

Quest is on for safer drinking water in U.S.

By Peter Andrey Smith, New York Times

UNIONTOWN, Pa. — On a muggy Friday afternoon in a strip mall parking lot, as thunder echoed in the Alleghenies and cottonwood seeds floated on the breeze, Lee Stanish, 32, a postdoctoral researcher at the University of Colorado Boulder, and Natalie Hull, 24, a lab manager, stepped out of a white van, its hood plastered with dead insects.

After a brief conversation with a chain store manager, the two women retrieved a large black container from their van and wheeled it into the bathroom. Ms. Hull opened the faucet and let the cold water run. The two snapped on disposable gloves, unpacked their equipment, and began collecting tap water.

Hull checked the water temperature and filled water in a vial of formaldehyde for cell counts. Stanish placed another vial of water in a portable chlorine meter for analysis. “We’re in and out in about 10 minutes,” she said. Hull flipped the faucet off. On to the next tap.

By nightfall, the van would be loaded with close to 30 gallons of water sampled from dozens of locations across the Ohio River Valley. Stanish and Hull planned to set up a mobile laboratory in a hotel room in Morgantown, W.Va., all in an effort to understand a hidden underground ecology where organisms eke out a living in dark, cool pipes loaded with chlorine.

“What we know so far is that it’s usually very clean,” Stanish said. “But it’s a disturbed environment.”

The 53,000 water utilities in the United States deliver some of the safest drinking water in the world — a public health

victory of unrivaled success that began in 1908 with chlorination campaigns in Jersey City and Chicago. Still, millions of individual cases of waterborne diseases occur annually and related hospitalization costs approach \$1 billion each year. In 2007 and 2008, the most recent years for which figures are available, the Centers for Disease Control and Prevention recorded 164 waterborne disease outbreaks, almost entirely from protozoan cysts of the parasite *Cryptosporidium*.

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