5

Trailhead: Hike out to Maroon Snowmass TH

Elevation Gain: 345 ft.

Campsite: N/A

Elevation Loss: 1226 ft.

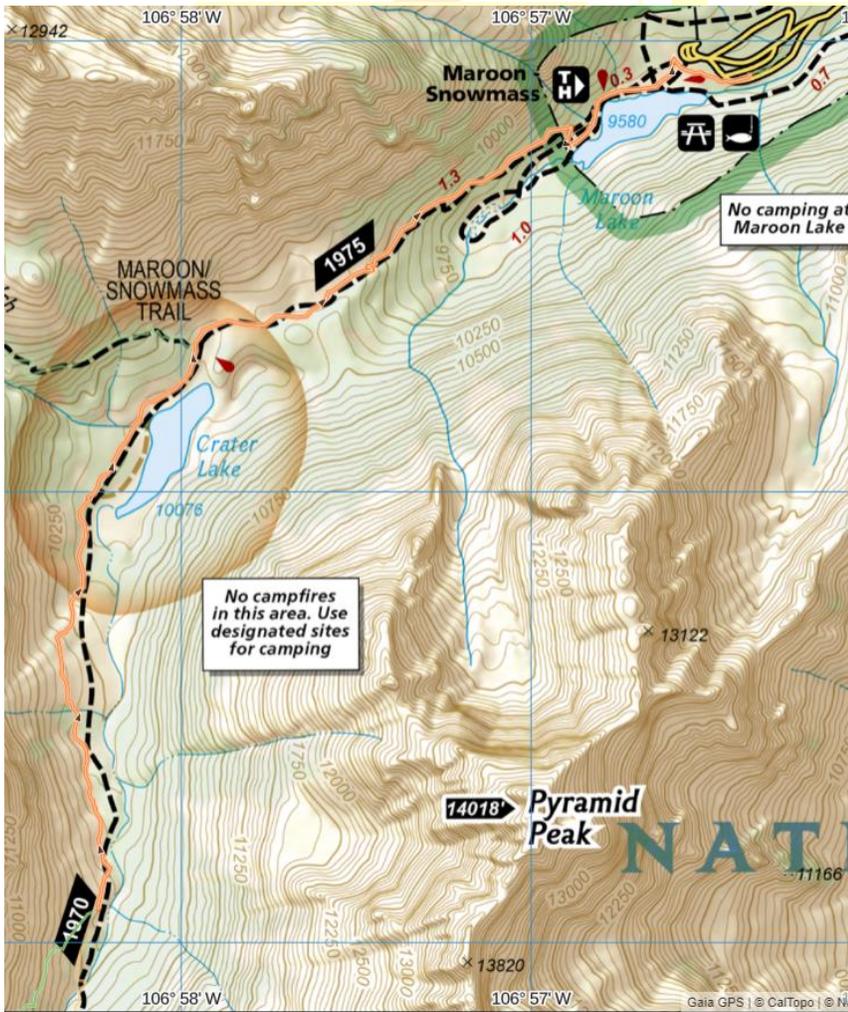
Mileage: 4.06 mi.

Travel Time: 2.31 hrs.

Water Locations: West Maroon Creek

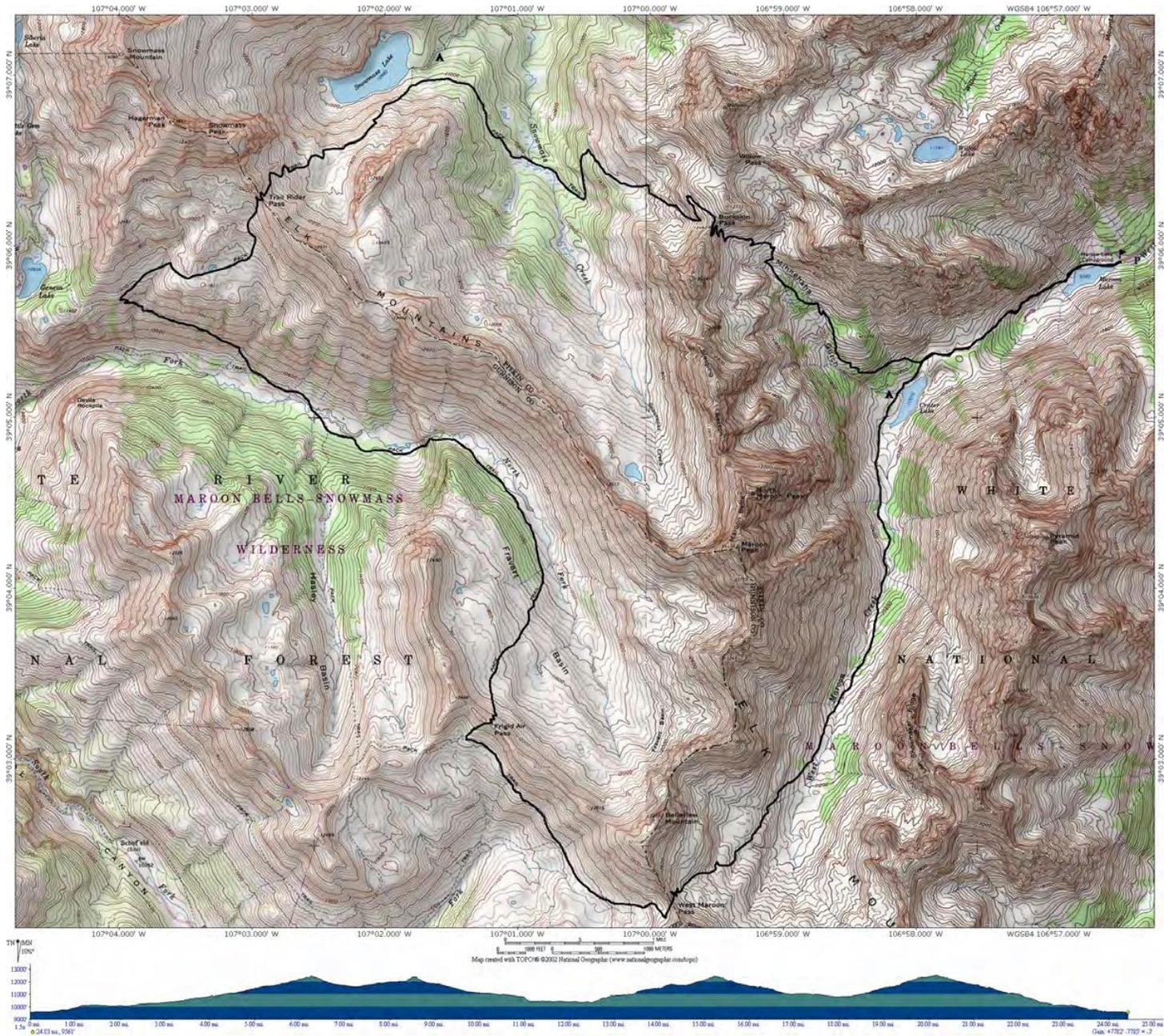
Emergency Access: Maroon Snowmass TH

Continue on the West Maroon Creek Trail as it heads north toward Crater Lake. Then follow the valley a little over a mile until you reach the Maroon Snowmass Trailhead.



Topography & Maps

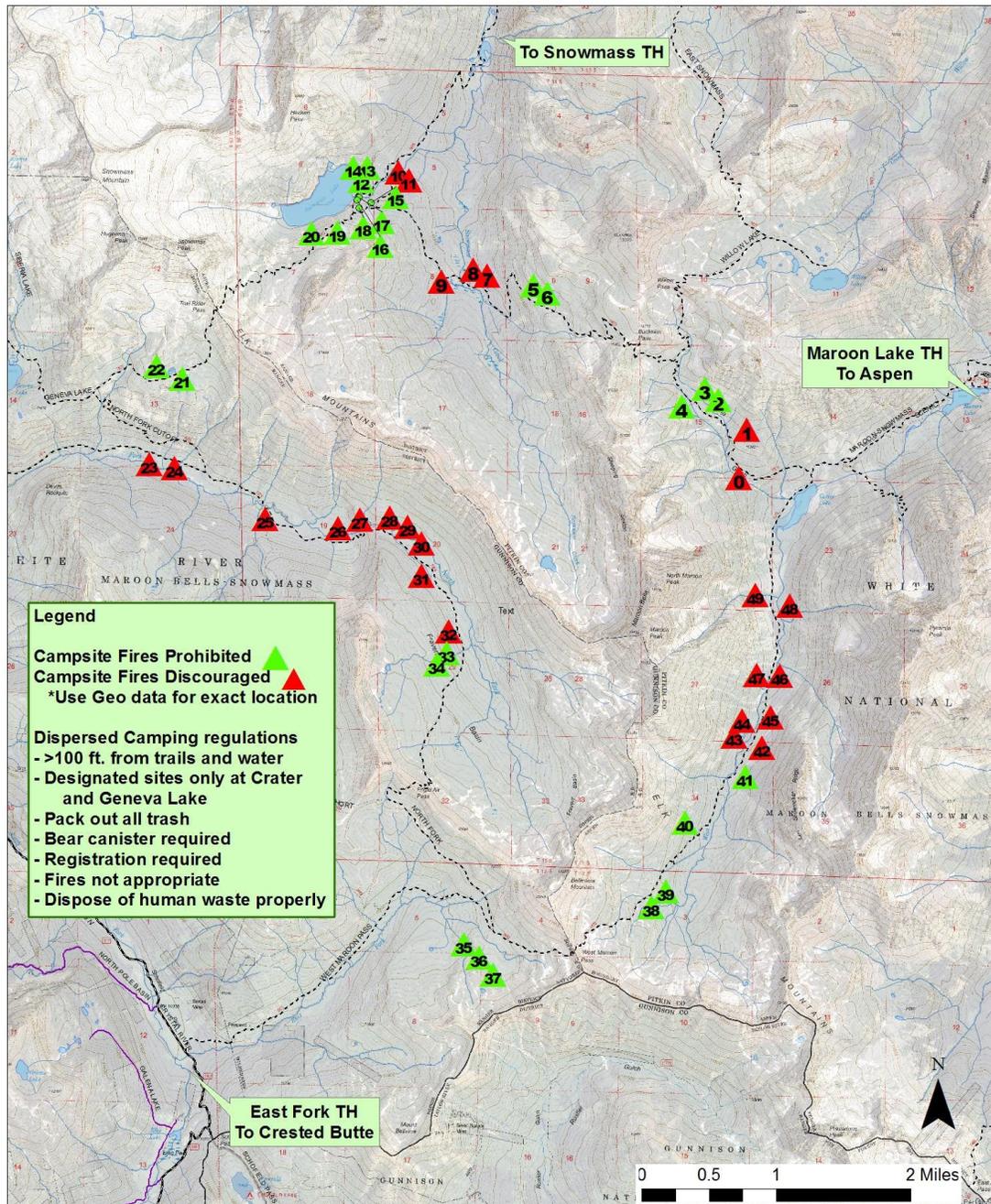
4 Pass Loop Topographic Map



4 Pass Loop Campsites Map

Select Campsites - Four Pass Loop

Maroon Bells - Snowmass Wilderness

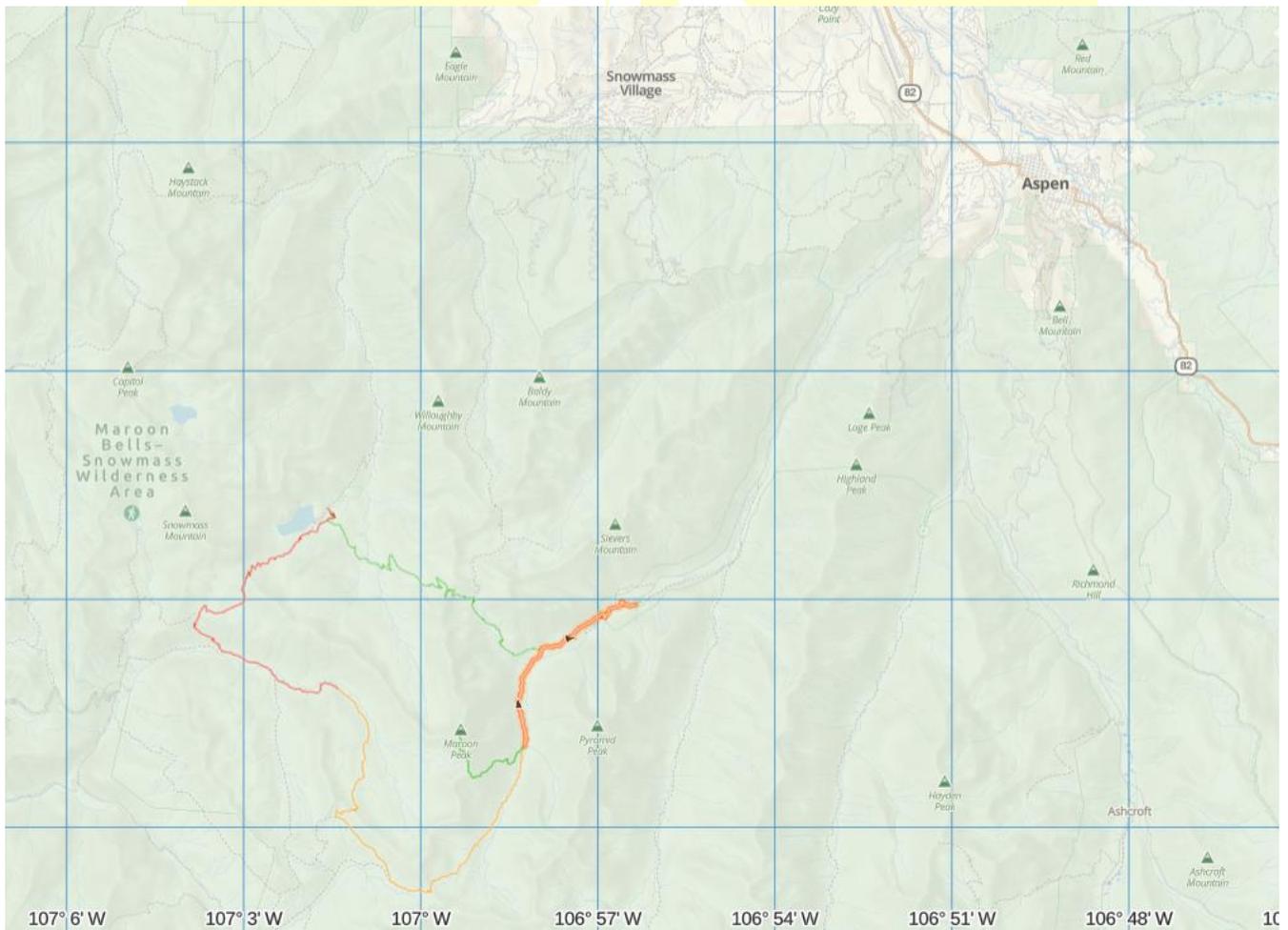


Wilderness camping and travel is at your own risk.

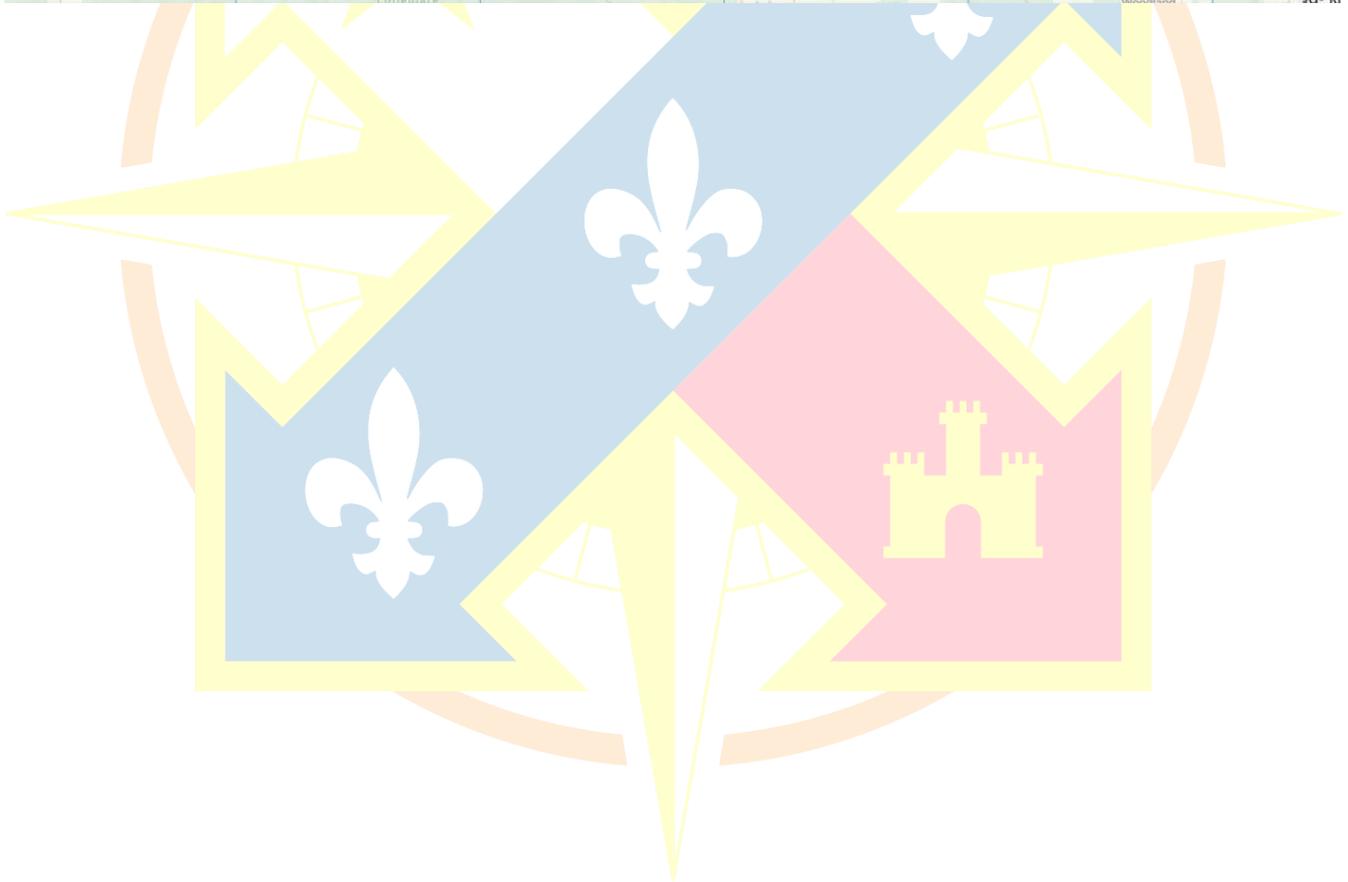
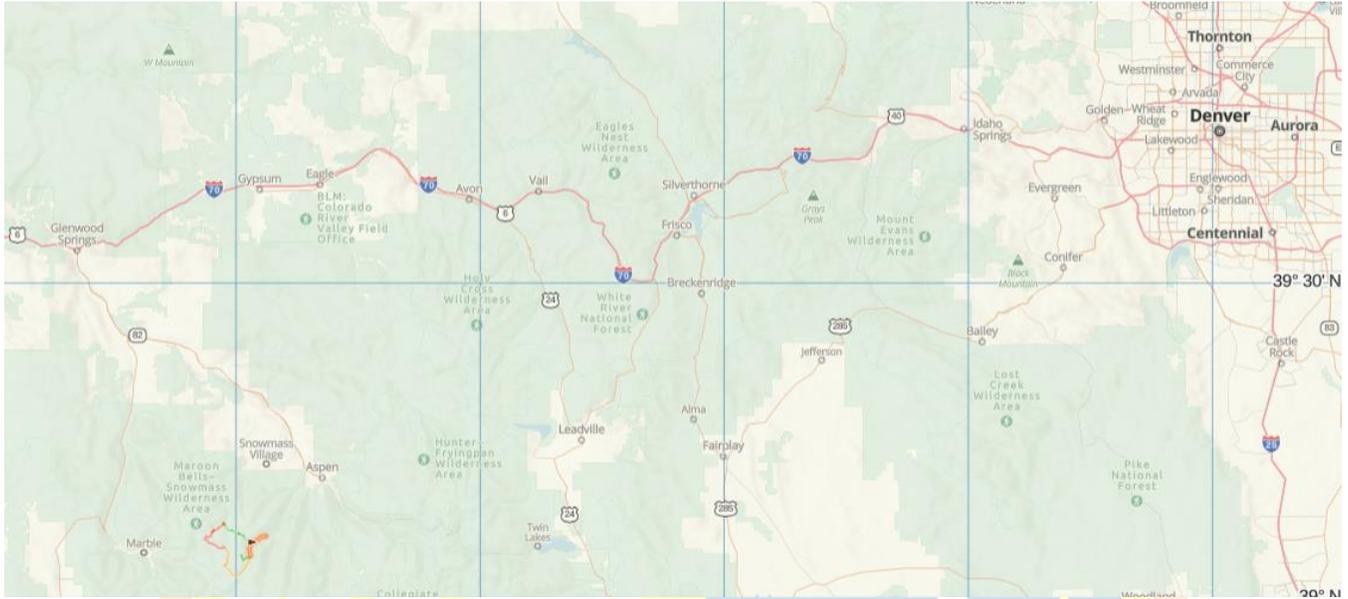
Plan Ahead and Prepare: Know the camping regulations. Find an appropriate and legal site before sunset. Campfires are not appropriate along the heavily impacted Four Pass Loop.

Select Campsites - Four Pass Loop					
Dispersed Camping Regulations - Maroon Bells Snowmass Wilderness					
> 100 ft. from trails and water		Pack out all trash	Bear proof food storage required	Registration required	
Dispose of human waste properly		Fires not appropriate	Designated sites only at Crater and Geneva Lake		
Camp Number	Trail Zone	Number of Tent Pads	CAMPFIRES	Longitude	Latitude
0	Minniehaha	2	DISCOURAGED	106°55'32.455"W	39°5'16.31"N
1	Minniehaha	2	DISCOURAGED	106°55'35.939"W	39°5'31.465"N
2	Minniehaha	4	PROHIBITED	106°55'52.555"W	39°5'43.667"N
3	Minniehaha	4	PROHIBITED	106°55'54.399"W	39°5'45.744"N
4	Upper Snowmass Creek	5	PROHIBITED	106°59'0.99"W	39°5'45.117"N
5	Upper Snowmass Creek	2	PROHIBITED	107°0'17.317"W	39°6'23.435"N
6	Upper Snowmass Creek	3	PROHIBITED	107°0'15.616"W	39°6'22.763"N
7	Upper Snowmass Creek	5	DISCOURAGED	107°0'47.091"W	39°6'29.043"N
8	Upper Snowmass Creek	2	DISCOURAGED	107°0'50.257"W	39°6'29.975"N
9	Snowmass Lake	2	DISCOURAGED	107°1'2.489"W	39°6'30.15"N
10	Snowmass Lake	5	DISCOURAGED	107°1'30.221"W	39°7'10.112"N
11	Snowmass Lake	5	DISCOURAGED	107°1'30.061"W	39°7'9.262"N
12	Snowmass Lake	4	PROHIBITED	107°1'47.723"W	39°7'5.731"N
13	Snowmass Lake	4	PROHIBITED	107°1'46.326"W	39°7'7.544"N
14	Snowmass Lake	5	PROHIBITED	107°1'47.623"W	39°7'11.647"N
15	Snowmass Lake	3	PROHIBITED	107°1'46.376"W	39°7'2"N
16	Snowmass Lake	5	PROHIBITED	107°1'47.59"W	39°7'1.12"N
17	Trail Rider Pass	2	PROHIBITED	107°1'40.509"W	39°6'59.096"N
18	Trail Rider Pass	4	PROHIBITED	107°1'46.534"W	39°6'57.921"N
19	Trail Rider Pass	2	PROHIBITED	107°1'55.844"W	39°6'51.215"N
20	Trail Rider Pass	2	PROHIBITED	107°2'4.513"W	39°6'46.236"N
21	Trail Rider Pass	2	PROHIBITED	107°3'12.604"W	39°5'51.616"N
22	Fravert Basin	3	PROHIBITED	107°3'25.551"W	39°5'51.619"N
23	Fravert Basin	4	DISCOURAGED	107°3'23.947"W	39°5'20.306"N
24	Fravert Basin	5	DISCOURAGED	107°3'14.957"W	39°5'16.856"N
25	Fravert Basin	2	DISCOURAGED	107°2'27.769"W	39°4'56.622"N
26	Fravert Basin	3	DISCOURAGED	107°1'52.456"W	39°4'48.443"N
27	Fravert Basin	2	DISCOURAGED	107°1'40.563"W	39°4'51.975"N
28	Fravert Basin	2	DISCOURAGED	107°1'26.832"W	39°4'52.426"N
29	Fravert Basin	2	DISCOURAGED	107°1'23.036"W	39°4'49.705"N
30	Fravert Basin	4	DISCOURAGED	107°1'17"W	39°4'45.519"N
31	Fravert Basin	4	DISCOURAGED	107°1'9.939"W	39°4'39.205"N
32	Fravert Basin	2	DISCOURAGED	107°0'53.763"W	39°4'12.451"N
33	Fravert Basin	3	PROHIBITED	107°1'0.191"W	39°4'6.225"N
34	Fravert Basin	3	PROHIBITED	107°1'0.362"W	39°4'2.575"N
35	East Fork	3	PROHIBITED	107°0'41.144"W	39°2'12.733"N
36	East Fork	3	PROHIBITED	107°0'38.856"W	39°2'9.662"N
37	East Fork	2	PROHIBITED	107°0'39.477"W	39°2'7.291"N
38	West Maroon	2	PROHIBITED	106°59'10.031"W	39°2'30.494"N
39	West Maroon	2	PROHIBITED	106°59'10.689"W	39°2'31.659"N
40	West Maroon	3	PROHIBITED	106°55'51.937"W	39°2'57.407"N
41	West Maroon	3	PROHIBITED	106°55'30.222"W	39°3'22.676"N
42	West Maroon	2	DISCOURAGED	106°55'23.303"W	39°3'31.363"N
43	West Maroon	2	DISCOURAGED	106°55'26.266"W	39°3'33.995"N
44	West Maroon	5	DISCOURAGED	106°55'24.956"W	39°3'36.377"N
45	West Maroon	3	DISCOURAGED	106°55'17.269"W	39°3'41.976"N
46	West Maroon	5	DISCOURAGED	106°55'14.111"W	39°3'57.05"N
47	West Maroon	2	DISCOURAGED	106°55'20.59"W	39°3'57.477"N
48	West Maroon	3	DISCOURAGED	106°55'14.435"W	39°4'23.542"N
49	West Maroon	2	DISCOURAGED	106°55'17.335"W	39°4'26.657"N

Maroon Bells-Snowmass Wilderness Area Map

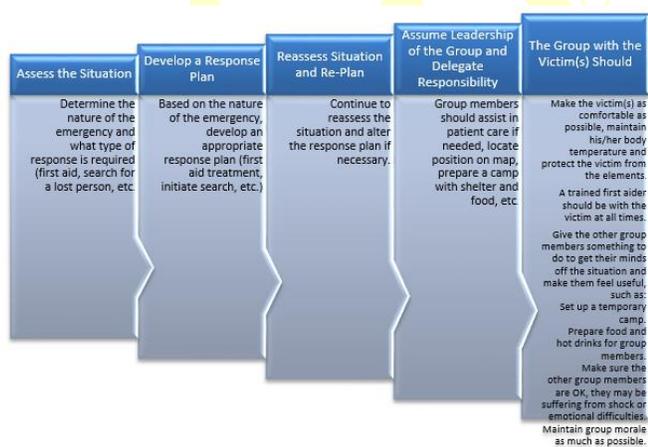


Central Colorado Area Map



Emergency Action Plan (EAP)

Since each situation is unique, trip leaders must remain flexible in their response. The key to properly responding to an emergency is to remain calm, assess things carefully before acting, and continue to reassess your strategy throughout. There are two basic things to be done, care for the victim and care for the rest of the group. The more severe the situation, the more both populations will need your care and support. A basic approach to handling emergency situations is shown in flowchart form in the figure below.



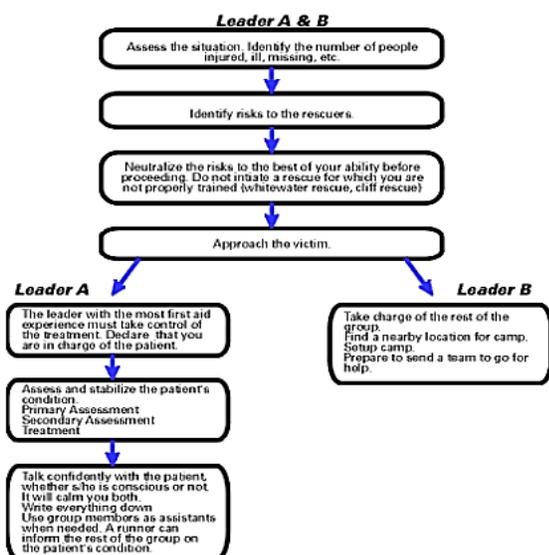
Evacuation Procedures

When to Evacuate

Evacuation is used as a general term for transporting someone from a trip. In most cases we think of this as caused by a medical problem. It can also be the result of psychological problems, a family emergency, or the assessment of the trip leaders that the person's behavior poses a threat to themselves or others in the group. Specific evacuation protocols for first aid situations will be determined by the group leaders.

If someone needs to be evacuated due to injury or illness, the primary concern is for the safety and health of the patient. When assessing the need for an evacuation, think both about the patient's condition and how rapidly medical attention is needed. For example, it may take 2 hours for the patient to walk out on their own. Whereas to send two people out for help (2 hours), get a rescue squad to the trailhead (1 hour), hike back in (2 hours - unless driving in is possible), and hike back out (2 hours+) will mean over 7 hours before the patient is evacuated. Their injury may need treatment sooner than that. You also consider your resources, do you have the necessary equipment, manpower, and experience to safely evacuate the person given the current trail and weather conditions. If you do evacuate the person, take the time to plan out the best route keeping in mind patient condition, distance, terrain, etc. Depending on the situation, you might choose the shortest route, the quickest route, or a longer route that poses less threat to the patient's condition. Use the evacuation flow chart to determine how to deal with an evacuation situation.

Emergency Response Flow Chart



Possible Evacuation Scenarios

Person Can Walk Out On Own Power	Person Can Walk Out with Assistance	Person Cannot Walk Out
<ul style="list-style-type: none"> The person's medical condition would not be compromised by walking out. This may necessitate taking all the person's equipment. Ex. Stomach ailment, mild allergic reaction, minor laceration. 	<ul style="list-style-type: none"> If the distance is not too great, the person may be able to hike out if carrying no weight and with assistance. This is to be attempted only as long as it does not aggravate the individual's condition. The person must be constantly monitored. 	<ul style="list-style-type: none"> The injury/illness would be aggravated by walking out or movement is contraindicated. Do not attempt a litter evacuation unless you have the necessary equipment, experience, and manpower, otherwise you risk additional injury to your patient as well as placing other members of the group at risk (see Dynamics of Accidents Model page 00). In this case a litter evacuation by skilled rescue personnel (rangers, first aid squad, etc.) is required. Send for help

Choosing to Evacuate

If you have determined that it is medically appropriate to evacuate your patient, you need to determine whether or not you have the skills, the time and the manpower to perform the evacuation safely. Ask yourself these questions.

_____ How much daylight do you have?

_____ What is the weather? Is it changing? For the worse?

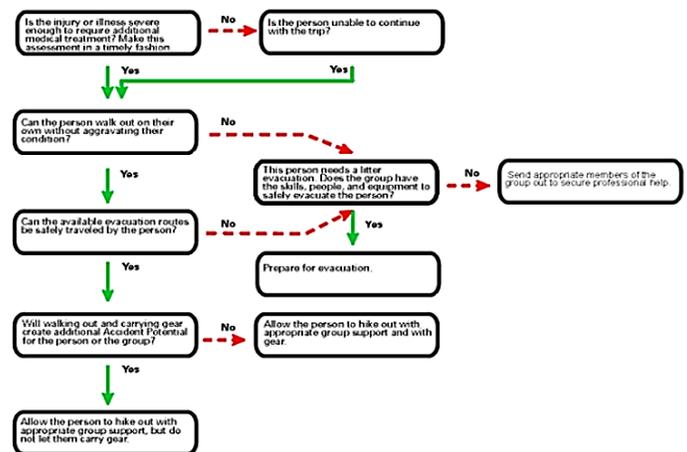
_____ Can you continue to provide the necessary first aid treatment and monitoring during the evacuation?

_____ What if your patient's condition deteriorates? Would it be more difficult to treat him/her once you start hiking out?

_____ How many people do you have to do the evacuation? For a litter evacuation you should plan to have a minimum of 3 teams of 6-8 people rotating through the litter carry.

Evacuation Flow Chart

Evacuation Plan Flow Chart



Identify exact location and phone number. Can you call back? If not determine a time or plan for the caller to contact you again.

Interview caller to determine problem

Leaders may underestimate the nature of the problem so a conservative medical response is the best course of action.

Triage problem

Class I - minor medical problem. Person can remain on the trip.

Class II - minor medical problem. Person must be treated or evaluated at medical facility. Discharge and return to trip likely. Anything above Class II requires a call to McCosh Health Center.

Emergency Call - Ins/Rescue

In the event of an emergency one of the most important components is how you handle the incoming call. You need to gather sufficient information to determine the nature of the problem and to select the most appropriate responses.

In order to categorize the nature of the response we use an adaptation of the International Scale of River Difficulty which is used to rate whitewater rivers on a scale from Class I to Class V. As you will see below, we use this scale to establish responses levels for Evacuation, Medical Response, and Notification.

Identify caller

Class III - moderate medical problem. Person must be treated or evaluated at medical facility. Discharge and return to trip uncertain.

Class IV - serious medical problem. Person must be treated or evaluated at medical facility. Discharge and return to trip unlikely.

Determine appropriate evacuation response

Class I - hikes out on own power

How long will this take?

What if it takes longer?

What if patient's condition deteriorates?

Class II - hikes out with assistance

How long will this take?

What if it takes longer?

What if patient's condition deteriorates?

Class III - needs to be picked up by vehicle

How long will this take?

What if it takes longer?

What if patient's condition deteriorates?

Class IV - needs litter evacuation

How long will this take?

What if it takes longer?

What if patient's condition deteriorates?

Class V - needs helicopter airlift

How long will this take?

What if it takes longer?

What if patient's condition deteriorates?

Determine appropriate professional medical response

Class I - person seen on return to campus

Class II - leaders or support drives person to hospital

Class III - EMS meets groups at trailhead

Class IV - EMS sent in to group

Class V - Advanced Rescue Team or helicopter required

Notifications (each higher level is cumulative of the levels beneath)

Family members

Follow-up

How is the group doing? Do they need to be evacuated for emotional support?

Will the group need follow-up support and/or counseling upon return to campus?

Will the leaders need follow-up support and/or counseling upon return to campus?

Triage

The purpose of Triage is to determine the nature and extent of injury or illness. In the case of multiple victims, it is used to prioritize treatment. As you take an emergency phone call, you need to gather information to do your own triage of the situation.

1. Get full SOAP Note from Leader

- History
- Vitals
- Problem list
- Anticipated Problem list

2. Determine exact location of the group.

- Where was the group when the messengers left?
- How far are they from the trailhead?
- What other options are there for reaching the patient? What is the group doing (staying put or hiking out?)
- How will the time lengths of different evacuation modes affect the medical condition/treatment?

3. Contact outside experts as needed to develop emergency response plan

- Based on problem as defined in #1 and #2 determine the "need for speed."
- Implement the appropriate professional medical response as indicated above.

Communications and Navigation

Recommended Communication Equipment

Motorola T600 H20 2-Way Radio	Garmin inReach Mini
 <p>Group will be equipped with two way radios for communications and emergency procedures. Range of up to 35 miles (may vary depending on terrain and conditions); compatible with any radio regardless of brand.</p> <p>Motorola T600 H20 2-way radios will keep you in contact with your adventure partners on land or water, thanks to a 35-mile range and a floating, waterproof design and LEDs that light up in water. An emergency alert button transmits an alert siren followed by spoken or incidental sounds to warn others of your peril, and has a built-in LED flashlight for emergencies.</p> <p>Push-To-Talk (PTT) power boost allows you to extend the transmission range by increasing the transmitter power output. Hands-free communication is provided by iVOX/VOX, which acts like a speakerphone to keep your hands free as you hike</p>	 <p>inReach Mini is your go-to connection for maintaining off-the-grid contact. It's our palm-sized satellite communicator for adventures where size and weight matter. inReach Mini lets you send and receive text messages, track and share your journey and, if necessary, trigger an SOS alert to contact the GEOS 24/7 emergency response team. With inReach connectivity, your family and friends will know they can stay in touch globally.</p> <ul style="list-style-type: none"> • Small, rugged, lightweight satellite communicator enables two-way text messaging using the 100% global Iridium network (satellite subscription required) • Trigger an interactive SOS to the 24/7 search and rescue monitoring center (satellite subscription required) • Access downloadable maps, U.S. NOAA charts, color aerial imagery and more by using the free Garmin Earthmate app and compatible devices • Optional inReach weather forecast service provides detailed updates directly to your inReach Mini or paired device; basic and premium weather packages available • Send and receive inReach messages through compatible Garmin devices, including connected wearables and handhelds
Emergency Frequency:	Garmin Link for Tracking:
Ranger Frequency:	

Recommended Tracking & Emergency Signal Devices

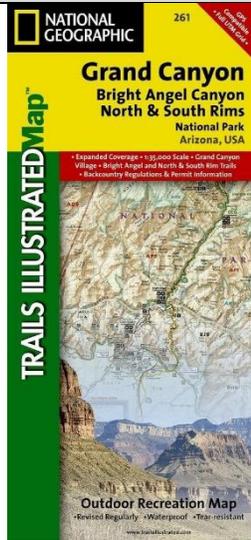
Garmin Rino 755t
 <p>We will have one Rino device for navigation, gps tracking and emergency communications. High-sensitivity GPS with GLONASS satellite reception tracks satellites in more challenging environments than GPS alone.</p> <p>Powerful, 5 watt FRS/GMRS 2-way radio lets you communicate by voice call or unit-to-unit text messaging. 3 in. color touch-screen with dual orientation and sunlight-readable display.</p> <p>Bluetooth® connectivity supports a wireless headset (not included) for improved voice communication.</p> <p>3-axis compass with accelerometer and barometric altimeter sensors. NOAA weather radio, Active Weather forecasts and animated weather tracking help you stay one step ahead of changing conditions.</p> <p>Geocaching Live connects with with Geocaching.com to download the caches you want while you're on the go.</p> <p>Position Reporting shows you the location of other Rino users on the same channel and lets you alert them if you need help.</p>

Note: AcadianX Guides are equipped with all mentioned gear.

Recommended Navigation Tools

Topographic Trail Map

National Geographic Trails Illustrated Topo Map



Learning how to navigate with a paper map is an essential skill. A topographic map is designed to show the physical features and terrain of an area, which is what makes them ideal for backpackers. They're different from other maps because they show the three-dimensional landscape: its contours, elevations, topographic features, bodies of water, and vegetation. Simplified trail maps—like the JPEG images you might find on a national park's website—don't include all the information you need in order to navigate. No elevation data, no magnetic declination, and much fewer symbols. If you get lost, these trail maps won't help you find your way out. A topographic map offers a wealth of orienteering information—not just elevation and distance, but changes in vegetation and even human-made structures. It's enough to plan an entire trip in advance or to find your way in a pinch.

Handheld Navigation Device

Garmin GPSMap



Precise navigation meets global communication in the rugged GPSMAP 66i button-operated GPS handheld and satellite communicator¹ featuring Garmin TopoActive mapping and inReach[®] technology.

- Send interactive SOS alerts anytime, from anywhere in the world.
- No matter where you are, two-way messaging lets you connect to the ones who matter.
- Let loved ones know precisely where you're roaming with location tracking and sharing.
- Know the terrain before you're in it, with preloaded TopoActive maps of the U.S. and Canada.
- Stay out there longer with up to 35 hours of battery life in tracking mode and up to 200 hours in Expedition mode.

Navigation Enabled Watch

Garmin Fenix



- Ultimate multisport GPS watch with full-color TOPO U.S. mapping, routable cycling maps and other outdoor navigation features
- Fit for adventure with rugged design that features stainless steel bezel, buttons and rear case: Physical size 5.1 x 5.1 x 1.8 cm; Weight - silicone band: 98 g ; metal band: 196 g
- Built-in navigation sensors include GPS and GLONASS capability

to track in more challenging environments than GPS alone as well as 3-axis compass, gyroscope and barometric altimeter

- Preloaded run profiles: running, treadmill running, trail running. Put key stats at your fingertips with the performance widget that shows your training status, training load and more
- Provides built-in mapping and navigation features to help keep you oriented and on course. Full-color TOPO mapping comes preloaded with map data optimized for at-a-glance navigation and location tracking.
- Features multinetwork (GPS, GLONASS and Galileo) satellite reception to track in more challenging environments than GPS alone. In addition to map-based guidance, each watch also provides a set of ABC (altimeter, barometer and compass) sensors for outdoor navigation. The built-in altimeter provides elevation data to accurately monitor ascent and descent for activities such as hiking, while the tilt-compensated three-axis electronic compass keeps your bearing — whether you're moving or not.

Note: AcadianX Guides are equipped with all mentioned gear.

Clothing Essentials

Layering Basics

When you step outdoors, the ancient art of layering becomes your smart-technology thermostat. This tried-and-true strategy lets you regulate comfort by slipping layers on and off as your activity level or the weather changes.

How to layer: To understand layering your clothing for outdoor activities, you need to know the function of each layer:

1. **Base layer** (underwear layer): wicks sweat off your skin
2. **Middle layer** (insulating layer): retains body heat to protect you from the cold
3. **Outer layer** (shell layer): shields you from wind and rain

Even if you don't wear all three layers at the outset, it's a good idea to take all layers on every outing: You can peel off layers if things heat up, but you can't put on layers that you didn't bring along.

Cold, Rainy and Hot Layering Examples

We're often asked about how to layer for certain weather. Any suggestions based solely on weather, though, overlook key considerations, like exertion level and personal metabolism. The examples below are for a hypothetical person who doesn't run particularly hot or cold, who is going on an intermediate-level half-day hike:

Cold-weather layers:

Midweight polyester long underwear top and bottom; a jacket with synthetic insulation; midweight fleece pants; waterproof/breathable rain jacket and pants.



Rainy-weather layers (cool temps):

Lightweight polyester long underwear top and bottom; lightweight fleece jacket; synthetic hiking pants; lightweight waterproof/breathable rain jacket and pants (with plenty of vents).



Hot-weather layers:

Polyester briefs and a short-sleeve synthetic Tee; convertible nylon hiking pants; lightweight wind jacket.

You have literally dozens of alternatives and options for each of these layers. The trick is to go with options that

make the most sense for where you're headed, what you're doing and what you're able to spend.

It's also key that you take the time to adjust layers as conditions change. If the rain and wind let up, remove your shell. If hiking alone isn't warming you up, add a middle layer. And many people add a middle layer (on top) and/or outer layer at every rest stop, just to avoid getting chilled.



Base Layer: Moisture Management

As the next-to-skin layer, a base layer's job is moving perspiration away from your skin, aka "wicking." In cool or cold conditions, wicking long-underwear-style base layers are needed to keep your skin dry. That's essential because it helps to keep you from becoming chilled or worse—hypothermic.



Base layer materials: You have a wide range of fabric options, including synthetics like polyester and nylon, or natural fibers like merino wool and silk. Though there are subtle differences in wicking and drying for each material, and in odor retention and durability, a lot of people simply go with their personal fabric preference.

Base layer weights: Your options are straightforward—lightweight, midweight and heavyweight—though you might also see terms like "ultralightweight" on one end of the spectrum or "expedition weight" at the other. Generally, heavier (thicker) fabrics keep you warmer, though that's not really the primary purpose of a base layer (wicking is).

Warm-weather base layers: Long underwear might not be appealing when temperatures soar, but having dry skin generally makes you more comfortable in all conditions. (No one likes having clammy, drippy skin.) Here are some other warm-weather base-layer considerations:

- Any summer shirt is really a base layer, so look for ones that offer wicking.
- Some shirts designed for warm weather spread the moisture out through the fabric, where evaporation helps with cooling. They won't really be marketed as a base layer, but as your next-to-skin layer they can increase your comfort in hot conditions.
- Underwear like briefs, boxers and bras should also wick (the same is true when you wear it under your long underwear in winter).
- UPF-rated base layers give you added sun protection.
- Cotton, considered a no-no in winter because it sponges up water and can chill you, can be okay if you're outside on a super-dry, scorching summer day.
- Emerging fabric technologies, like wool infused with ceramic particles, will offer base layers that literally cool your skin for greater comfort.

Middle Layer: Insulation

The insulating layer helps you retain the heat that's radiated by your body. The more efficiently this layer traps that heat, the warmer you'll be.



Middle layer materials: Just as with base layers, you have a broad range of options, both synthetic and natural. In general, thicker (or puffier) equals warmer, though the efficiency of the insulating material is also important. Below are some common middle layer materials, though other options, like wool and wool-blend tops, are also available.

Here are some of your primary choices for middle layers:

Polyester fleece: Available in lightweight, mid-weight and heavyweight fabrics (sometimes marketed as 100, 200 and 300 weight), fleece stays warm even if gets damp, and it dries fast. Fleece also breathes well, so you're less likely to overheat in it.

The flipside of breathability, though, is that wind blows right through, which can steal warmth. That's why you need to have a shell layer with you if you're going with a fleece middle layer. (Another option is to wear wind fleece, which includes an inner wind-blocking membrane.)

Down insulated jackets: Highly compressible for easy packing, down offers more warmth for its weight than any other insulating material. The efficiency of down is measured in fill power—from 450 to 900. Because down is always inside a shell material, down jackets also offer some water and wind resistance. The drawback to down is that it loses insulating efficiency when damp.

Synthetic insulated jackets: Synthetic insulations have long tried to mimic down's efficiency, coming closer to that standard every year. And, while synthetics don't compress as well as down, they're a popular option for rainy conditions because they retain insulating ability when they get damp. And, like down, synthetic insulation is always inside a shell material that offers added water- and wind resistance.

Outer Layer: Rain and Wind Protection (Shell)

The outer layer (or shell layer) protects you from wind, rain and snow. Shells range from pricey mountaineering jackets to simple wind-resistant jackets. Most allow at least some perspiration to escape; virtually all are treated with a durable water repellent (DWR) finish to make water bead up and roll off the fabric.

Your outer shell is an important piece in stormy weather, because if wind and water are allowed to penetrate to inner layers, you can get seriously chilled.



Shells can be lumped into the following categories:

Waterproof/breathable shells: Your most functional (and expensive) choice, this type of shell is your best option for full-on squall conditions. Generally, pricier equals drier, though higher priced shells are often more durable as well.

Water-resistant/breathable shells: These are more suited to drizzly, breezy conditions and high

activity levels. More affordable than waterproof/breathable shells, they're typically made of tightly woven nylon or polyester fabrics that block light wind and light rain.

Soft shells: These emphasize breathability. Most feature stretch fabric or fabric panels for added comfort during aerobic activities. Many combine light rain and wind protection with light insulation, so they in effect combine two layers into a single jacket.

Waterproof/nonbreathable shells: These bare-bones shells are okay for rainy days with light to no activity (e.g., fishing, spectating). They are typically made of a coated nylon, which is water- and windproof. If you exert yourself while wearing one, you'll probably end up saturating your underneath layers with perspiration.

Recommended Clothing Brands and Considerations

Clothing Type	Style	Brands	Notes
Hiking Shoe/Boot	<i>Boot/Shoe/ Trail Runner</i>	Salomon Merrel Obre La Sportiva	Some people like to wear a pair of light trail running shoes instead of boots. Most prefer boots in order to keep ankle stable. Feet will get wet so Gor-tex lined are recommended.
Base Layers	<i>Torso</i>	Tesla Patagonia Norrna SmartWool	Must wick away moisture, contact the skin, and recommended to have anti-microbial properties.
	<i>Legs</i>	Tesla Under Armor	Must wick away moisture, contact the skin, and recommended to have anti-microbial properties.
Middle Layer	<i>Fleece/Puffys/ Synthetics</i>	Mountain Hardware REI Co-Op North Face Arc'teryx Patagonia	Insulation layer for thermal protection. Can include fleece and puffy jackets. A synthetic fill is recommended for damp conditions
	<i>Leggings</i>	SmartWool Ortovox Outdoor Research	Insulation layer for thermal protection.
Outer Layer	<i>Hardshell/Softshell/ Windshell</i>	Patagonia Outdoor Research Mountain Hardware Rab Arc'teryx Mammut	Should be durable, moisture resistant, quick drying and light weight.
	<i>Pants/Shorts</i>	Kuhl Outdoor Research REI Co-Op Arc'teryx	Should be durable, moisture resistant, quick drying and light weight.
Briefs/Boxers	<i>Synthetic/ Merino Wool</i>	Exoficcio Saxx (Quest 2.0) SmartWool Icebreaker	Needs to be synthetic, anti-microbial, breathable, and moisture wicking. At least 3 pairs.
Socks	<i>Hiking Sock</i>	Smart Wool Darn Tough Wigwam	Good hiking socks are a must. A two-layer system is recommended to reduce friction. A good Merino Wool is recommended. You will need at least 3 pairs.
	<i>Sock liner</i>	REI Co-Op Injinji Sealskinz	
Head Gear	<i>Beanie</i>	Smartwool Outdoor Research North Face	Should be snug on your head and keep you warm and effectively cover your ears.
	<i>Neck Gaiter/ Cravat</i>	Buff	Most versatile piece of clothing you will have. A must on the trail.
Gloves	<i>Hiking</i>	<i>Any reasonable brand should do</i>	Gloves - a good pair of padded fingerless biking gloves will help prevent blisters when using trekking poles.
	<i>Liner</i>	Outdoor Research Manzella Sealskinz Arc'teryx	Should keep your hands warm up to 30° F, recommend to be water resistant and touch screen compatible
	<i>Thermal Gloves/ Mittins</i>	Outdoor Research Black Diamond Manzella Hestra	Waterproof is preferable. Need to keep you warm even when wet outside.
Rain Shell	<i>Jacket/Pants</i>	REI Co-Op Arc'teryx Outdoor Research Rab Marmot	The rain shell needs to breathe properly allowing heat to escape. If not you will become overheated when hiking.

Recommended Clothing Retailers and Websites

Below is a list of suggested retailers where you can find your gear and websites to help you research and choose your best option:

1.  REI Co-Op <https://www.rei.com/>
2.  Backcountry.com <https://www.backcountry.com/>
3.  Amazon <https://www.amazon.com/>
4.  Outdoor Gearlab <https://www.outdoorgearlab.com/>

Recommended Local Clothing Retailers – Lafayette, Louisiana

1.  Pack & Paddle <https://packpaddle.com/> (Highly Recommended)
2.  The Backpacker <https://backpackeroutdoors.com/>
3.  Field & Stream <https://www.fieldandstreamshop.com/>

Gear Essentials

Gear Basics

Camping is like staying in a primitive cabin, minus the cabin itself. So, in addition to your tent, pack as though you're going to stay someplace where there's little or no furniture, no electricity, no stove or refrigerator, and the cupboards are bare. In a developed campground you will have running water and a community bathroom a few hundred yards away. A typical campsite has a table (if not, you'll want to bring one), a place to park a car and a place to pitch a tent.

You can keep your initial investment low if you borrow or rent the priciest items—the tent and your sleeping bags and pads. That's a better strategy than paying bottom dollar for something that might not even last for a single camping trip. That said, if you are ready to invest in your very own camping gear, here are a few tips to help you decide exactly what to buy.

- **The tent:** If your budget can go a little bigger, then go bigger with your tent: A 3-person tent gives a cozy couple a little extra breathing room, and a family of four can more easily achieve harmony in a 6-person tent. You can also check the tent's peak height if you want a tent that you can stand up in (that can make getting dressed and moving around easier to do). Vestibules outside the doors are nice for stowing muddy shoes and having two doors can help you avoid climbing over sleeping tent-mates for late-night bathroom breaks.

Tip: Practice setting up your tent at home first. And don't forget a properly sized footprint—if you have a ground sheet that's too small, it won't fully protect your tent floor, and if you have one that's too big, it can catch rainwater and pool it underneath your tent.

- **The sleeping bag:** When selecting your bag, temperature rating is a good place to start. If you're planning on only going fair-weather camping, a summer bag is probably all you'll need, but a 3-season bag will give you more

leeway for unpredictable shoulder-season weather. If you're always cold (or always hot), adjust accordingly. And no need to go with a super-snug mummy bag like backpackers use, when a rectangular camping bag will give your body more room to roam.

- **The sleeping pad:** A good sleeping pad is like the mattress on a bed, but it also has high-tech insulation to prevent you from losing body heat on the cold ground. Big air mattresses, like what your guests sleep on at home, might look temptingly plush, but their lack of insulation will likely leave you feeling cold. Take a look at specs when comparing sleeping pads—if one is thicker, longer or wider and has a higher insulation value (known as the R-value) — it will be more comfortable and warmer.

Tip: Set your tent, bag and pad up early, so you don't have to do it in the dark.

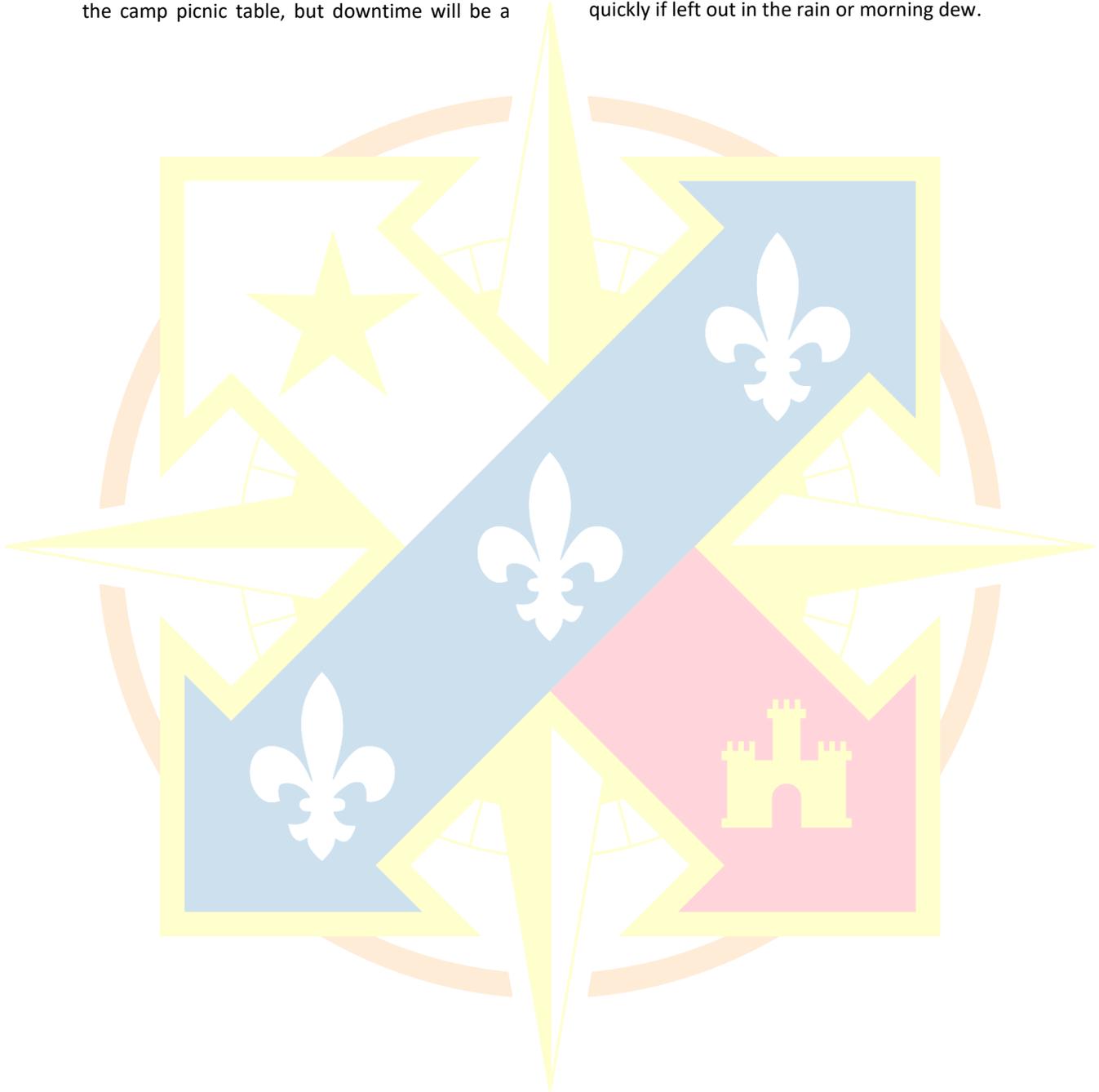
- **Lighting:** Campsites don't have illumination, so you have to bring your own. A flashlight is OK, but a headlamp frees up your hands for camp tasks. A lantern is nice for ambient light. (You can also build a campfire, but watch for fire restrictions.)
- **Stove:** A classic two-burner propane camp stove should do the trick. You won't spend a fortune and you can cook breakfast and prepare your morning brew at the same time. Bring at least a couple of fuel canisters and a lighter, and fire it up once at home to be sure you know how it works.
- **Pots, plates, cups and sporks:** You gotta bring everything necessary for food prep and consumption. You can raid your home kitchen, just don't bring the fine china. And, unless you plan to take dirty dishes home, you'll need a scrubber, biodegradable soap, a towel and a small washtub or two (one for dirty, one for clean).

Tip: Pack all your kitchen gear in a large clear plastic bin with a lid. It's easy to store away at home and everything will be ready next time you want to camp.

- **Camp Chairs:** These are optional if you can sit at the camp picnic table, but downtime will be a

little more enjoyable when you have a comfy place to perch. (And a hammock is even better, especially for afternoon naps.)

Tip: Mesh camp chairs let water drain easily and they dry quickly if left out in the rain or morning dew.



Recommended Gear Brands

Gear System	Style	Brands	Notes
Packing	<i>Backpack</i>	Osprey Granite Gear (UL) Gossamergear (UL)	Pack size is dependent on trip length. For a 3 to 6 day hike a 60 L or larger pack is preferred. Look for good suspension with a breathable back. Should support hydration system.
	<i>Daypack</i>	Osprey	Hydration system is key.
	<i>Compression/Stuff Sacks</i>	Sea to Summit	These will protect your gear within your pack and help to keep it organized. Waterproof.
	<i>Pack Cover</i>	Osprey REI Co-Op	Make sure the cover fits completely around your pack when fully loaded.
	<i>Kit Bags</i>	Osprey	These are handy to organize small items in your pack
Shelter	<i>Double Wall Tent</i>	REI Co-Op Big Agnes Nemo Kelty Sierra Designs	1 man tent is recommended but a 2 man is nice if you prefer the extra room. Pay attention to the total weight.
	<i>Single Wall Tent & Tarps</i>	ZPack (UL) Six Moon Designs (UL) Tarptent (UL) Mountain Laurel (UL) Gossamergear (UL)	These are lightweight options for ultralight hikers. They are prone to condensation. They require advanced skill levels to pitch and use effectively.
	<i>Bivy</i>	REI Co-Op Outdoor Research	These are hot and stuffy. Can be claustrophobic. Virtually no living space.
	<i>Hammock</i>	Clark Products Dutchware ENO Hennessy Warbonnet	In order for a hammock to be an effective shelter you need to have a complete system that is comprised of a Waterproof tarp, a Top-quilt or sleeping bag, The Hammock itself with built-in or separate bug mesh, a Under-quilt or sleeping pad, and a Suspension system
Sleep System	<i>Sleeping Bag</i>	Big Agnes Marmot REI Co-Op Nemo Sierra Designs Feathered Friends (UL) Enlightened Equipment (UL)	20-degree rating is preferred. Major differences are between down or synthetic. Each has its benefits.
	<i>Sleeping Pad</i>	Therm-a-Rest Klymit Nemo	Pay attention to thermal rating. Also note the durability. A leaky pad during winter camping can suck.
	<i>Camp Pillow</i>	Sea to Summit Klymit	Should be small enough to fit inside your bag.

Gear System	Component	Brands	Notes
Cooking	<i>Canister Stove</i>	Soto MSR Snow Peak	Simplest option.
	<i>Canister System Stove</i>	Jetboil	Convenient integrated system. Most efficient.
	<i>Alcohol/Solid Fuel Stove</i>	Trail Designs (UL)	This is the most lightweight option. Not as efficient as the others.
	<i>Cookware</i>	GSI Snow Peak Toaks	Titanium works best. Size is based on your needs.
	<i>Utensils</i>	Snow Peak Sea to Summit	Need to be lightweight with a small footprint. I prefer one with a long handle.
Health, Hygiene & Safety	<i>First Aid Kit</i>	Adventure Medical Kits Surviveware	Size of kit is based on duration of your trip and number of people in your group.
	<i>Wipes</i>	Dude Wipes Sea to Summit	Must be biodegradable.
	<i>Water Filter</i>	Sawyer Katadyn Platypus	It is the most efficient method but is only effective against large pathogens but not effective against viruses. I prefer a gravity fed filter as opposed to inline.
	<i>Sunglasses</i>	Kaenon Costa Del Mar	Ensure they have UVA and UVB protection.
Personal Gear/Tools	<i>Gaiters</i>	Outdoor Research Rab	Great for mud and snow. Style is based on personal preference.
	<i>Trekking Poles</i>	Black Diamond Leki	Need to be durable and dependable. Don't buy cheap, they WILL break.
	<i>Camp Chair</i>	TravelChair REI-Co Op Big Angles	The lighter the better. Not a necessity.
	<i>Head Lamp</i>	Black Diamond Petzl	Having a locking mechanism can save your butt. Pay attention to Lumens and battery life.
	<i>Multi-tool</i>	Leatherman Gerber	Doesn't have to be overly fancy. Just needs to be light and have the basics.
Navigation/ Electronics	<i>Radio</i>	Motorola	Used for communicating with other members of your team. Need to be weatherproof and at least splash resistant.
	<i>Battery Pack Charger</i>	Anker	The more charges it has, the heavier it will be so find a balance. Keeping it in a protective case with all the necessary wires is ideal.
	<i>Solar Power</i>	X-Dragon BigBlue ECEEN	This option is dependent on weather so be weary. The larger the solar panel the more efficient it is.
	<i>GPS</i>	Garmin	These are nice to have and are durable. However, a well-protected phone can be a viable option.
	<i>PLB & Satellite Messaging</i>	Garmin Spot	This is a must and could save your life one day.
	<i>GPS/Altimeter Sports Watch</i>	Garmin Suunto	These are a great tool and convenient when on the move. I have tested the Garmin Fenix for 5 years and it has never let me down.
	<i>Compass</i>	Suunto Silva Brunton	You want a baseplate compass specific for wilderness navigation and preferably with adjustable declination. Having an attached sighting mirror is a nice option but not essential
	<i>Maps</i>	USGS Topographic National Geographic Trail Maps	Keep in mind when using NatGeo Maps that the scale is not consistent from map to map. When orienting using their maps adjust your measurements accordingly.

Recommended Gear Retailers and Websites

Below is a list of suggested retailers where you can find your gear and websites to help you research and choose your best option:

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2.  Backcountry.com <https://www.backcountry.com/>
3.  Amazon <https://www.amazon.com/>
4.  Outdoor Gearlab <https://www.outdoorgearlab.com/>

Recommended Local Gear Retailers – Lafayette, Louisiana

1.  Pack & Paddle <https://packpaddle.com/> (Highly Recommended)
2.  The Backpacker <https://backpackeroutdoors.com/>
3.  Field & Stream <https://www.fieldandstreamshop.com/>

Total Base Weight _____ lbs.

AcadianX Gear Checklist (3 – Season/Backpacking)

Packing System:

- Backpack _____ lbs.
- Daypack* _____ lbs.
- Compression/Stuff Sack _____ lbs.
- Pack/Rain Cover _____ lbs.

Shelter System:

- Tent/Hammock _____ lbs.
- Tent Pad _____ lbs.

Sleep System:

- Sleeping Bag _____ lbs.
- Sleeping Pad _____ lbs.
- Camp Pillow* _____ lbs.

Kitchen System:

- Stove/Burner _____ lbs.
- Fuel _____ lbs.
- Pot/Cup _____ lbs.
- Utensil _____ lbs.
- Fire Kit** _____ lbs.

Personal Gear/Tool System:

- Trekking Poles* _____ lbs.
- Gaiters* _____ lbs.
- Camp Chair* _____ lbs.
- Knife _____ lbs.
- Multi-tool _____ lbs.
- Traction _____ lbs.
- Repair Kit ** _____ lbs.

Navigation/Electronics System:

- Topo/Trail Map _____ lbs.
- Compass _____ lbs.
- GPS _____ lbs.
- PLB & Sat. Messaging _____ lbs.
- Waterproof VHF Radio* _____ lbs.
- Battery Charging Kit** _____ lbs.
- Phone* _____ lbs.

- Flashlight/lamp _____ lbs.
- Headlamp _____ lbs.

Health, Hygiene, and Safety System:

- First Aid Kit _____ lbs.
- Water Bottle/Bladder _____ lbs.
- Water Treatment _____ lbs.
- Hygiene Kit** _____ lbs.
- Foot Care Kit** _____ lbs.
- Sunscreen & Lip Balm _____ lbs.
- Insect Repellent _____ lbs.
- Personal Medication _____ lbs.
- Sunglasses _____ lbs.
- Pack Towel _____ lbs.

Clothing System:

- Base Layer – Torso _____ lbs.
- Base Layer – Legs _____ lbs.
- Insulation Layer – Torso* _____ lbs.
- Insulation Layer – Legs* _____ lbs.
- Outer Layer – Torso _____ lbs.
- Outer Layer – Legs _____ lbs.
- Briefs x 3 _____ lbs.
- Socks x 3 pair _____ lbs.
- Hiking Boots _____ lbs.
- Belt _____ lbs.
- Hat _____ lbs.
- Beanie* _____ lbs.
- Hiking Gloves _____ lbs.
- Thermal Gloves* _____ lbs.
- Shell Layer _____ lbs.
- Sleep Clothes _____ lbs.
- Camp/Water Shoes* _____ lbs.

*Optional depending on temperature and weather conditions or your personal/team needs.
 **Refer to the AcadianX Kit list

AcadianX Gear Checklist (Kit List)

Fire Kit: Total wt: _____ lbs.

- Lighter/ignition Source _____ lbs.
- Fire Starter _____ lbs.
- Bellow _____ lbs.

Battery Charging Kit: Total wt: _____ lbs.

- Portable Power Bank _____ lbs.
- Solar Panel _____ lbs.
- Charging Wires/Cords _____ lbs.

Repair Kit: Total wt: _____ lbs.

- Aquaseal _____ lbs.
- Super Glue _____ lbs.
- Duct Tape _____ lbs.
- Tenacious Tape Patches _____ lbs.
- Needle & Thread _____ lbs.
- Parachute Cord _____ lbs.
- Cable Ties _____ lbs.
- Replacement Parts _____ lbs.
- Spare Batteries _____ lbs.

Hammock System: Total wt: _____ lbs.

- Tarp _____ lbs.
- Netting _____ lbs.
- Hammock _____ lbs.
- Under Quilt _____ lbs.
- Suspension System _____ lbs.

Tarp System: Total wt: _____ lbs.

- Tarp _____ lbs.
- Ground Pad _____ lbs.
- Bug Netting _____ lbs.
- Stakes _____ lbs.

Hygiene Kit: Total wt: _____ lbs.

- Toothbrush _____ lbs.
- Toothpaste _____ lbs.
- Floss/toothpick _____ lbs.
- Personal Wipes _____ lbs.
- Sanitizer _____ lbs.
- Trowel _____ lbs.
- Blue Bags _____ lbs.

*Use the total kit weight and add to your primary gear list.

Foot Care Kit: Total wt: _____ lbs.

- Leukotape _____ lbs.
- Duct Tape _____ lbs.
- Sawyer Blist-O-Bans _____ lbs.
- Benzoin _____ lbs.
- Foot Balm _____ lbs.

Logistics

Travel

We can travel to the Aspen area by vehicle. The guide will have a vehicle large enough to transport all the participants and gear. We will meet in Denver at a predetermined place and time for pickup.

Departure

Route: Denver to Aspen Area
Date: 7/4/2021
Depart Time: _____
Arrival Time: _____

Return

Route: Aspen Area to Denver
Date: 7/10/2021
Depart Time: _____
Arrival Time: _____

Lodging

There is plenty of available lodging in the Everglades National Park area. Lodging information here:

Lodging 1 Name: _____ Check-In Date: _____
Lodging 2 Name: _____ Check-In Date: _____
Lodging 3 Name: _____ Check-In Date: _____

Transportation

Vehicle needs to fit all members of the expedition with enough room to also haul all your gear and supplies.

Rental Service: _____ Pickup Location: _____
Type of Vehicle: _____

Shuttle Plan

Shuttle Service: _____ Pickup Date/Time: _____

Gear Rental

Outfitter Service: _____ Pickup Date/Time: _____
Type of Gear: _____

Preparation & Training

Study the map

Provided in this loadout are maps of the route which you can use to familiarize with the journey. Study the layout of the land and all the significant land features. Use mapping tools such as Google Earth to help visualize your journey.

Submit Permit Requests

You need to know when permits are being accepted and to be sure to submit them as soon as you can in order to secure the desired sites. Refer to the [Fees and Passes](#) section of this loadout for more details.

Book Travel and Lodging Arrangements

Travel and lodging arrangements should be made 3 months prior to departure. Ensure your vehicle has the capability to hold all your gear and get you where you're going. You can input your travel details in the [Logistics](#) section of this loadout once you have them.

Trip Insurance

For your protection, we strongly recommend the purchase of trip insurance. It will protect you against financial loss in the event of trip cancellation or interruption, medical expenses, travel delay, emergency evacuation or other circumstances. Follow the following link to find out more:

<https://www.imglobal.com/travel-insurance>

Gear up

Begin purchasing needed gear. Refer to the [Gear Loadout](#) section of this loadout to determine your gear needs. Use the gear checklist to determine the total weight of your gear. For a multi-day trip your gear should be within the 30 to 35 lb. range without food and water. Assume 20 lbs. for water.

Learn your gear

Know how to setup and use your gear. Pull all your gear out, ensure it all works, and calculate the total weight (you can use the [Gear Checklist](#) to record weights). Become familiar with your pack. Find an efficient way to pack it that works for you.

Physical Self-Assessment

Request the AcadianX "MOUNTAINEERING PHYSICAL ASSESSMENT & BACKCOUNTRY READINESS QUESTIONNAIRE" to assess yourself.

Training

You need to prepare your body for carrying a heavy load for long periods of time. The "3 Way Training" program is a good basic program to help you meet that goal. This consists of training for three days a week doing 3 different exercises for a span of 3 months.

Day 1: Leg Training & Trail Run

Begin with leg training. This can consist of calisthenics, plyometrics, and strength training. Then follow up with a 2 – 3 mile trail run. Work on improving your time.

Day 2: Tower Day

This day consists of using a weighted pack or vest that is equivalent to the amount of weight you will be carrying and to climb a local parking tower. You can alternate between the ramps and the stairs or for more of a challenge you can use the stairs exclusively.

Day 3: Hiking Day

On this day grab your weighted vest or pack and head to the trail. Again you should have enough weight to match the weight you will carry on your trip. Refrain from using trekking poles because you don't want to train your body to become dependent on them. Again go for 2 to 3 miles or more at a time and pay attention to pace. Maintaining between a 2 – 3 mile and hour pace is ideal.

For more in-depth advice on training and ways to physically prepare yourself for the mountains follow the link below:

[Physical Training Fundamentals for Mountaineering](#)

Assessment Hike

When training to go on a long distance trek or a summit attempt it is good practice to go on an overnight hiking trip in full gear at least one month before your scheduled adventure. This is a great way for you to assess your performance and break-in or test out your gear. Try to at least simulate the distances you will cover in a single day. For example when training for the Zion Traverse Trek, I took our group on an overnight hiking trip to Chicot State Park. This hike featured a 20 mile loop that was close to home (we are Cajuns from South Louisiana) with a hilly topography that was ideal for assessing our performance. Because our average daily distance planned for Zion was 9 miles, the Chicot loop gave us an ideal proving ground by offering similar hiking distances. When the hike was over, based on the group's performance, I was confident this team was ready to tackle highlands and canyons of Zion National Park.

