

**The** Bonneville Salt Flats are one of Earth's most unique landforms. Located 120 miles west of Salt Lake City in Tooele County, Utah, the Salt Flats are about five miles wide and 12 miles long. They are comprised mostly of sodium chloride, or table salt. Like the Great Salt Lake, the Salt Flats are a remnant of ancient Ice Age Lake Bonneville, which covered over one-third of Utah from about 32,000 to 10,000

## What are the Bonneville Salt Flats?

years ago. The Salt Flats are managed by the Bureau of Land Management. They are on the National Register of Historic Places, and are designated as an "Area of Critical Environmental Concern" because of their geology, history and scenic beauty. A place to preserve and protect, the Bonneville Salt Flats attract thousands of visitors each year.

**How did the Bonneville Salt Flats form?** When Lake Bonneville was at its highest level approximately 17,000 years ago, the water exceeded 1,000 feet deep over the Bonneville Salt Flats. Evidence of this great depth

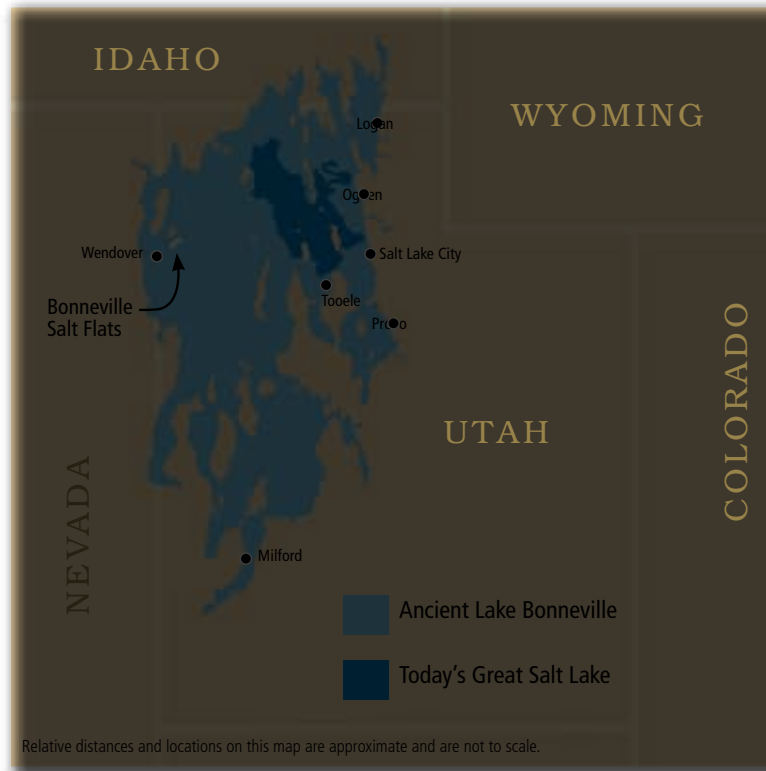
is seen as horizontal terraces and escarpments on the sides of the nearby Silver Island Mountains. As Lake Bonneville receded, evaporation left large concentrations of dissolved minerals deposited in surrounding soils. These minerals include potash, which is commercially used as fertilizer, and halite (table salt). The Salt Flats are comprised of approximately 90% salt. Today, shallow groundwater flows in from the surrounding watershed, picks up dissolved minerals along the way, and percolates upward to the Salt Flats' surface. During cooler months (November to May), this groundwater floods the Salt Flats several inches deep. When temperatures rise in late spring and summer, the salty water rapidly evaporates in the heat, and minerals are left behind to form new salt crust. Wind, periodic rainstorms, and regional climate also play an important part in changing salt crust conditions throughout each year.

The stratified layers that form the Salt Flats are almost five feet thick

near the center and only an inch or two at the outer edges. The Salt Flats are just over 46 square miles in size (30,000 acres), which equates to about 147 million tons, or 99 million cubic yards, of salt.

**Where did the name come from?** In 1833, explorer Joseph R. Walker mapped around the Great Salt Lake. He also crossed the northern perimeter of the Salt Flats while working for Capt. Benjamin L.E. Bonneville. At that time it was common for people to name significant landmarks after their employers. It is from Capt. Bonneville that the Salt Flats and Lake Bonneville derive their name. There is no known historical record of Bonneville himself ever seeing the Salt Flats or Great Salt Lake.

**Early human history** Researchers have determined that primitive humans lived there more than 10,000 years ago at nearby Danger Cave. Where did these people come from? How did they live? What reliable food sources were in the area to sustain them? Although Lake Bonneville was receding at the time, did it provide them with fresh water and food? These questions have only been partially answered by archaeologists. Digging or disturbing historical sites is illegal. The Archaeological Resources Protection Act provides penalties up to \$250,000 and five years imprisonment for violators.



### Recent human history

Trapper and frontiersman Jedediah Smith crossed the Salt Flats while returning to Utah from an expedition to California in 1827. John C. Fremont and his U.S. government-sponsored expedition crossed the heart of the Salt Flats in 1845 while trying to find a shorter overland route to the Pacific Ocean. The next year Fremont's route across the Salt Flats would become known as the Hastings Cutoff as part of the California Trail. Promoted by Lansford Hastings as a faster, easier route to California, Hastings Cutoff proved to be just the opposite for the Donner-Reed Party of 1846. What contributed to the party's infamous winter survival in the Sierra Mountains was the delay the emigrants

experienced while crossing the Salt Flats. Their wagons became mired in mud just below the thin salt crust. Artifacts from the Donner-Reed Party, and other emigrants that crossed the trail, are on display in the Donner-Reed Museum in Grantsville.



**What happens on the Salt Flats today?** Automotive endurance and land speed racing are perhaps responsible for the Salt Flats' global renown. The Salt Flats were mostly a local fascination when Teddy Tetzlaff drove a Blitzen Benz to an unofficial speed of 141.73 mph in 1914. Since then land-speed racing on the Salt Flats has grown enormously. Every summer and early fall, professional and amateur teams from around the world compete for land-speed records in different vehicle classes. Events such as August's "Speed Week," September's "World of Speed" and October's "World Finals," transform the Salt Flats into a magnet for land-speed drivers and spectators. The fastest recorded speed on the Salt Flats is 622.407 mph, set by Gary Gabolich in 1970 in his "Blue Flame" rocket car. The Salt Flats also host a variety of other events every year. The Salt Flats are also internationally renowned as a unique backdrop for filming major motion pictures, fashion layouts, and automobile commercials.



# Frequently asked questions

**Where are the Bonneville Salt Flats?** The Salt Flats are located 120 miles west of Salt Lake City, Utah just off of Interstate 80 before the state border at Wendover, Utah. The paved access road leading to the Salt Flats is reached by taking Exit 4 off I-80. From there drive north toward the Silver Island Mountains. The paved road turns right and heads due east for three miles. A cul-de-sac is at the end of the road. Travel on the Salt Flats is at your own risk and is only recommended when the surface is entirely dry.

**Can anyone drive on the Salt Flats?** No person may operate an off-road vehicle on public lands without a valid State driver's license or learner's permit. The Salt Flats are free to visit and open to the public most of the year. During permitted events fees may be required and special security restrictions may be mandatory to maintain public safety.

**Is it safe to drive on the Salt Flats?** If you drive on the Salt Flats you are on your own. Let someone know where you are and when you plan to return. Review and adhere to the Bonneville Salt Flats Travel Advisory, which is available at [www.blm.gov/ut](http://www.blm.gov/ut). When the Salt Flats are dry, the surface is generally safe to drive upon. However, avoid driving along the edge of the salt crust as your vehicle may become suddenly stuck in underlying mud. Getting stuck on the Salt Flats is hazardous and has resulted in fatalities. Salt residue is corrosive and should be washed off of vehicles. The Salt Flats should not be driven upon when they are submerged in water.



**What is the weather like on the Salt Flats?** Daytime temperatures can range from below freezing in winter to triple digits in summer. Strong winds and thunderstorms often occur during warm weather months. UV radiation can be intense on hot summer days. Visitors need to come prepared with protective clothing and plenty of water. Dehydration and heat exhaustion are dangers in the summer.

**What facilities are available?** There are no facilities available on the Salt Flats. There are no surface improvements or signs on the Salt Flats after the paved access road ends. Food, fuel, lodging and other services are available at Exit 4 or in the nearby town of Wendover.

**Is overnight camping available?** Overnight camping, fires and fireworks are prohibited on the Salt Flats to maintain public health and safety, and to protect natural resources. There are no developed campground facilities. Free camping is available on adjacent public lands. During events participants camp on the mud flats next to the Salt Flats access road.

**What do I need to know about attending events on the Salt Flats?** The public can gain access by paying an entrance fee and following route markers to designated viewing areas. Reservations for spectators are not required. Bicycles, motorcycles and ATVs are permitted on the Salt Flats.

**When do I need a permit?** A permit or entrance fee is not required to take personal photos, view the area, or drive on the salt except during special events. Organized group permits and commercial filming permits are required and may be obtained from the Bureau of Land Management Salt Lake Field Office.

**Can you see the curvature of the earth?** The Bonneville Salt Flats are one of seven locations around the world where the curvature of the earth is purportedly visible to the naked eye.

For additional information please refer to the Bureau of Land Management website:

[www.blm.gov/ut](http://www.blm.gov/ut)

For additional information please refer to the Tooele County website:

[www.co.tooele.ut.us](http://www.co.tooele.ut.us)

# Bonneville Salt Flats

## Tooele County, Utah

