Drinking Swimming Pool Water in an Emergency

Ken Jorgustin January 28, 2011 52 Comments

You may be surprised to discover how many residential swimming pools are in your neighborhood. Just for fun, open up Google Earth and zoom into your neighborhood and see how many there are around you. City dwellers probably won't see many, but many parts of the country are dotted with pools.

According to the National Swimming Pool Foundation there are approximately 10 million Swimming Pools in the United States… about 6 million in-ground pools and 4 million above-ground pools based on percentages discovered in a pool marketing report from the year 2000.

According to the U.S. Census Bureau (2000) there are 105 million households in the United States.

So, on average, there is one swimming pool for every 10 households in America.

The average size in-ground swimming pool holds about 20,000 gallons of water.
The average size above-ground swimming pool holds about 10,000 gallons of water.

This works out to be about 160 billion gallons of water that is stored in swimming pools across America. That is the equivalent of 1,500 gallons of water for every household in America, theoretically enough water to sustain each household (a family of four) for a year (except for evaporation) if all other sources of water were to become inaccessible for some disastrous reason.

There are some flaws with this way of thinking however – that is, the notion of relying upon swimming pool water for a backup source. City dwellers will not find many residential pools nearby, swimming pools are more concentrated in geographical areas with hotter climate, and are more often found in areas where people can afford the luxury. Additionally, one cannot assume that all swimming pools have been treated properly so as to consider them somewhat safe for drinking from (after further treatment).

Nevertheless, as you can see, there is quite a resource of water available in many locations, enough to 'get by' during a disaster event that brings down the municipal water supply or a long term power outage that shuts down everything including all well-pumps.

Drinking swimming pool water can be safe, if you are smart about it and treat the water properly.

Immediately following a disaster where power is lost, and for a period of days, most all swimming pool water will be in fairly good condition. That is, assuming that the owners have been properly maintaining their pools, the water will be fairly clean.

Depending on the outdoor temperature, and time of year, after a few days without filtering or chlorine generation, the pool water will begin to deteriorate and begin to grow some algae. This deterioration can be greatly minimized if the pool is immediately covered in some way after losing power. Some pool owners already have covers, but if you do not, a sufficient size tarp will work OK (a good prep to have). A cover will help keep sunlight from breaking down the existing chlorine in the water.

The chlorine that is put in swimming pools to maintain sanitation from bacteria, algae, and other nastiness, will break down fairly quickly when exposed to the UV rays in sunlight. Normally, the chlorine level of a properly maintained pool is kept at about 3 to 5 ppm (parts per million), while 4 ppm or less is considered safe to drink. You can check this with a swimming pool test kit.
How To Make Drinking Water Safe With Bleach
Drinking Water For Long Term Storage
During a disaster situation when the pool pump will not operate (e.g. loss of electrical power), chlorine tablets floating around in their dispenser container will help to keep some level of chlorine in the pool. But without filtration and agitation, its effectiveness will be diminished and not dispersed adequately throughout the pool. At some point the pool will probably begin to grow algae.

The FDA says that water is safe to drink with chlorine levels up to 4 ppm. A quick tap-water check here indicates that our municipal drinking water is 1 ppm, probably just enough to keep it safe from bacteria.

If using swimming pool water to drink, it is highly recommended to check it first for its chlorine level, and for even better safety, treat it prior to drinking by boiling it for 1 minute. This hypothetical discussion though presumes that you are without power, so boiling may be a challenge. Think, 'camp stove'.

It is also a great idea to filter the water with a quality drinking water filter, which will not only effectively remove bacteria and pathogens, but will make it taste better.

One of the highest quality drinking water filters I have found, is the Big Berkey Countertop Water Filter .

I've used the Berkey for over a decade, and in fact it is used daily to filter our drinking water from tap – mainly to remove the municipal additives – fluoride and chlorine just prior to drinking. If the swimming pool is being used as an emergency water source during a disaster, and the water is becoming green with algae, this filter will remove it completely. Although I wouldn't rely on a swimming pool for a backup source for drinking water, it may be reasonable to use as a drinking source if it was reasonably maintained, properly treated, and you take your own safety precautions.

Note that unless the pool is your own, you will not know what someone else may have put in their pool besides chlorine, and I'm certainly not advising that all swimming pools are safe to drink from, although when you think about it, how many people and kids end up inadvertently drinking gulps of the water anyway… when's the last time you heard of someone keeling over sick because they drank water from their swimming pool…