

Water Distribution Systems—A Growing Concern

Because of a significant change in building codes requiring sprinkler systems in new construction, aging water distribution systems, and water shortages or restrictions (even on public water systems), water and its associated distribution systems are emerging as a potentially long-term risk management issue for many youth programs. Here are a few examples of problems that have developed over the past few years:

- An old camp dining hall on the edge of a lake burned down. Due to state regulations, the septic system could not be rebuilt in the same location. The camp had to install a piping system to pump water half a mile away, at an additional cost of almost half a million dollars.
- The well water at one camp was very alkaline. Over a period of more than 50 years, so much sediment had built up that less than 25% of the water was able to flow through the pipes. Maybe that's why your showers don't flow well! Now imagine what reduced water flow does to the sprinkler system in your new lodge.
- Many youth programs rely on city water, and new building construction usually requires a sprinkler system. A serious problem that many communities are encountering is that the city water system is overburdened, and there is insufficient water pressure or volume to support your fire protection system.
- Droughts will continue to create problems (both water supply and fire issues) for many rural programs. Water rights, particularly in western states, have been a hotly contested issue for more than a century, and this debate is likely to expand nationwide.
- Water purity concerns have significantly reduced the number of organizations that manage aboveground water systems, and have added restrictions as well as testing and certification requirements for wells. Ask a director who has dealt with an e-coli outbreak involving 130 children and 60 staff with only one nurse "how important is water quality?"

Water quality and distribution systems are emerging as issues with long-term ramifications. Most youth programs would not be able to operate on imported water. Few donors will give to a capital campaign fund for a new water system (placing the brass dedication plaque on the septic tank vent just doesn't sound as appealing as placing it on the wall of a new building). Solutions will probably be expensive as well as challenging. Planning ahead may include some of the following ideas:

- For new construction or significant renovations, bring in your local fire marshal early to talk to the architect about sprinkler systems and water supplies.
- Talk with your maintenance director and get a firm understanding of the condition of your underground and building piping. At some point, that piping will need to be replaced.
- If your program is on well water, talk with some water quality experts about additional tests and quality controls you can put in place to ensure the water is healthy.

If you have a safety or risk management question or a suggestion for a topic, please contact Markel's Risk Management Department at safety1st@markelcorp.com.