



Drinking the Water



Is the water from the hot springs good to drink?

Water from the hot springs is Hot Springs National Park's primary resource. Congress first protected the hot springs in 1832, and it intended for the water to be *used*.

Drinking the hot springs water is perfectly normal, even encouraged. Go ahead. "Quaff the elixir," as they used to say in the heyday of the spa (1880-1950 was the Golden Age of Bathing). Thousands of visitors highly endorse the good quality of the hot springs water and fill bottles to take home.

Early Water Use

In the 1800s, springs were considered a practically guaranteed source of safe-to-drink water. Springs were categorized according to supposed mineral contents: sulphur springs, magnesia springs, chalybeate (or iron) springs, etc., and each type was considered medicinal for specific ailments. Spring waters acquire minerals by dissolving them out of rocks below the earth's surface. The hot springs waters rise from an estimated maximum depth of around 8000 feet, having fallen as rain over 4000 years ago. On average 700,000 gallons are collected from the springs every day at an average temperature of 143° F (62° C). Some of the old-fashioned spring-category names survive here and there, but now that cities and rural associations must treat their water, springs do not always inspire the trust they did in the past. In the early 1900s people sipped at almost every seep in Hot Springs National Park. This is not recommended today, so we provide specific fountains where visitors may collect the water.

Fountains Today

Hot water "jug fountains" are located within the national park in front of the Libbey Memorial Physical Medicine Center on Reserve Street, at the National Park Service Administration Building on Reserve Street, between the Hale and Maurice Bathhouses on Bathhouse Row, and outside park boundaries at Hill Wheatley Plaza on Central Avenue. You may also drink the hot springs water at the Noble Fountain on Reserve Avenue (at the south entrance of the Grand Promenade), at the Dripping Spring between the Hale and Maurice Bathhouses, and at the Shell Fountain on the Stevens Balustrade (between the Fordyce and Maurice Bathhouses).

Safe Water

The National Park Service does not claim the water is curative, but the park *does* certify that it is safe to drink. The water is colorless, odorless, and tasteless--it lacks much iron and sulphur. The federal government still protects the springs. The park's Water Quality Laboratory and state-certified analysts ensure that the water meets rigorous federal and state drinking water standards. The water is tested regularly at numerous sampling points.

The water is naturally potable (good to drink) when it arrives at the surface of Hot Springs Mountain. A century ago the terms "sterile water" and "potable water" were synonymous, and you may encounter the phrase "naturally sterile Hot Springs water."

One of the water's gases was even thought to be germicidal, but this was not really accurate. The water is not sterile. Modern scientists have incredibly powerful microscopes that enable them to examine the water more closely than the first users would have dreamed possible. Scientists do find micro-bacteria but none of concern. Bacteria are found nearly everywhere on earth, and most are not harmful. The park's water--as stated before--is certified safe for drinking.

The hot water jug fountains dispense only the *hot* spring water--which need not be treated, so it is not. Note: the Hale/Maurice jug fountain has no parking lot, so fewer visitors use it. Consequently the water there turns lukewarm in the pipe, but it is safe. Just let it run until it is comes out hot.

About sediments: minerals often precipitate out of the water and stick to the insides of pipes carrying it. Occasionally the accumulated sediments break off and settle in the bottom of your container. It may look unappetizing but is not toxic. If you dislike the sediments, dump the water out and get more at a different spigot. By the way, a sealed container will temporarily prevent loss of the water's gases, although some of the minerals may settle out eventually. Many visitors report the spring water is delicious when served chilled.

Cold Springs

The national park also has jug fountains serving cold spring water at Happy Hollow and Whittington springs. The actual springs are a few yards away from the respective fountains. These two fountains dispense the water from cold springs, whose sources are different from the hot springs. Whittington Spring flows out of West Mountain, and Happy Hollow Spring flows out of North Mountain. The Arkansas Department of Health requires formal treatment of these springs, and ozone filtration systems are used because they have been deemed the least intrusive of the acceptable methods. Very little ozone remains in the water by the time it reaches the spigot. There is no "treated" taste. Many companies that commercially bottle spring water use the same process--but they do not use water from Hot Springs National Park. The park provides spring water free of charge at all of its jug fountains. Regulations prohibit private individuals from selling any of the park's waters.

Fountain Maintenance

Finally, fountains are sometimes closed briefly for routine maintenance. Pipes totally clogged by minerals mean a dry fountain, and servicing averts this problem. Please be patient, and remember: the National Park Service never closes all the fountains at once. Spring water is always available at Hot Springs National Park.

**Hot Spring Water
Chemical Analysis**

Water averages 143° Fahrenheit/62° Celsius
Parts per Million

| | | | |
|--|------|---------------------------------|-------|
| Silica (SiO ₂) | 53.0 | Bicarbonate (HCO ₃) | 130.0 |
| Calcium (Ca) | 47.0 | Sulfate (SO ₄) | 7.8 |
| Magnesium (Mg) | 4.9 | Chloride (Cl) | 2.2 |
| Sodium (Na) | 4.0 | Fluoride (F) | 0.26 |
| Potassium (K) | 1.4 | Oxygen (O ₂) | 4.5 |
| Free Carbon Dioxide (CO ₂) | 9.7 | | |

Radioactivity through radon gas emanation is 43.3 picocuries per liter.

**Happy Hollow Spring
Chemical Analysis**

The source of this cool water is a spring above Fountain Street on the southeast slope of North Mountain. Happy Hollow Spring probably issues from Arkansas Novaculite. The water appears to be of recent vintage-perhaps less than a century in age. Prior to 1960 when it was privately owned, it was called the Magnesia Spring and a pitcherful cost 5 cents.

Water averages 62° Fahrenheit/17° Celsius
Parts per Million

| | | | |
|----------------------------|------|---------------------------------|-------|
| Silica (SiO ₂) | 8.6 | Bicarbonate (HCO ₃) | 1.0 |
| Calcium (Ca) | 0.30 | Sulfate (SO ₄) | 0.90 |
| Magnesium (Mg) | 0.28 | Chloride (Cl) | 2.2 |
| Sodium (Na) | 1.4 | Nitrate (N) | 0.072 |
| Potassium (K) | 1.0 | | |

**Whittington Spring
Chemical Analysis**

The source of this cool water is just off Whittington Avenue near the base of West Mountain. In 1911, park employees built a trough for this spring flow to gather in, and in 1954 a jug fountain was built at the present location. Emerging from Big Fork Chert, the water is over 6000 years old.

Water averages 66° Fahrenheit/19° Celsius
Parts per Million

| | | | |
|----------------------------|------|---------------------------------|-------|
| Silica (SiO ₂) | 9.9 | Bicarbonate (HCO ₃) | 150.0 |
| Calcium (Ca) | 60.0 | Sulfate (SO ₄) | 10.0 |
| Magnesium (Mg) | 3.0 | Chloride (Cl) | 2.4 |
| Sodium (Na) | 1.7 | Nitrate (N) | 0.14 |
| Potassium (K) | 1.0 | Iron (Fe) | 0.17 |

Hot Springs

National Park Service
U.S. Department of the Interior



Hot Springs National Park
Arkansas

Fountains Supplying Spring Water of Hot Springs National Park

