

# If Your Well Goes Dry

## Hauling Potable Water: Good Idea or Bad?

Article excerpted from *Size Up*, the magazine of the New York State Association of Fire Chiefs

By Craig D. Jackson, P.E., New York State Department of Health

As our state dries in time of drought, residential wells and springs are usually the first drinking water resources to run dry. It has become common in parts of New York State for the fire companies to help solve drinking water problems by trucking water to residents. This water is often pumped into failing wells in an effort to replace diminishing groundwater. While this may provide some short term relief, it can be a bad practice for several very important reasons.

First and most important, there can be significant public health risks from using fire tankers to haul drinking water. Fire tankers don't always have the luxury of a hydrant fill. Ponds, streams, rivers, and lakes are used to fill tankers for firefighting. These natural waters are full of microbial life and may contain pathogenic organisms that can cause serious human illness. *Giardia lamblia* is one such pathogen that is common in surface waters. *Cryptosporidium* is another that is often found in farm ponds and in streams and rivers downstream of agricultural activities. *Cryptosporidium* is the bug that caused 100 fatalities in a water borne outbreak in Milwaukee during 1993. Some pathogens are quite hardy and can survive in a tanker for weeks. Even with refill from another source, enough pathogens may remain in tank bottoms or on tank walls to cause illness.

Second, it is generally not effective to pour water into a dry well and extract it later. Depending on the geology at the well, residents typically recover as little as 10 percent of the introduced water. The rest will flow away through the same soil or rock pathways that bring water to the well when groundwater is high. Within a few hours, a day or two at best, the trucked water is no longer recoverable.

The third good reason is that few fire companies are properly certified to haul drinking water. State regulations require that bulk water certification be obtained before a tanker is used to transport drinking water. Bulk water certification, covered in Chapter 1, Subpart 5-6 of the State Sanitary Code, requires pre-approval of the water source, tanker disinfection and fill procedures that must be diligently followed, and paperwork to document that the hauler is meeting these obligations. Fire tankers can be used to fill swimming pools without this certification. This is because a pool is not a drinking water source and because the filtration and disinfection associated with pools are designed to control recreational exposure to pathogens. But even for pools, the source of water is a significant concern. Care should be taken to avoid potentially contaminated water such as farm ponds.

What can a resident do? State and county health officials advise residents to address water supply problems in ways that ensure safe, clean drinking water. Public water hook up is a good bet, but is not always available. Deeper wells can also solve the problem, but they can be expensive. Clean, protected cisterns can be used to hold drinking water. And for considerably less than the cost of a new well, a home can be outfitted with a supplemental storage tank that can then be filled with safe, clean drinking water. Polyethylene tanks that are

FDA approved for food contact are available from hardware and farm supply stores for as little as \$200. Some additional plumbing will be required to add a new tank, and a suction pump may also be needed. There are certified haulers in all parts of the state available to deliver safe, clean drinking water to residents for very reasonable costs. Lists of these haulers are available from your local county or state health office.

Fire departments are here to serve - it is their undeniable nature. It is hard to say no to people who are in need and seeking help. But please, do not use uncertified tankers, and do not haul questionable water to help these folks. Doing so may do far more harm than good. Instead, refer them to their local county or state health office for assistance. Thank you for your help with this important health related matter.