



Mojave National Preserve

Issue 18 / Fall 2010

Wildflower season at Mojave National Preserve is truly a feast for the senses.

Desert Light Gallery

Since the turn of the last century, trans-continental railroads have promoted rail travel to national parks by producing framed prints and artwork advertisements that depict the beauty of these national treasures.

The tradition of close ties between the railroads, art, and national parks continues with *Face to Face: Mojave's Belly Flowers*, an exhibition at the Desert Light Gallery in the lower level of the Kelso Depot Visitor Center.

Mojave National Preserve invites desert travelers to experience the photography of Terry Ellis this fall. Her perspective on the life and landscape of this unique desert environ will be on display from October 2, 2010 - January 3, 2011.



TERRY ELLIS

Gay Matilda



TERRY ELLIS

Fanciful Clementine

The Joy of the Unexpected

DO YOU REMEMBER...

the last time you put on an old coat that hadn't been worn for a while, stuck your hand in the pocket, and pulled out a twenty dollar bill? Or you returned home from a trying day at work to find a phone message from a childhood friend you hadn't heard from in years. Or better yet, you jumped out of bed, having overslept, dressed in a frenzy and bolted out the door to work only to realize it was Saturday?

Often the unexpected can turn an ordinary day into an extraordinary one. Millions of people travel every year on interstate highways from Los Angeles to Las Vegas. Thousands of those people choose to take the road less traveled through what many have referred to as the "Lonesome Triangle." Bordered by I-15 on the north and I-40 on the south, Barstow at its apex and the Nevada state line at its base, this rough triangle of land is the third-largest unit of the National Park System in the contiguous United States.

For those who have ventured to cross this high desert, seeking no more than a shortcut, many have come away with the sense of an unexpected joy. I know that was the case for me when I began work here last fall.

As a ranger in Yellowstone, Glacier and Yosemite, my passion has always been for those mountainous parks, dense with forests and glacial lakes, vast with meadows and high-alpine tundra, rich with waterfalls and wildlife. So to come to the desert, 1.6 million acres of dry, desolate, barren flatland (or so I thought), was somewhat disheartening. But it wasn't long before my preconceptions of this high desert landscape were proven wrong.

The first sunrise breaking over a horizon delineated by 6,000-foot-high ranges caught my breath; the first sunset unobscured for hundreds of miles stopped me short; the night sky open in a full dome for the eye to see in every cardinal direction left me speechless. Water, though scarce, was not absent. Over 250 springs and seeps give evidence of an extensive system of perched aquifers just beneath the surface. Snow falls on a land whose elevation rises from 900 to nearly 8,000 feet. With a total of 8 to 10 inches of precipitation yearly, water is not non-existent, but definitely precious.

Life can be harsh and competitive as species vie for meager resources, and in that I began to see a tenacity and resilience in the life of this desert. Its allure and grandeur may not be like that of Yosemite or Yellowstone, but it's difficult to explain the pureness of silence only the desert can afford, and the subtle beauty that one finds only by taking the time to explore and immerse oneself in this place.

Mojave is unique in both its natural topography and its cultural diversity. Where the two meet is where the stories of this desert begin. Water plays a tremendous part in this chronicle of man and nature. It's what brought the Mojave across this land thousands of years ago and more recently the Chemehuevi. It's what led pioneers and explorers to follow in their footsteps. Its presence dictated where people would settle and how they would travel, and during the WWII boom years it gave rise to a company town of 1,500 to 2,000 hardy souls.

The town was called Kelso. It was built here, in the middle of the "Lonesome Triangle," in large part because of the presence of that incredibly valuable resource: water. Nearby springs at the base of the Providence Mountains provided the water necessary to power the Union Pacific's steam locomotives. En route from Los Angeles to Salt Lake City, these "iron horses" encountered the Cima grade. This 2.2 percent slope required the aid of helper engines and led to the construction of the building I'm in now, the Kelso Depot, built in 1924.

The distant blare of the horn, the roar of the engine, and the vibration of the windows announce the approach of a Union Pacific diesel train. The rhythmic clicks of the cars over the tracks, the squeaking of brakes, and then silence – a pure, complete silence that makes one strain to hear even the faintest sound. That silence broken by the roar of those locomotives may seem like an awful contradiction, yet both come together to tell the story of an oasis in the barren desert that really isn't all that barren. It's a place where you may find joy in the unexpected.

Jennifer Morrell
Park Ranger



NIPS/LATER

Welcome to Mojave!

As the superintendent of Mojave National Preserve, I want to extend my personal welcome to you and my hope that your visit to this special place will be rewarding. Cooler temperatures make fall and winter a wonderful time to visit the Mojave Desert, and the season's softening light offers a bolder, warmer palate for desert photographers, some of whose work can be viewed in the Desert Light Art Gallery.

Mojave's landscape varies tremendously as you travel around the preserve, and I encourage you to take short walks in various areas. There is a lot to see and experience. Inside this guide you'll find information on how to visit the Kelso Dunes, Cinder Cones and Lava Beds, and the Joshua tree woodland on Cima Dome. On the east side of the park, campgrounds, hiking trails, and cave tours are all available for those who have more time to explore.

Over 1,800 miles of dirt roads await desert explorers in street-legal vehicles, providing access to old mining sites, springs, and roadside campsites. Some routes require high-clearance vehicles, and road conditions change rapidly during rainy weather, so check with a ranger before heading out.

If you would like to learn more about what to see and do, talk to the rangers at the Kelso Depot Visitor Center or the Hole-in-the-Wall Information Center, visit our website, or call the headquarter's information desk. Mojave staff are eager to chat with you about your visit and share their excitement and knowledge of the area. In fact, in our spring visitor survey, they achieved a 98% good or excellent visitor satisfaction rate. We look forward to meeting you!

Dennis Schramm
Superintendent

3-Preserving the Past

Wind whistled through the warped and weathered walls, sunlight streamed down through broken roof shingles and cracked wallboard. The remains of an earlier era were nearly lost... Find out how Mojave National Preserve is carefully piecing together bits of high desert culture by restoring the structures where history was made.

4-Mojave by Car

Just getting around Mojave National Preserve can be a trial for some. But it need not be. Plan ahead and prioritize; familiarize yourself with Mojave's paved and dirt roads and the major sites to see along the way. And remember – you won't see it all in one day (but you can always come back)...

6-Chukar Hunting

"An experienced chukar hunter thinks about chukar country the same way a high-time pilot thinks about flight. He will love it, be drawn to it, hate to leave it, spend every possible minute in it – but..."

With 40 years of hunting experience, Pat Wray writes of the unique perspective in pursuing one of the greatest game birds ever introduced to this country.

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National Park Service
U.S. Department of the Interior

Mojave National Preserve

Established in 1994, Mojave National Preserve encompasses 1.6 million acres ranging in elevation from 800' near Baker to 7,929' at Clark Mountain. Although most of the park lies in the Mojave Desert, the southeast section grades into the Sonoran Desert, and elements of the Great Basin Desert are found at higher elevations east of the Granite, Providence, and New York mountains.

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The National Park Service cares for the special places saved by the American people so that all may experience our heritage.



Perspectives

From Cedar Canyon Road, looking north toward Fourth-of-July Canyon and east of Pinto Mountain one will find the illusive Drum Peak

Drum Peak Doesn't Measure Up to Clark Mountain After All

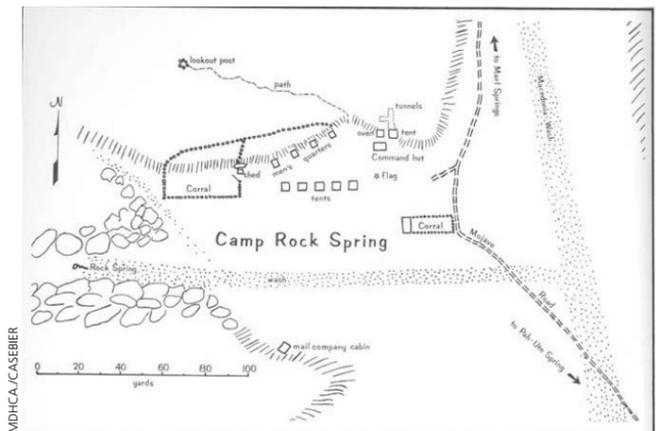
When I first came to Mojave National Preserve nearly a year ago, I studiously observed the skyline of the New York Mountain Range as I drove to and from work at the Kelso Depot Visitor Center. For months I tried to make out Drum Peak, which the National Geographic Trails Illustrated topographic map – by far the best map of the area – identified as 7,929 feet tall. That's 71 feet short of 8,000, exactly the same height as the preserve's loftiest peak, Clark Mountain, located north of Interstate 15. Drum Peak rises from the Pinto Valley, sandwiched between Fourth of July and Caruthers canyons. Why couldn't I see such a tall mountain peeking over the New York massif front from the Kelso-Cima Road?

I came to learn that Clark Mountain does indeed rise to the height stated above, but the Trails Illustrated map is in error saying that Drum Peak rises as high as Clark. According to the U.S. Geological Survey website, www.usgs.gov, Drum Peak is 6,965 feet above sea level, almost 1,000 feet short of Clark Mountain's elevation. I found that local historian, author, and Goffs Schoolhouse museum founder Dennis Casebier named Drum Peak and a few other land features in the preserve around 1972. When the National Geographic map makers added the name for the most recent printing, they accidentally printed Clark's elevation over Drum's contour lines. In speaking with Casebier, I discovered a lot more about the man whom the mountain commemorates.

The mystery peak's namesake was John Drum, the commanding officer of nearby Camp Rock Spring. Rock Spring was a bastion of the U.S. Army that protected travelers and the U.S. mail on the Old Mojave Road during the military camp's brief life (1867-68).

The desolate foundation ruins of old Camp Rock Springs can be visited on a mile-long interpretive trail starting at the rock house. The

short road to get there is signed five miles east of the Black Canyon Road turnoff on Cedar Canyon Road. Ascending a ridge from the canyon floor, where the fort was laid out, one gets a nice view of Drum Peak to the north – explaining why Casebier named the peak for the post commander.



Casebier published a book in 1973 (now out of print) about the short-lived Rock Spring. He describes John Drum as an outstanding military figure of his time. An Irish immigrant, Drum captained his 14th Infantry troops at the camp, described as one of the most forlorn, isolated posts in the West. Lt. Drum devoted his efforts to obtaining desperately needed food and clothing for his mostly sick, ragged, barefoot and underfed soldiers lest they desert the post – which in its destitute condition several did.

Continued on next page...

Essential Information

Dates and Hours of Operation

The preserve is always open. Information centers maintain regular hours of operation.

Fees and Reservations

There are no entrance fees. See page 7 for information about campground reservations and fees.

Information Centers

Three information centers provide orientation, information, and trip-planning advice. Park rangers are on duty. Western National Parks Association (WNPA) bookstores offer books, maps, and more.

Kelso Depot Visitor Center

Located 34 miles south of Baker, Calif., on Kelbaker Road. Open daily, 9 a.m. – 5 p.m.

Hole-in-the-Wall Information Center

Located 20 miles north of I-40 on Essex and Black Canyon roads. Winter hours (Mid-October–April): Open daily, 9 a.m.– 4 p.m. Summer hours (May–September): Friday through Sunday, 9 a.m.– 4 p.m.

Headquarters Information Center

Located at 2701 Barstow Road, Barstow, Calif. Open Monday through Friday, 8 a.m.– 4:30 p.m.

Food: The Beanery at Kelso

The lunch room concession offers hot & cold beverages, hot dogs, chili, salads, sandwiches, snacks, and desserts. Located at Kelso Depot Visitor Center. Open daily from 9 a.m. – 5:00 p.m.

Water

Drinking water is available only at Kelso Depot Visitor Center, Hole-in-the-Wall (HITW) Information Center, and the following campgrounds: HITW, Black Canyon, Mid-Hills, and Providence Mountains State Recreation Area.

Gasoline

There are no gasoline stations within Mojave National Preserve. Gasoline can be purchased along I-40 at Needles, Fenner, Ludlow, and Barstow, Calif., along I-15 at Baker, the Cima Road exit, and Primm, Nev., and along U.S. 95 at Searchlight, and the 163 junction at Palm Gardens, Nev.

Lodging

There are no motels in Mojave National Preserve. Lodging is available in Barstow, Baker, Nipton, Ludlow, and Needles, Calif., and in Primm, Cal Nev Ari, and Searchlight, Nev.

Bicycles

Bicycles are allowed in parking areas, on paved roads, and on existing open dirt roads. Bicycles are not allowed in wilderness areas, on hiking trails, or for cross-country travel.

Pets

Pets are welcome in Mojave National Preserve, though they are not allowed inside information centers. They must be leashed and never left unattended. Dogs used during hunting activities must be under the owner's control at all times. Please collect and dispose of pet waste in garbage receptacles.



Collecting and Vandalism

Disturbing, defacing, or collecting plants, animals, rocks, historic or archeological objects is prohibited. Leave these resources as you find them for everyone to enjoy. Metal detectors are not allowed.

Permits

Permits are required for all organized events, group events (more than 15 individuals or seven vehicles), and commercial activities, such as filming. Fees apply. Proof of insurance and posting of a bond may also be required, call 760-252-6107 or visit www.nps.gov/moja for more information.



Hunting is permitted in accordance with state regulations. All hunting activities require a license; requirements for additional permits and tags might apply. Visit the California Department of Fish & Game website at <http://www.dfg.ca.gov/> for more information.

Target shooting or "plinking" is prohibited. Firearms use and transport within the preserve must be in accordance with state and federal law. No shooting is permitted within a 1/2-mile of developed areas, including campgrounds, information centers, Kelso Dunes, Fort Piute, Sweeney Granite Mountains Desert Research Center, and Desert Studies Center at Zzyzx.

New Firearms Law

As of February 22, 2010, people who can legally possess firearms under federal, state of California, and local laws, are allowed to possess firearms in Mojave National Preserve. It is the visitor's responsibility to understand and comply with all applicable state, local, and federal firearms laws.

Federal law prohibits firearms in certain facilities in this park; those places are posted with signs at public entrances. If you have any questions, please contact Ranger Kirk Gebicke at 760-252-6131.

Private Property

Private inholdings are found throughout the preserve. Please respect the rights of our neighbors. It is your responsibility to obtain permission before entering private property, including to hunt or hike.

Cattle and Fences

Most grazing within Mojave National Preserve occurs on public land. This land is open to you to explore, but please don't disturb cattle, fences, or water tanks. Leave gates as you find them.

Firewood and Campfires

Wood is scarce in the desert. Cutting or collecting any wood, including downed wood, is prohibited. All firewood, including kindling, must be brought in. Campfires are allowed in fire rings and other established sites. To minimize your impact, use a firepan and pack out the ashes. Please do not leave fires smoldering or unattended.



Preserving the Past

Time-lapse photos show the transformation of the Hilltop House, at Bighorn Mine, from the 1930s to restoration efforts today.

Vanishing Treasures - Hilltop House Restoration

“THE NATIONAL PARK SERVICE IS DEDICATED TO CONSERVING unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations.”

In the 1990s, a grassroots initiative was started to address the deterioration of prehistoric and historic sites in our National Parks. The “Vanishing Treasures Initiative” aims at achieving this goal in three specific ways: through documentation, repair, and training of craftsmen. The National Park Service identified parks which were deemed “in danger” in terms of losing valuable cultural resources. Of the three listed in California and Nevada, Mojave National Preserve was one. The question becomes, what is it that’s in danger?

Cultural resources are defined as those historic items that exist in our parks as physical evidence of the existence or passage of mankind on the landscape. These include 10,000-year-old artifacts representing hunting or seed processing or perhaps something as recent as 50-year-old mining cabins. Regardless of age, all of these ‘human’ remains on the landscape reflect the history of mankind’s culture as it has existed in different areas of the world.

Our national parks are here to preserve those vital historic records for future generations as witnesses to the hardy nature of our species. One example of this preservation effort can be found here in Mojave National Preserve and dates to circa 1930, an era of rampant prospecting and mining efforts throughout the Mojave Desert Region.



Hidden Hills Mining District

The Bighorn Mine residence, or “Hilltop House,” is a site located at the southeastern base of the Hidden Hills and is part of the Hidden Hills Mining District in the south central portion of Mojave National Preserve. The house was built prior to 1933, when W.E. Wilson was the

Bighorn Mine operator and the primary investors, Herbert and Anna von Wagenheim, were living at the mine to keep watch over their interests. The Bighorn Mine operation was one of the customers to whom the historic 7IL Ranch cattle operation (under the proprietorship of Mark and Mary Pettit at the time) delivered beef.



Herbert and Anna von Wagenheim

The “Hilltop House” is known to have been a gathering place for local miners, ranchers, and homesteaders for holidays and other celebrations. The structure collapsed in high winds during the fall of 2008, and preserve maintenance staff are now in the process of putting the building back up. Their purpose is to reestablish its presence on the visual historic landscape so that present and future generations of explorers can view and visit this place and experience it just as it stood in the 1930s. This work was made possible by a \$40,000 grant through the Vanishing Treasures fund.

If your travels take you to the Bighorn Mine site, please acknowledge its vital historic role in the landscape and the work that’s been put in to restore it by leaving it as you found it. Thank you and enjoy a bit of our history – yours and mine.

Source:
Papierski, Betty. *Flat Tires & Coffee Fires: being tales from the 7IL ranch*. 20 vols. Goffs: Tales of the Mojave Road Publishing Company, 1993.

Dave Nichols
Archeologist

Preserve Projects for 2010/2011

The Kousch House

Nestled in a forested alcove of Caruther’s Canyon, the residence often referred to as the Leja cabin, was originally built by John A. Kousch and has been home to several families over the decades. Once abandoned, the residence slowly fell into disrepair. In 2010, a restoration crew from Point Reyes National Seashore, cleaned, sanitized and stabilized the cabin and grounds.



The Kousch House - 1941

Kelso Schoolhouse

The one-room schoolhouse on the edge of town was built in 1924, along with the new Kelso Depot. The school served as the center of education through Kelso’s World War II boom years and then, like the town, grew silent. Now, in 2010, park service restoration crews are working to restore this bit of Kelso history.



Kelso Schoolhouse - 2010

Captain John Drum

(continued from page 2)

Shortly after establishing the mother post at Rock Spring, Drum received orders to build an outpost at Marl Springs, an important watering hole some 20 miles to the west. Three soldiers of “K” Company were detailed to construct the new outpost. Piute attacks on mail express riders, miners and wagon trains occurred regularly along the Mojave Road.



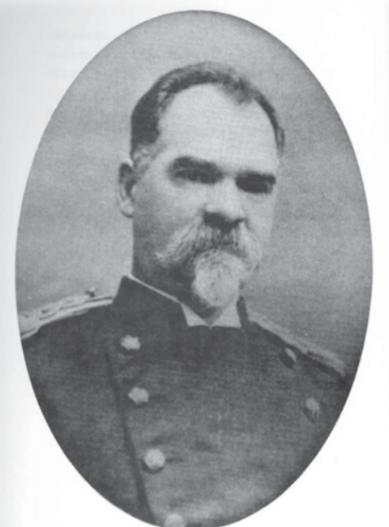
Milling feature at Marl Springs may have been used by soldiers stationed at the military outpost.

Lt. Drum focused on controlling the reliable springs at both fortifications, but the Piutes became bolder in trying to thwart white incursions through their territory. The remnants of a small redoubt are still visible today at the remote site.

Late in 1867, the soldiers on duty found themselves surrounded during a 24-hour siege by Piutes holding higher ground. If not for a dawn patrol returning to Arizona from Fort Soda Springs to the west, the tiny command would doubtless have been overrun.

After Lt. Drum’s frontier service at Camp Rock Spring and the 30 years that he served in the 19th-century Old Army, he had advanced to the rank of Captain. By 1898 he found himself campaigning alongside Lt. Col. Theodore Roosevelt’s volunteer regiment of Rough Riders in the Spanish-American War. It was in the assault of San Juan Heights where, standing on a rock exposed to enemy fire, Capt. Drum delivered a final order to his men: “Ready, aim, fire!” as a sniper bullet pierced his heart.

Phillip Gomez
Park Guide



John Drum
Courtesy, Colonel James Hunter Drum

John Drum

Exploring Mojave

The setting sun shines warm shadows on the sands of 700-foot-high Kelso Dunes.

Avenues to Adventure

Mojave National Preserve is vast. At 1.6 million acres, it is the third-largest unit of the National Park System in the contiguous United States. Some of Mojave's wild and historic splendor can be seen from the primary roads of the preserve (see map on page 8), while even more awaits those who travel its trails and unmaintained roads.

Black Canyon Road

Black Canyon Road (unpaved north of Hole-in-the-Wall) connects Cedar Canyon Road with Essex Road, 20 miles to the south.

Mid Hills

Campground, trailhead, vault toilets, water. Not recommended for RVs.

About 2 miles west of Black Canyon Road at the north end of Wild Horse Canyon Road, Mid Hills supports pinyon-juniper woodland habitat. The effects of a fire that swept through the area in June 2005 are evident, although several campsites in the popular campground still contain shady stands of pinyon pine and juniper.

Hole-in-the-Wall

Information center, bookstore, campgrounds, picnic area, trailhead, restroom, water, telephone. Just north of the junction of Black Canyon and the south end of Wild Horse Canyon roads, rhyolite cliffs riddled with holes and hollows are the backdrop for Hole-in-the-Wall.

Cedar Canyon Road

Mostly unpaved, the 20-mile Cedar Canyon Road connects Kelso Cima Road in the west with Ivanpah Road in the east, paralleling (and sometimes joining) the historic Mojave Road.

Rock Spring

Wayside exhibits, no services.

A well-known waterhole for early travelers, Rock Spring is located 5.2 miles east of Black Canyon Road on Cedar Canyon Road, then ¼ mile south on a sandy road marked with a small hiking sign. Camp Rock Spring, a military redoubt established in 1866, was one of the most isolated and comfortable army posts in the West.

Sand & Mud Driving Tips

- Be sure to carry plenty of drinking water and emergency supplies.
- Engage four-wheel drive before entering deep sand or mud.
- Don't gun the engine—this will spin the tires, dig you in deeper and could bury your vehicle to the frame. Smooth, easy power is better than too much power; use low gearing and just enough throttle to maintain forward movement.
- If you detect a loss of traction, turn the steering wheel rapidly from side-to-side—this might help to generate traction.
- If your vehicle gets stuck, place solid materials (such as floor mats) under the tires to provide traction.
- If you're really stuck, it's best to stay with your vehicle. A stationary, stranded vehicle is much easier to locate than a person traveling on foot. Avoid strenuous activity during the heat of the day; stay in the shade of your vehicle.

Cima Road

About 26 miles east of Baker, Calif., the paved Cima Road connects I-15 with Cima, Calif., 16 miles to the southeast.

Cima Dome & Joshua Tree Forest

Self-guiding trail, no water.

The near-perfect symmetry of Cima Dome rises 1,500 feet above the surrounding desert and provides ideal habitat for the world's largest concentration of Joshua trees. Although the top of the dome is located west of Cima Road near the Teutonia Peak Trailhead, this unusual geologic feature is best seen from a distance. Try the view looking northwest from Cedar Canyon Road, 2.5 miles east of Kelso Cima Road.

Clark Mountain

No signs or services.

The only portion of Mojave National Preserve north of I-15, Clark Mountain, is also its highest point at 7,929 feet. A relict white fir grove near the top is one of only three in the Mojave Desert. Check detailed maps or ask a ranger for access information. **High clearance and four-wheel drive recommended.**

Ivanpah & Lanfair Roads

Eleven miles south of Primm, Nev., Nipton Road begins at I-15 and passes through Nipton, Calif., 11 miles east. Ivanpah Road (only the 10 northernmost miles paved) heads southeast of Nipton Road, through the Ivanpah and Lanfair valleys, eventually connecting with the paved Lanfair Road and the Fenner Valley. Together stretching 46 miles, Ivanpah and Lanfair Roads connect the northern preserve boundary (bordering Nipton Road) with the southern near Goffs, Calif.

Caruthers Canyon

Primitive camping, hiking, no signs or services.

About 5.5 miles west of Ivanpah Road on New York Mountains Road, then 2 miles north on an unsigned road, Caruthers Canyon is located in the rugged New York Mountains. Surrounded by mountains rising over 7,500 feet, a botanical "island" of chaparral plants remains from wetter times of the past. **High clearance and four-wheel drive recommended.**

Lanfair Valley

No signs or services.

South of the New York Mountains along Ivanpah and Lanfair roads, this high valley shelters an impressive Joshua tree forest and was an early ranching and homesteading center. From 1893 until 1923, the Nevada Southern Railway ran up the valley from Goffs, providing services to homesteaders and ranchers in the valley and to miners in the mountains beyond. While little evidence remains of homesteads that once dotted the valley, tracts of private property still exist. Please respect the rights of landowners.

Kelbaker Road

A 56-mile paved road stretching from I-15 at Baker, Calif. in the north to I-40 east of Ludlow, Calif. in the south, Kelbaker Road winds past cinder cones, lava flows, Kelso Depot, Kelso Dunes and the Granite Mountains.

Cinder Cones & Lava Flows

No signs or services.

About 14 miles southeast of Baker, Kelbaker Road traverses a 25,600-acre area of lava flows and volcanic cinder cones thought to range in age from 10,000 to 7 million years old. In 1973, the area was designated as Cinder Cones National Natural Landmark due to its scenic beauty and exceptional geological value. Aiken Mine Road (19 miles southeast of Baker, Calif.) offers an interesting side trip through the heart of the area and access to a lava tube. **High clearance and four-wheel drive recommended.**

Kelso Depot Visitor Center

Information, three floors of exhibits, orientation film, art gallery, bookstore, lunch counter, restrooms, water, and picnic area.

Located 34 miles southeast of Baker, Kelso Depot began operation in 1924 and served as train station, restaurant and employee housing on the Los Angeles and Salt Lake route of the Union Pacific Railroad. Now Mojave National Preserve's principal information center and museum, extensive exhibits describe the cultural and natural history of the preserve. Historically furnished rooms offer a glimpse into Kelso's past.

Kelso Dunes

Self-guiding trail, vault toilets, no water.

About 41 miles southeast of Baker (7 miles south of Kelso Depot), then 3 miles west on a graded dirt road, Kelso Dunes were created by winds carrying sand grains from the dried Soda Lake and Mojave River Sink located to the northwest. The Providence and Granite mountains served as barriers that trapped the blowing sand. Created over the course of 25,000 years, the dunes are nearly 700 feet high and cover a 45-square-mile area. The Kelso Dunes produce a "booming" or "singing" sound when sand with the right moisture content slides down the steep slopes. Try it for yourself—run down a dune slope (but don't trample vegetation!) to initiate the sound.

Granite Mountains

No signs or services.

An imposing jumble of granite marks the south entrance to the preserve, 50 miles southeast of Baker on Kelbaker Road. Portions of the Granite Mountains lie within the University of California's Desert Research Center; please respect the signs that mark the boundary. **High clearance and four-wheel drive recommended.**

Dirt Road Driving

Prepare Your Vehicle

Ensure that your vehicle is in good condition: check tires, oil, and gas gauge.

For emergencies, carry tools, tire jack, towrope, extra water, and fluids for your vehicle.

Know the Rules of the Road

All vehicles operating within Mojave National Preserve must be street-legal in accordance with California DMV requirements, including current registration and tags, lights and turn signals, and valid insurance. California "Green Sticker" and "Red Sticker" programs are not recognized within the preserve.

Off-pavement travel is allowed only on existing open dirt roads. Do not travel cross-country or create new routes. This rule is strictly enforced; violators will receive citations. Driving in washes is not permitted. Watch for and respect Wilderness Boundary signs; motorized vehicles and bicycles are not allowed in designated Wilderness Areas.

Check Road Conditions

Road conditions vary widely. Dirt roads might be rough, sandy or muddy, rendering them impassable, and the unprepared motorist could be trapped many miles from help. Watch for cattle, burros and other wildlife on roadways.

Not all roads are shown on all maps; traces and illegal shortcuts add to the confusion. Carry a good map, and ask a park ranger for current road conditions.

Piute Spring

About 7.4 miles west of U.S. 95 on the unmarked and unpaved Mojave Road, then 3.1 miles west on an extremely rough unmarked dirt road. **High clearance and four-wheel drive recommended.**

Fort Piute and Piute Spring

Trails, wayside exhibits, no signs or services.

Willows, cottonwoods, and rushes thrive along a half-mile section of Piute Creek. Fort Piute (still visible) was one in a string of military outposts built along the Mojave Road. Please don't climb on the foundations or remove anything.

Zzyzx Road

Six miles southwest of Baker on I-15, Zzyzx Road leads 5 miles south into the preserve along the western shore of Soda Dry Lake.

Zzyzx/Soda Springs

Self-guiding trail, wayside exhibits, vault toilets, non-potable water, picnic area.

Historically known as Soda Springs and later renamed Zzyzx (pronounced Zye-zix), this oasis is home to the California State University Desert Studies Center. The buildings and pond were developed in the 1940s by Curtis Springer, who operated a health resort at the site. Zzyzx is open to the public—stroll around Lake Tuendae and along the shore of Soda Dry Lake. Please do not disturb participants when classes are in session.

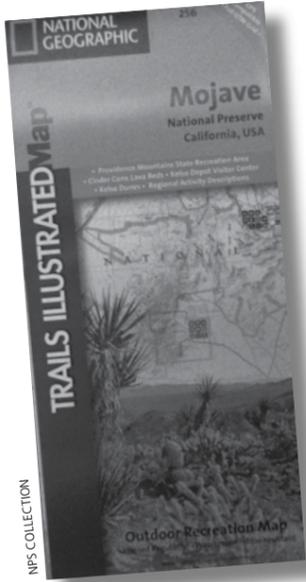


Wild Horse Canyon Road will take you on a ten-mile scenic drive around Gold Valley



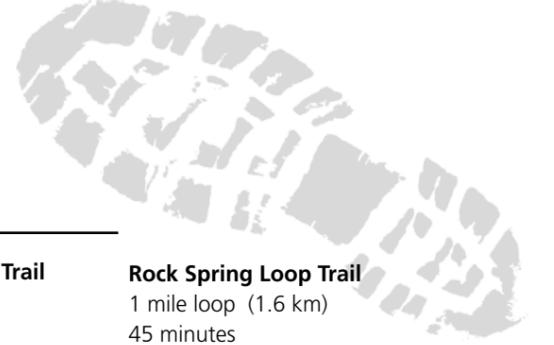
Hiking

Hikers at Mojave National Preserve can enjoy a variety of challenges, with sweeping views, solitude and over 800,000 acres of designated wilderness.

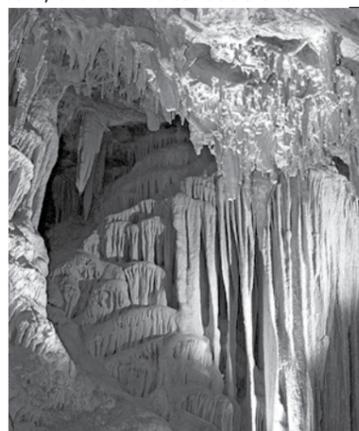


Although there are few established hiking trails in Mojave National Preserve, abandoned dirt roads, washes, and ridge lines offer an abundance of cross-country hiking opportunities.

All trails and routes listed below are shown on the National Geographic Trails Illustrated topographic map for Mojave National Preserve. This and other maps are available for purchase at all information centers (see page 2 for locations and other information).



<p>Lake Tuendae Nature Trail 0.25 miles (0.4 km) 15 minutes Lake, History</p> <p>Enjoy an easy, self-guided stroll around Lake Tuendae. Wayside exhibits reveal the rich cultural and natural history of this area.</p> <p>Zzyzx parking area, 5 miles south of I-15 on Zzyzx Road.</p>		<p>Trail Total Distance Time Highlight</p> <p>Description</p> <p>Trailhead location</p>	<p>Hole-in-the-Wall Nature Trail 0.5 miles (0.8 km) 20 minutes Identification of Local Plants</p> <p>Learn to identify desert plants on this 0.5 mile round-trip hike.</p> <p>Hole-in-the-Wall Information Center and Campground, 20 miles north of I-40 on Essex and Black Canyon roads.</p>	<p>Rock Spring Loop Trail 1 mile loop (1.6 km) 45 minutes Rock House, Natural Spring</p> <p>Trail starts at Bert Smith's Rock House. Wayside exhibits describe the history of Mojave Indian use and the U.S. Army.</p> <p>5 miles east of Black Canyon Road on Cedar Canyon Road.</p>
<p>Rings Loop Trail 1 mile (1.6 km) 45 minutes Petroglyphs, Banshee Canyon</p> <p>Discover how Hole-in-the-Wall got its name and ascend narrow Banshee Canyon with the help of metal rings mounted in the rock.</p> <p>Hole-in-the-Wall Information Center parking area, 20 miles north of I-40 on Essex and Black Canyon Roads.</p>	<p>Teutonia Peak Trail 3 miles (4.8 km) 2 hours Panoramic Views</p> <p>Explore the world's densest Joshua tree forest en route to a rocky peak with expansive views of Cima Dome and beyond.</p> <p>12 miles south of I-15, or 6 miles north of Cima, on Cima Road.</p>	<p>Trail Total Distance Time Highlight</p> <p>Description</p> <p>Trailhead location</p>	<p>Kelso Dunes 3 miles (4.8 km) 3 hours Panoramic Views, Singing Sand</p> <p>Hikers at sunrise and sunset are treated to both cooler temperatures and the rose-colored glow of the dunes.</p> <p>3 miles west of Kelbaker Road on the well-graded, but unpaved Kelso Dunes Road.</p>	<p>Barber Peak Loop Trail 6 miles (9.6 km) 3.5 hours Volcanic Cliffs, Evidence of Fire</p> <p>Pass through Opalite Cliffs, volcanic ash deposits, and sandy washes as you explore Wildhorse and Banshee Canyons.</p> <p>Hole-in-the-Wall Picnic Area and Campground.</p>
<p>Mid Hills to Hole-in-the-Wall 8 miles one-way (12.8 km) 4.5 hours Evidence of Fire, Canyon, Solitude</p> <p>Hike through a maze of washes with barrel and cholla cacti, and evidence of the 2005 Hackberry Fire. Watch for trail route markers.</p> <p>Entrance to Mid Hills Campground, 2 miles west of Black Canyon Rd on the north end of Wild Horse Cyn. Road.</p>	<p>Quail Basin 6.5 miles (10.4 km) 4 hours Quiet basin, Granite Outcroppings</p> <p>Look for tracks in the sandy wash. Venture into a small valley of granite boulders alive with Mojave yucca and juniper.</p> <p>11 miles north of I-40 on Kelbaker Rd. then 1 mile east on unmarked dirt road.</p>	<p>Trail Total Distance Time Highlight</p> <p>Description</p> <p>Trailhead location</p>	<p>Piute Creek 6.5 miles (10.4 km) 4 hours Historic Ruins, Spring, Wildlife</p> <p>Explore the ruins of Fort Piute, built in the 1860s and the perennial spring that runs nearby.</p> <p>9.5 miles east of the junction of Lanfair and Cedar Canyon roads on a dirt utility road, then 0.5 miles north.</p>	<p>Keystone Canyon 6 miles (9.6 km) 4 hours Panoramic Views</p> <p>Hike the road into Keystone Canyon. Continue cross-country to the top of the ridge for spectacular views.</p> <p>18 miles south of Nipton Rd. on Ivanpah Rd. then 2.5 miles west on unmarked dirt road. Bear left at the first fork, right at the second, then continue to parking area.</p>
<p>Castle Peaks Corridor 8 miles (12.8 km) 5 hours Views, Spring</p> <p>Walk up the closed road to the ridgetop. Continue into a small canyon for excellent views of the Castle Peak spires.</p> <p>4.9 miles east of Ivanpah Rd. on Hart Mine Rd., left at fork, then 1 mile, left at fork, then 3.4 miles, left at fork, then 1 mile to road's end.</p>	<p>Caruthers Canyon 6 miles (9.6 km) 4 hours Seasonal Creek, Historic Mine</p> <p>Hike to an old gold-mining area. Do not enter mine shafts or climb on structures; they are unstable and extremely dangerous.</p> <p>5.2 miles west of Ivanpah Rd. on New York Mtns. Rd., at 4-way intersection, 2 miles north on unsigned road.</p>	<p>Trail Total Distance Time Highlight</p> <p>Description</p> <p>Trailhead location</p>	<p>Developed Trails are listed in black, Recommended Routes are highlighted in blue.</p> <p>High clearance and four-wheel drive is recommended for all highlighted routes. These routes are not established trails; trailheads might be unidentifiable or nonexistent. Check a detailed map or guidebook and consult a park ranger for route information.</p>	



Mitchell Caverns: A State Park within a National Preserve

Stalactites, stalagmites, helictites, shields, and draperies are but a few of the formations that decorate the Caverns at Providence Mountains State Recreation Area. Located just south of Hole-in-the-Wall on Essex Road, this 5,900-acre state park offers cave tours, camping, and hiking.

Tours

Guided tours of Mitchell Caverns require a 1½-mile walk and last about 1½ hours. The

temperature inside the cave is a comfortable 65°F. Tour schedules are as follows:

Winter (Labor Day-Memorial Day)

Weekdays: 1:30 p.m.

Weekends: 10 a.m., 1:30 p.m., & 3 p.m.

Summer (Memorial Day-Labor Day)

Saturday and Sunday: 1:30 p.m.

Fees are \$6 for adults, \$3 for children under 16; free for children under 6 years old. Cash or check only. No credit cards.

Tours are limited to 25 people. Reservations are not accepted for individuals or small groups, but are required for groups of 10 or more and must be made by calling at least 3 weeks in advance.

Camping

Six campsites with tables and fire rings are available on a first-come, first-served basis for \$25 per night. Water and flush toilets are provided.

For reservations and information, call 760-928-2586.



J. MORRELL

Mojave National Preserve provides range after range of high desert vegetation and topography that serve as home for Chukar and other wildlife.

Hunting in Mojave National Preserve

Hunting is authorized in 69 national parklands, including Mojave National Preserve. Here, the National Park Service (NPS) continues to provide a unique experience and support for an important American heritage and cultural value.

The hunting season for the Preserve is September 1 to January 31 (except through the first Sunday in February for bighorn sheep). Commonly hunted game species include mourning doves, quail, chukar, rabbits, bighorn sheep and mule deer. Nongame species are also hunted within the Preserve.

Have a safe, enjoyable, and lawful hunt: familiarize yourself with applicable NPS and California Department of Fish & Game (CDFG) regulations and San Bernardino County ordinances. A current copy of hunting regulations is indispensable, and is available online at www.dfg.ca.gov/regulations or by calling 916-653-4899.

YOUTH QUAIL & CHUKKAR HUNT

October 22–23 at Hole-in-the-Wall
For more information contact wildlife biologist, Neal Darby, at 760-252-6146.



A Chukar Hunter's Perspective

The land where chukars are found is big country. And you may never be able to see so far or so much as when you are chukar hunting.

If you keep at it long enough, chukar hunting changes your perspective on a couple of levels. On the macro level you stop seeing chukar country as a harsh, unforgiving, dangerous place and begin to see it as a beautiful and productive land. You begin to appreciate the variety and diversity introduced at every spring, under every tree, in every dry streambed. After hundreds of hours spent prowling around the high desert, you'll begin to understand a little bit about how this incredible ecosystem functions. You'll see the interactions between the critters that live there. You'll experience some of the potential weather patterns. You'll want to learn more. You'll read, you'll ask questions, you'll start arranging your schedule to spend more and more time hunting chukars and just poking around in that dry country. One day, without knowing how it happened, you'll realize how much you've come to love the high desert. At some point shortly thereafter, you'll begin to feel it loves you, too.

You will be wrong.

That's when chukar hunting starts getting risky. Because the high desert is harsh, unforgiving, dangerous - a tough place to stay alive in when things go wrong. The inexperienced chukar hunter enjoying his new love affair with the desert is in the same situation as the new pilot whose 500 flight hours and sense of competence and complacency blind him to the risks he just doesn't recognize yet. An experienced chukar hunter thinks about chukar country the same way a high-time pilot thinks about flight. He will love it, be drawn to it, hate to leave it, spend every possible minute in it - but he'll never forget that mistakes have a higher price tag in the high desert realm, that it will kill him if given the chance.

On the micro level, chukar hunters learn to notice and understand the very small things that most people never see. You'll learn to look beneath the sagebrush, bitterbrush and cheatgrass to find bird tracks on the dirt between the rocks. You'll learn to distinguish their droppings and the places where they took dust baths. You'll recognize the rocks where their lookouts perch from the buildup of droppings, and you'll find the rocky bowls that catch rainwater where they drink

during the day. You'll find feathers where a chukar made a mistake and a hawk made a kill. You'll find tracks you won't recognize until the day you watch an animal making those same tracks. Gradually, you will open the book the high desert offers and turn its pages slowly. You'll find shed mule deer antlers, rodent tracks in the dirt, badger dens, occasional obsidian flakes or even Indian arrowheads and other tools. You'll find rattlesnake skins and mountain lion scat.

After you've paid your dues, after hundreds of muscle cramps, frozen eyelashes, blisters, windburned cheeks, sunburned ears, fingers so cold they won't bend and lips so cracked they can't smile, after days when you'd trade your shotgun for a library card and your dog for a goldfish, you'll look out one day over a landscape that opens itself only to those people who love it and realize you are one of them. You'll hear that rhythmic chuk ... chuk ... chukkerr from the birds you pursue. Rookie chukar hunters consider it mocking laughter, but you'll know better. You'll know they're talking to you, telling you: Hurry back, hurry back - bring it on. That sound, that invitation, that challenge, helps you put the entire experience in perspective.

A chukar hunter's perspective.

Excerpts from Pat Wray's book, "A Chukar Hunter's Companion"



Pat Wray is a fulltime freelance writer and book author living in Corvallis, Oregon with his wife, Debbie, and three hunting dogs. For more information on Mr. Wray or his book, go to <http://patwray.com>

Park Ranger Programs



NPS COLLECTION

Kelso Depot Tours - Kelso Depot
Monday-Friday @ 11:00 a.m. & 2:00 p.m.
(year-round)



NANCY MORRELL

Flora & Fauna Walk - Teutonia Peak Trailhead
(see local postings)

Kelso Dunes Walk - Kelso Dunes Trailhead
Saturdays @ 11:00 a.m.
(October-April)



NPS COLLECTION

Petroglyphs: Rocks that Talk - Hole-in-the-Wall
Saturdays @ 3:00 p.m.
(October-April)

Someplace Special - Hole-in-the-Wall Amphitheater
Saturdays @ 7:30 p.m.
(October-April)

Geology Talk - Hole-in-the-Wall Information Center
Sundays @ 9:00 a.m.
(October-April)

Camping & Backcountry Travel

Backcountry Guidelines & Regulations

Backcountry travel and camping—backpacking, dispersed camping, and horsepacking—require careful planning in order to ensure a safe and rewarding experience. Visitors should adhere to National Park Service regulations and are further encouraged to follow Leave No Trace guidelines to minimize their impact on the fragile desert environment. Additional regulations apply for roadside camping (see below) and horsepacking (talk with a park ranger or visit us online for more information: www.nps.gov/moja).

Leave No Trace principles are rooted in scientific studies and common sense. The message is framed under seven Leave No Trace Principles presented below with accompanying regulations and guidelines specific to Mojave National Preserve:

1. Plan Ahead and Prepare

- There is no permit or registration system for backcountry camping at Mojave National Preserve; be sure to notify others of your travel itinerary.
- Few established trails exist; carry a good map and familiarize yourself with desert travel and survival skills before beginning your trip.

2. Travel and Camp on Durable Surfaces

- Reuse existing campsites (required for dispersed camping—see below).
- Do not make camp in a dry wash—flash floods develop quickly in the desert.
- Camping is limited to a maximum of 14 consecutive days per visit/stay and 30 total days per year.
- Campsites must be more than 200 yards from any water source.
- Camping is not permitted: within 1/4 mile of any paved road; within 1/2 mile of Fort Piute or Kelso Depot; within 1 mile north of the Kelso Dunes (i.e., the crest of the dunes) or 1/4 mile south of the Kelso Dunes access road. (Exceptions might apply for dispersed camping—see below.)

3. Dispose of Waste Properly

- Store all food and garbage in a manner that will prevent access by wildlife. Carry plastic bags and pack out all trash.
- Pack out all toilet paper and hygiene products.
- Pet excrement must be collected and disposed of in garbage receptacles.

4. Leave What You Find

- Disturbing, defacing, or collecting plants, animals, rocks, and historic or archeological objects is prohibited. As part of our national heritage, these resources should be left as they are found for all to enjoy. Metal detectors are not allowed.

5. Minimize Campfire Impacts

- Campfires are allowed in established fire rings only, or with use of a portable firepan (be sure to pack out ashes). Do not leave fires smoldering or unattended.
- Cutting or collecting any wood, including downed wood, is prohibited. All firewood must be brought into the preserve.

6. Respect Wildlife

7. Be Considerate of Other Visitors

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Friends and family enjoy the spectacular setting of Hole-in-the-Wall Campground.

Campgrounds

Hole-in-the-Wall Campground

Facilities: pit toilets, trash receptacles, potable water, fire rings, picnic tables, dump station; no utility hookups.

Fees: \$12 per site per night, \$6 for America the Beautiful Senior/Access Pass holders.

Reservations: not accepted; campsites available on a first-come, first-served basis.

At 4,400 feet in elevation, Hole-in-the-Wall Campground is surrounded by sculptured volcanic rock walls and makes a great base camp for hikers (see p.5) and for exploring nearby Mitchell Caverns in the Providence Mountains State Recreation Area. Thirty-five campsites accommodate RVs and tents; two walk-in sites are also available.

Mid Hills Campground

Facilities: pit toilets, trash receptacles, potable water, fire rings, picnic tables; no dump station or utility hookups.

Fees: \$12 per site per night, \$6 for America the Beautiful Senior/Access Pass holders.

Reservations: not accepted; campsites available on a first-come, first-served basis.

The Hackberry Fire swept through the Mid Hills area in June 2005, burning much of the vegetation; however, about half of the 26 campsites were left unharmed and remain surrounded by pinyon pine and juniper trees. At 5,600 feet in elevation, Mid Hills is much cooler than the desert floor below. The access road is unpaved and is not recommended for motorhomes or trailers.

Black Canyon Equestrian & Group Campground

Facilities: corrals, pit toilets, trash receptacles, potable water, fire ring, grill, picnic shelter with tables.

Fees: \$25 per group per night.

Reservations: required; call 760-928-2572 or 760-252-6104.

Located across the road from Hole-in-the-Wall Information Center. Horses and riders are welcome at Mojave National Preserve! Permits required for large groups (see p.2 for permit information).

Nearby Camping Areas

Providence Mountains State Recreation Area (Mitchell Caverns)

16 miles north of I-40 on Essex Road, has six campsites with tables and fire rings available on a first-come basis for \$25 per night. See page 5 for more information.

Afton Canyon

25 miles southwest of Baker on I-15, has a BLM campground with tables and fire rings for \$6 per night.

Commercial camping within the preserve:

Mojave Desert Outpost - Located at 49448 Ivanpah Road, 1/2 mile north of Cedar Canyon Road.

This privately owned campground offers basic dry camping to large or small groups by reservation only.

For more information or to make a reservation call: 951-780-3179 or check their website at mojavedesertoutpost.com

Commercial camping outside of the preserve is available at Baker, Barstow, Needles and Nipton, Calif.

Roadside Camping (refers to designated sites near paved, graded, and two-track roads)

Roadside camping is permitted in areas that have been traditionally used for this purpose. By reusing existing sites, you help protect the desert from further damage. Sites with existing rock fire rings should be considered disturbed and suitable for roadside camping. Do not camp along paved roads or in day-use areas, and stay at least 200 yards from all water sources.

The National Park Service encourages roadside campers to use the following, selected sites:

Near Kelbaker Road:

Rainy Day Mine Site

15.2 miles southeast of Baker on Kelbaker Road, then 0.3 miles northeast on the unsigned and very sandy road to the Rainy Day Mine. Four-wheel drive recommended; no RVs.

Granite Pass

6.1 miles north of I-40 on Kelbaker Road, just north of Granite Pass, then west on one of several access roads. Campsites are located just north of the granite spires. High clearance vehicle recommended; no RVs.

Kelso Dunes Mine

4 miles west of Kelbaker Road on the unpaved Kelso Dunes Road. One campsite is located south of the road, 1/4 mile past the marked trailhead. Several others are available 3/4 mile beyond, near a clump of trees. Except at these sites, roadside camping is prohibited along Kelso Dunes Road (including at the trailhead).

Near Cima Road:

Sunrise Rock

12 miles south of I-15 on the east side of Cima Road. Trailhead for Teutonia Peak Trail is nearby on the west side of Cima Road.

Near Black Canyon Road:

Black Canyon Road (East)

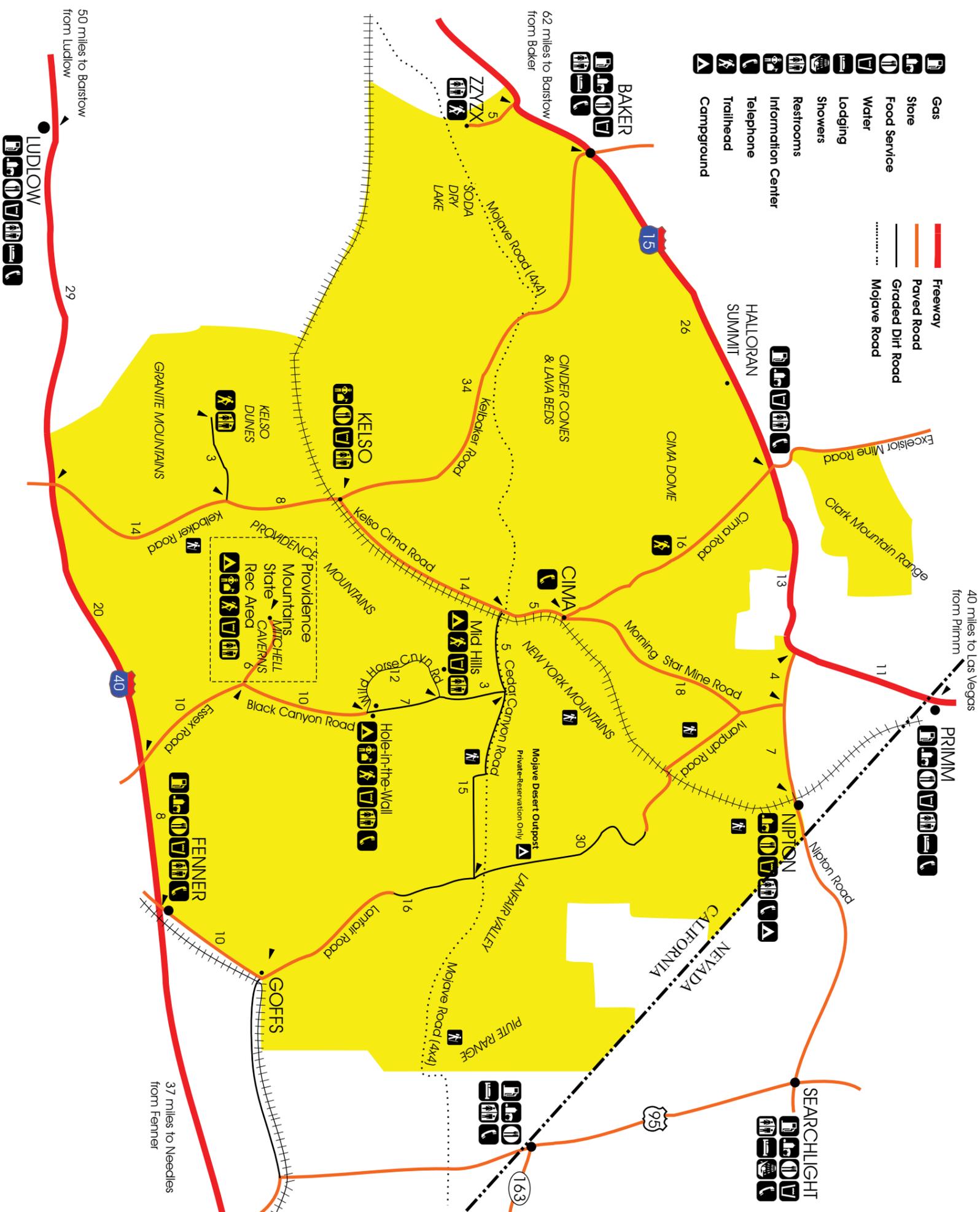
4 miles south of Hole-in-the-Wall Information Center on the east side of Black Canyon Road, above a wash and near a hill with views of the Providence Mountains. Another site is located about 4 miles further south, near rock piles.

Near Ivanpah and Cedar Canyon Roads:

Caruthers Canyon

5.5 miles west of Ivanpah Road on New York Mountains Road, then 1.5 to 2.7 miles north to campsites. High clearance and four-wheel drive recommended; no RVs.





Telephone Directory

Emergency 911

Federal Interagency Communications Center 909-383-5651
San Bernardino County Sheriff - Baker 760-733-4448
San Bernardino County Sheriff - Needles 760-326-9200

Mojave National Preserve

Headquarters (Barstow) 760-252-6100
The Beanery @ Kelso (lunch room) 760-252-6165
Hole-in-the-Wall Fire Center 760-928-2573
Hole-in-the-Wall Information Center 760-252-6104 or 760-928-2572
Kelso Depot Visitor Center 760-252-6108

Nearby Parklands

Anza Borrego Desert State Park 760-767-4205
Bureau of Land Mgmt. - Barstow Field Office 760-252-6000
Bureau of Land Mgmt. - Needles Field Office 760-326-7000
Calico Ghost Town (Yermo) 760-254-2122
Death Valley National Park 760-786-2331
Joshua Tree National Park 760-367-5500
Lake Mead National Recreation Area 702-293-8990
Providence Mountains State Recreation Area 760-928-2586

Website Directory

National Park Service
Mojave National Preserve www.nps.gov/moja
Death Valley National Park www.nps.gov/deva
Joshua Tree National Park www.nps.gov/jotr
Lake Mead National Recreation Area www.nps.gov/lame

Bureau of Land Management www.blm.gov
California Desert www.californiadesert.gov
CSU Desert Studies Center (Zzyzx) <http://biology.fullerton.edu/dsc/>
Desert Discovery Center (Barstow) www.deserttrails.org/welcome1.html
Desert Tortoise data and information www.deserttortoise.gov
DesertUSA wildflower reports www.desertusa.com/wildflor/wildupdates
Leave No Trace www.lnt.org
Mojave National Preserve Conservancy www.preservethemojave.org
Providence Mountains State Recreation Area <http://www.parks.ca.gov>
Sweeney Granite Mtns. Desert Research Ctr. <http://nrs.ucop.edu/Sweeney-Granite.htm>
US Federal government jobs www.usajobs.opm.gov
Western National Parks Association (bookstore) www.wnpsa.org
Wilderness information www.wilderness.net