



*With costs of energy and equipment increasing, new techniques are being implemented to help ensure reliability of equipment and to achieve greater energy efficiency. This session will provide a working knowledge of how these technologies and techniques can allow your water or wastewater utility to reduce the number of emergency calls because of unplanned equipment failures.*

The Kansas Rural Water Association  
presents:

## **Improving Equipment Reliability and Gaining Energy Efficiency**

**Tuesday, August 31, 2010**

Russell City Hall  
133 W 8th Street, Russell, KS

**Wednesday, September 1, 2010**

4-H Building  
900 Greeley, Salina, KS

**Thursday, September 2, 2010**

Fort Riley Public Works  
Building 352, Fort Riley, KS

### **TRAINING NOTICE:**

The Kansas Rural Water Association is sponsoring three training workshops entitled "**Improving Equipment Reliability and Gaining Energy Efficiency.**" See dates and locations below.

The essential operation of water and wastewater utilities requires good maintenance practices. This training session will introduce and demonstrate infrared thermography, vibration analysis, laser alignments, and airborne ultrasound to allow cities and rural water districts to plan maintenance actions and reduce the number of emergency calls from unplanned equipment failures. Such emergencies reduce the operational capacity, readiness, and profitability of utilities. Learn how these technologies and techniques can increase your operational readiness and help you better plan for the future. This session is for all system operators, maintenance staff, managers, administrators and elected officials. All sessions begin with registration check-in at 8:30 a.m. The training begins at 9:00 a.m. and will conclude at 4:30 p.m. Lunch is on your own.

### **DATES AND LOCATIONS:**

**9:00 a.m. to 4:30 p.m. (8:30 a.m. Check-in, coffee and rolls)**

**Tuesday, August 31, 2010**

**Russell City Hall, 133 W 8th Street, Russell, KS**

*Directions: from Interstate 70, exit on Highway 281/ Fossil Street, proceed north to 8th Street, turn west on 8th to City Hall. Park on north side of City Hall.*

**Wednesday, September 1, 2010**

**4-H Building, 900 Greeley, Salina, KS**

*Directions: from Interstate 70, exit on Ohio Street, proceed south on Ohio Street to Greeley Avenue, turn west on Greeley, proceed west to 4-H Building.*

**Thursday, September 2, 2010 \***

**Fort Riley Public Works, Building 352, Fort Riley, KS**

*\* This session limited to first 30 registrants*  
*Directions: from Interstate 70, exit at Marshall Field, turn north on Marshall Drive, road name changes to Henry Drive, proceed north on Henry Drive to Building 352. Attendees may be asked for driver's license, proof of insurance and vehicle registration at the Fort gate.*

### **COURSE TOPICS:**

- **Vibration Monitoring** - provides real time data of the operating condition of rotating equipment
- **Infrared Thermography** - how this technology can be used for locating water leaks, improving building energy efficiency, checking the operating condition of mechanical and electrical equipment
- **Ultrasound** - can be used to locate leaks, improve lubrication techniques and reduce exposure to arc flash incidents
- **Power Quality Analysis** - use analysis to reduce the effects of harmonics and other electrical conditions which cause system failures and degradation of motor winding insulation
- **Condition Monitoring** - simple techniques that can improve the overall operating condition of notors, pumps, fans, blowers and even pipe and waterline integrity

### **PRESENTER:**

O. J. Utter, Utter Precision, Inc., Utica, NE, is the owner and primary consultant for Utter Precision, Inc. He is a Level I airborne ultrasound technician, Level II vibration analyst and a Level III infrared thermographer. Utter Precision offers training and consulting for vibrations, infrared, airborne ultrasound, sheave and coupling laser alignment and electronic field balancing.

### **REGISTRATION:**

Complete the attached form and return it by mail or fax it to KRWA at 785/336-2751 or call KRWA at 785/336-3760. You may also register online at [www.krwa.net](http://www.krwa.net) under "training". Early registration is encouraged by Friday, August 27.

### **COST:**

This session is offered at NO CHARGE by KRWA.

### **CERTIFICATION CREDIT:**

Water and wastewater operators who attend will receive 5 hours of credit towards certification or renewal for full-day attendance.