■ Abandoned surface mines also contain dangers. Many of the steep embankments and high walls are very unstable and will collapse under the weight of a person, especially after periods of alternate freezing and thawing which cracks the rock and weakens the steep earth material. Water bodies may look like desirable swimming holes or ice skating ponds; however, they can be deceptively deep, dangerously cold, and frequently hide steep slippery sides that can make climbing out extremely difficult or a life-threatening danger.

Regardless of the type of mine, remember to stay away if you spot what appears to be an abandoned mine. It's likely to be dangerous. And, if you are in a area where coal has been mined, watch where you are going. You may stumble across an abandoned mine when you least expect it. Be alert!

Don't go looking for abandoned mines but if you find what you think is an abandoned mine shaft, tunnel, or other danger, mark the location so it can be easily spotted. Be careful not to go too close. Then report what you found to the nearest location of the Office of Surface Mining, or contact your state abandoned mine reclamation office (see <a href="https://www.osmre.gov/map.htm">www.osmre.gov/map.htm</a> for contact information). Be prepared to describe the approximate location, identifying landmarks, nearby trails, or other characteristics that will help authorities locate the mine.

Reporting the location of abandoned mines is a public service. You will be protecting others from danger, and helping America maintain and improve the environment. For additional information about abandoned mine land hazards visit the Office of Surface Mining "Keep out" web site at www.osmre.gov/keepout.htm).

And remember, warning signs should be taken seriously; however, most abandoned mine hazards have no warning signs or fences around them and the hazards are not always apparent. Abandoned mines sites are an irresistible and sometimes deadly attraction for children and adults. In addition, trespassing or exploring on abandoned mines is a violation of property rights just like walking into someone's yard or home without their permission. So...Keep out and be safe.

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## KEEP OUT



## Old mines are DANGEROUS

Whether hiking, camping, hunting, 4-wheeling, or simply just enjoying the countryside, outdoor activities are a source of enjoyment for millions of Americans each year. But outdoor recreation also requires caution – especially near abandoned mines.

No one knows the exact number or location of all abandoned surface and underground coal mines in this country. We do know that hundreds are scattered across the American countryside, primarily in the eastern coal-producing states, such as Pennsylvania, West Virginia, Virginia, and Kentucky. In western states like Colorado, Arizona, Montana, and Utah there are also abandoned "hard-rock" mines that pose additional dangers. Hazardous abandoned mine problems include open shafts and horizontal openings resulting from underground mining, unstable vertical cliff-like highwalls, danger-

This is an abandoned underground coal mine entrance in Eastern Kentucky. It would be VERY dangerous to enter this mine opening. The unstable roof is caving in and large sections are continuously falling.

ous water bodies, collapsing buildings and rusting machinery, and defective or unused explosives. Many of these hazards are the result of mining that occurred years ago – some in the early 1900s. There is nothing of value left in abandoned mines – that's why they were abandoned. Federal and state reclamation agencies are working to reclaim abandoned mines, but there are so many of them left that it is vital to know about abandoned mine dangers and stay away from them.

■ Abandoned mine shafts may be unmarked or unprotected at the surface and be hundreds of feet down. They may be fairly easy to see if they are large; they may be obscured by years of vegetative overgrowth; they may be covered by decayed and rotten boards that will give way under the slightest weight; or they may be a combination of all these. Even when an open shaft is clearly visible, walking close to it is very dangerous because the decomposed rock at the top of the shaft can suddenly cave in.

■ Abandoned horizontal mine openings leading into underground tunnels may seem sturdy to the untrained person but be prone to cave in. They may seem safe to explore but can contain many hazards — rotten roof support beams, deadly odorless gases, poisonous snakes, vertical shafts in the tunnel floors, and flooded sections. Darkness and sharp objects hanging from the roof add to these underground mine hazards. In addition, unused or misfired explosives can become highly unstable and be set off by a slight disturbance or a touch. Blasting caps, resembling a firecracker with wires, are sometimes found on the ground and, if stepped on, they will explode.



Abandoned surface mines may contain unstable highwalls -- where injury or death from falling rock creates serious danger. In addition, highwalls present a serous hazard to off-road vehicles, who's drivers may accidentally drive over the edge. The water-filled pits at this Midwest abandoned coal mine have steep, unstable banks and sharp rocks hidden under the water.