



*This training course teaches maintenance and troubleshooting of electrical motors and how to set up and maintain variable speed drives. Attendance is limited to the first 20 registrants. This is an excellent training session and very popular. Register early.*

## The Kansas Rural Water Association

presents:

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### Specialized Training Course

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# Understanding and Troubleshooting Electrical Motors and Variable Speed Drives

Wednesday and Thursday  
February 8 and 9, 2012  
Water Treatment Center  
803 E. 23rd Avenue  
Hutchinson, KS

## TRAINING NOTICE:

You are invited to attend this new training program to help water and wastewater utility operators and managers be better troubleshooters on electric motors and variable speed drives. This session will provide instruction on the set-up, operation and maintenance of motors and drives. This training will be held Wednesday and Thursday, February 8 and 9, 2012 at the Water Treatment Center in Hutchinson, KS.

This training will be generic, without regard to particular manufacturers. The training will demonstrate how to troubleshoot and program a wide range of drives. The motor section will cover troubleshooting and diagnostics of motors including maintenance, lubrication and service schedules. The training will also instruct how to choose the right motor for the drive.

Sessions begin at 8:30 a.m. and will conclude by 4:30 p.m. You may arrive at 8:00 a.m. for complimentary coffee and rolls.

## Dates and Location:

Wednesday and Thursday  
February 8 and 9, 2012  
Water Treatment Plant  
803 E. 23rd Avenue, Hutchinson, KS

*Directions: From Highway 61, turn west on 17th avenue; proceed west on 17th Avenue to Severance Street; turn north on Severance Street; proceed north to 23rd Avenue; proceed through the round-a-bout and then west on 23rd Avenue to the entrance of the Water Treatment Center.*

## Cost:

Due to funding reductions, KRWA has established a fee of \$50 per day for this training. Enclose payment or KRWA can bill.

## Certification Credit:

Water and wastewater operators who attend will receive 1 (one) credit hour towards certification or renewal for each hour of attendance. Full day attendance will provide 5 hours credit.

## Course Outline:

- Troubleshooting and Diagnostics of Motors
- Maintenance, lubrication and service schedules
- Variable Speed Drives
  - Components
  - Applications
  - Reduction of operating costs
  - Programming the drive
  - Troubleshooting the drive

Those attending should bring their multi-meter so that they can troubleshoot components. Handouts and reference material will be provided.

## Presenter:

Robert Blume holds certification to teach Industrial Electrical Electricity. In addition to operating his own electrical repairs business, he is employed professionally. He has a broad experience with electrical components and operations; Bob makes this session interesting and exciting and filled with information presented in a manner that local water and wastewater operators understand and appreciate.

## Registration:

If you plan to attend, please complete the attached form and return it at your earliest convenience. **CLASS SIZE IS LIMITED TO THE FIRST 20 REGISTRANTS.** Return the registration form by mail or fax your registration to KRWA at 785/336-2751 or you may call KRWA at 785/336-3760. You may also register via the internet at [www.krwa.net](http://www.krwa.net) under "training". Pre-registration is required. Please register by Thursday, February 2.

This is an extremely popular training course; **sessions fill fast.** Class size is limited due to the equipment provided for the training.