By Monica Wurtz, Tech Assistant

KRWA Attends EPA's Vulnerability Self Assessment Tool (VSAT) Training

KRWA staff Rita Clary (left) and Monica Wurtz (right) attend VSAT and WHEAT training in Lee's Summit, Missouri on April 28 and 29, 2015. The course was taught by Josh Mazurek (center), with Computer Sciences Corporation, EPA contractor.

It's tornado season in Kansas. According to the National Weather Service, Kansas ranks third in the nation with an average of 49 tornadoes (EF-1 or larger) per year. We all know that tornadoes are capable of causing thousands, even millions, of dollars in damage. If your water or wastewater utility is faced with a natural disaster, are you aware of what your most vulnerable system components are?   Are you financially prepared to repair or replace those important parts of your system?

With questions like these in mind, the U.S. Environmental Protection Agency (EPA) developed the Vulnerability Self Assessment Tool (VSAT) to assist water and wastewater utilities of all sizes with determining vulnerabilities to both man-made and natural hazards, and with evaluating potential improvements to enhance their security and resilience. Utilities can also use VSAT 6.0 to update current risk assessments and ensure that they are ready to meet the increasing safety and security challenges of the future.

What is a Risk or Vulnerability Assessment?

It is a process that helps utilities to evaluate their susceptibility to potential threats, identify corrective actions that can reduce or mitigate the risk and consequences, and provides a framework for developing risk

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reduction options and associated costs. The process requires much data collection from a team of individuals including management, operations, engineering, maintenance, and others. The process can also be lengthy – an in-depth, quality risk assessment can take months to complete.

What are the benefits of using VSAT 6.0?

❖ It's easier to use. Version 6.0 features a New Analysis Wizard to assist small systems and new users with suggested default assessments for common utility assets, countermeasures, and threats.

❖ It's compliant with the J-100 Standard – the first voluntary consensus standard that encompasses an all-hazards risk and resilience management process for use specifically by water and wastewater utilities.

❖ It makes your utility eligible to apply for the U.S. Department of Homeland Security's SAFETY Act protections, which can limit liability for claims resulting from an act of terrorism.

- It's part of the eligibility requirements for some U.S. Department of Agriculture's Rural Development Grants for water and wastewater utilities.
- It's free! VSAT 6.0 is available for download at http://water.epa.gov/infrastructure/watersecurity/techto ols/vsat.cfm. There is also a series of basic and advanced VSAT training videos available at this weblink.

In April 2015, KRWA Circuit Rider Rita Clary and I attended VSAT 6.0 and WHEAT 3.0 training provided by EPA. During the two-day, hands-on course, Rita and I completed a risk assessment for a simulated water and wastewater utility using VSAT and WHEAT. We learned the step-by-step process of using the tool, starting with the New Analysis Wizard, entering in system details regarding assets (i.e. source, treatment, storage), countermeasures (i.e. fencing, hardened doors, continuous process monitoring), and threats. We also learned how to use WHEAT to establish an economic baseline and then estimate the consequences of a specific threat scenario. Finally, we learned how to generate cost/risk reports that include a risk drill-down for each asset/threat pair, a narrative, and a data report. If you would like to know more about VSAT or if you are interested in having KRWA staff assist you with completing a risk assessment using VSAT 6.0, please contact Rita at rita@krwa.net or me at monica@krwa.net.

Kansas Rural Water Association staff are no strangers to providing assistance on Risk Assessments and Vulnerability Assessments. KRWA staff previous provided assistance to hundreds of systems directly and then as a subcontract to the consulting firm Tetra-Tech which has been contracted by the Kansas Department of Health and Environment to conduct such work. KRWA plans to include the topic and

What is WHEAT?

WHEAT = Water Health and Economic Analysis Tool

An EPA-developed software tool that estimates public health (injuries and fatalities) and economic (utility and regional) consequences.

WHEAT results can be directly input into VSAT during consequence estimation.

Three scenarios available:
- Loss of operating assets
- Release of a hazardous gas
- Drinking water contamination

For more information on WHEAT, visit
http://water.epa.gov/infrastructure/watersecurity/techtools/wheat.cfm

demonstration of the VSAT 6.0 and WHEAT 3.0 programs at future training sessions. It should also be noted that Rita Clary was a participant in the final review and development of VSAT at meetings held in Washington, D.C.

Monica Wurtz began work with KRWA in October 2013. She previously worked at the Kansas Department of Health and Environment and also worked at US EPA Region 7 for four years. Monica is considered a national expert on various drinking water regulations.

VSAT Potential Threats to Utilities

Man-Made
- Acts of terrorism (air or marine attack, bombs, assault)
- Contamination of product
- Process Sabotage
- Vandalism
- Theft

Natural Disasters
- Earthquakes
- Floods
- Hurricanes
- Ice Storms
- Tornadoes
- Wildfires