



Playing the Game of Risk

As a child, life was all about taking risks, everything from “I Dare You” to “I Double Dog Dare You”. We even had a board game (long before the days of video games) called “Risk!” in which we strategized how to take over continents. As an adult, the games have changed, but I now see risk playing on a much larger and more consequential scale. A recent trip to Italy underscored this point.

Mount Somma is the huge caldera in southwestern Italy that contains the smaller but more famous Mount Vesuvius. Emitting poisonous gases and vaporizing living creatures from the heat, it was Vesuvius that buried Pompeii and Herculaneum in ash in 79 B.C. But the ancient Mount Somma that exploded millennia earlier still endangers the modern world. The outer shell of this formerly huge mountain still partially encircles its volatile offspring. Should Vesuvius erupt, Mount Somma's remnants, broken away on the northwest, would play a significant role in modern history.

Vesuvius is, in fact, still active, last erupting in 1944 and currently showing various signs of another pending explosion. So its temperature is closely and constantly monitored, and locations of the numerous heat sensors within its crater are measured by a series of Leica instruments installed around the crater's edge. Plans are underway to replace this set up with a Japanese muon tomographic system to image the magma chambers for better predictions of when molten rock will breach the surface.

Close by this geological bomb lies Naples, capital of Italy's Campania region and third largest city in the nation, with a population of about one million in the city and over



Red Zone for Mt. Vesuvius.

“How can we express risk to those who prefer to close their eyes and ears to it?”

three million in the metropolitan area. The lay of the land means that molten lava from an eruption from Vesuvius would be steered toward Naples. Geologists and volcanologists have identified the areas that would be endangered by an eruption.

But delineation of that Red Zone, where mandatory evacuations should occur

quickly, has been altered for convenience's sake. It ends just short of the urban limits where evacuation would be most difficult and disruptive to the economy of the region. Whether a bad call to evacuate when an eruption did not occur, or lack of notice to evacuate if an eruption took Naples by surprise, either situation would be a costly mistake.

Currently, because maps show the Red Zone located so far from the heart of town, there are plans to build a large new hospital on the Red Zone's edge. But volcanologists and geologists know that the actual endangered area encompasses the planned construction site and extends even further toward Naples' center. Official maps say one thing, while science says another.

Across the Atlantic Ocean, Americans play similar games of downplaying risk for the sake of economic convenience. When new flood maps are proposed for an area, there are frequently landowners who protest on the basis of not having experienced a flood in so many years. Surely I am not the only surveyor who has had a client make such a statement, or to be told that the water from the creek “hardly ever comes above the first step.” Short memories and the ability to minimize bad experiences often support claims that the proposed new flood maps just have to be wrong.

Once a map is adopted, property owners will apply for a Letter of Map Change to qualify for exemption from mandatory construction and insurance coverage requirements. If such applications succeed, then the affected buildings and sites are still eligible for protective insurance, but at a much lower rate than if still in the 1% annual chance Special Flood Hazard Area. However, the goal is generally to eliminate any extra expense, even if it would protect what is likely the single largest investment that property owners will ever make.

How can we express risk to those who prefer to close their eyes and ears to it? This is a huge challenge, one that the Technical Mapping Advisory Council to FEMA has been struggling with in our efforts to help the agency meet its Congressional mandate (Homeowners Flood Insurance Affordability Act, 2014) to more clearly communicate with the public. But in the daily world of surveying, there is something we can do. When we are asked to assist in applying for Letters of Map Amendment or Revision based on Fill, an opportunity arises to educate clients about flooding risks. There are no “no risk” areas on Flood Insurance Rate Maps, and proximity of mapped 1% annual chance risk areas should be a reminder of how often floods are currently happening well beyond those limits. A Letter of Map Change should be viewed as a chance to reduce a vital expenditure, not one to eliminate insurance entirely. ■

Wendy Lathrop is licensed as a Professional Land Surveyor in NJ, PA, DE, and MD, and has been involved since 1974 in surveying projects ranging from construction to boundary to environmental land use disputes. She is a Professional Planner in NJ, and a Certified Floodplain Manager through ASFPM.

the American Surveyor

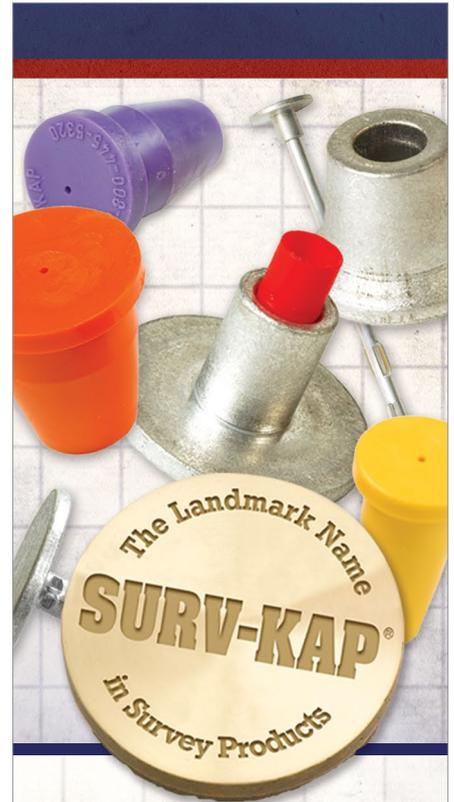


Your comments and suggestions are valuable to us—feel free to let us know what you think.

You can reach our staff and contributing writers through the online message center at: www.amerisurv.com

OR

The American Surveyor
905 West Seventh Street, #331
Frederick, MD 21701



CUSTOMER SERVICE... we stake our reputation on it.

EASY ONLINE ORDERING!
Your Satisfaction, Guaranteed.

SURV-KAP

- SURVEY MARKERS
- CAPS
- ACCESSORIES

800-445-5320



SURV-KAP.COM