

Introduction to Stray Voltage

Tuesday, May 5, 2026

Stray Voltage Testing

Wednesday, May 6 - Thursday, May 7, 2026



Arlington Ag Research Station
Public Events Building
N695 Hopkins Road
Arlington, WI 53911

Developed by

Midwest Rural Energy Council

University of Wisconsin Biological Systems Engineering
Department

Public Service Commission of Wisconsin

Wisconsin Department of Agriculture, Trade and Consumer
Protection



The stray voltage investigators' courses have been designed to reduce time in the classroom and improve knowledge retention by combining web-based instructional modules with our classroom sessions. You will review basic materials at home before attending the course. You will be sent instructions on accessing the web-based instructional material. You will need to successfully complete these instructional modules before attending the classroom session. Each instructional module will have a short quiz to test your knowledge. After the classroom session, you will take a final exam online.

**An Advanced Level Class will be held October
13-14 in Madison, Wisconsin.**

Course Organizers and Instructors:

Anthony Cook is the owner of AC Electrical Testing, a company that provides stray voltage testing and electrical investigations nationwide. Clients of AC Electrical Testing include utilities, cooperatives, municipalities, renewable energy companies, and farm owners. Services include instruction, testing, investigating, and expert witness work for litigation. He also is the owner of Mr. Electric of Madison, which provides electrician services to the greater Madison area. Anthony's family includes his wife and three children. Anthony has been involved in the electrical profession for over 23 years including experience as an electrician, utility designer, utility system operator, utility consultant, and business owner. Anthony's holds an A.S. in Computer Electronics and Telecommunications, a B.S. in Technology Management, and an MBA. He is a Master Electrician, Commercial Electrical Inspector, and Designer of Engineering Systems in the State of Wisconsin.

Michael Haas, P.E., P.E., is a Principal Engineer with Safearth Americas. In the last 20 years, Michael has been employed as a consultant, and by investor-owned utilities, focusing his career on bonding, grounding, safety, power quality, and stray and contact voltage. As a subject matter expert, he has traveled across the nation helping power suppliers, farmers, and others with their concerns, often serving as an expert witness. Michael graduated from the University of Wisconsin – Platteville with a degree in Electrical Engineering. He is a licensed Professional Engineer in the state of Wisconsin, a member of the Institute of Electrical and Electronics Engineering, a member of IEEE's honor society Eta Kappa Nu (IEEE-HKN), and was an active participant in the Public Service Commission of Wisconsin's former Stray Voltage Committees. He is also a licensed master electrician (Wisconsin) and a commercial electrical inspector (Wisconsin).

Paul Ortmann, P.E., P.E., is the Principal Engineer in the Power Quality Department at Idaho Power Company. He has been involved in stray voltage investigations since 2000 and contributed to the development of the Idaho State Stray Voltage Statute and Idaho Public Utilities Commission Stray Voltage Rules. For several years he has helped teach the stray voltage classes offered through the MREC. Paul is also a member of the IEEE and the ASABE and contributes to the ongoing development of power quality and stray voltage standards

Douglas J. Reinemann, PhD is professor of Biological Systems Engineering at the University of Wisconsin-Madison. Reinemann has been working at the interface between energy and agricultural systems for over 30 years. Doug has been actively involved with the Midwest Rural Energy Council - an organization of power suppliers addressing issues related to energy supply to agricultural production and processing operations as well as integrating renewable energy resources into the energy distribution grid. Dr. Reinemann has directed the activities of the UW Milking Research and Instruction lab since 1990. He holds Bachelor's and master's degrees in Agricultural Engineering from the University of Wisconsin-Madison and a Ph.D. in Ag Engineering from Cornell University.

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The introductory course is for those new to the topic of stray voltage. It is designed to give dairy producers and agricultural professionals a basic understanding of stray voltage sources and solutions and includes a demonstration of simple spot check measurements for stray voltage.

COURSE TOPICS INCLUDE:

- Basic Electrical Knowledge
- Utility and Farm Circuits
- Review of Animal Research
- Stray Voltage Rules and Regulations
- Voltage Spot Checks

COURSE SCHEDULE:

Tuesday, May 5: 8:00 am - 5:00 pm - Lunch and Dinner included

Stray Voltage Testing

Wednesday, May 6 - Thursday, May 7, 2026

The testing course is designed to give the professional stray voltage investigator the tools required to collect the data required for a complete stray voltage investigation. Students will gain an understanding of the farm and utility circuits associated with stray voltage and measurement techniques to determine the sources of voltage and current on a farm. This course includes farm visits and a hands-on exercise during which the student will work with an experienced stray voltage investigator and perform all of the standard measurements of a stray voltage investigation.

COURSE TOPICS INCLUDE:

- Review of Electrical Calculation Methods
- Stray Voltage Circuits and Sources
- Agricultural Electrical Code
- Customer Relations
- Stray Voltage Measurement Tools
- Measurement Techniques and Data Recording
- Hands-on Stray Voltage Investigation in Small groups, and Data Quality Analysis

COURSE SCHEDULE:

Wednesday, May 6: 8:00 am - 5:00 pm - Lunch included
Thursday, May 7: 8:00 am - 3:00 pm - Box Lunch included

General Information

REGISTRATION FEES:

**Introduction to Stray Voltage \$200
\$225 if registered after April 2, 2026**
Fee includes registration, materials, breaks, lunch and dinner on Tuesday.

**Stray Voltage Testing \$385
\$435 if registered after April 2, 2026**
Fee includes registration, materials, breaks, lunch on Wednesday and Thursday

**BOTH Intro and Testing \$585
\$660 if registered after April 2, 2026**
Fee includes registration, materials, breaks, lunch and dinner on Tuesday and lunch on Wednesday and Thursday

An **Advanced Level Class** will be held
October 13-14, 2026, in Madison, Wisconsin.

Make checks payable to: Conference Management-MREC Stray Voltage

Mail to: Wisconsin Union, Conference Management,
702 Langdon Street, Madison, Wisconsin 53706.

ONLINE:
<https://uwmadison.eventair.com/2026-stray-voltage-introduction-testing/reg/Site/Register>

Please email conferences@union.wisc.edu with any dietary or special accommodations.

COURSE LOCATION:
Arlington Ag Research Station, Public Events Building,
N695 Hopkins Road, Arlington, WI 53911

LODGING OPTIONS:
Please make your own hotel reservations by calling the hotel of your choice.

Holiday Inn Express,
7184 Morrisonville Road, DeForest, WI 53532,
(608) 846-8686

Comfort Inn & Suites,
5025 County Highway V,
DeForest, WI 53532, (608) 846-9100

CANCELLATIONS/REFUNDS: All cancellations must be made in writing to conferences@union.wisc.edu by Monday, April 6, 2026 in order to receive a partial refund. A \$75 process and handling fee will be assessed to any cancellation made by the deadline. Cancellations after Monday, April 6, 2026 will not receive a refund. WU Conference Management may require up to 10 business days to process and issue a refund.

Registration Form

Introduction to Stray Voltage
May 5, 2026

Stray Voltage Testing
May 6-7, 2026

MAIL TO: Memorial Union Conference Management

702 Langdon Street
0DG1VRQ :LVFRQV/LQ
(PDLO FRQIHUHQFHV#XQLRQ ZLVE HGX

ONLINE:
<https://uwmadison.eventair.com/2026-stray-voltage-introduction-testing/reg/Site/Register>

Fill out a **separate** registration form (or copy) for each registrant. *Print clearly or type*

Name _____

Company _____

Job Title _____

Address _____

City State _____

Daytime Phone _____

Email address to access coursework:

Introduction to Stray Voltage \$200-\$225 if registered after April 2, 2026

Stray Voltage Testing \$385-\$435 if registered after April 2, 2026

Enclose fee. Payment must be made at time of registration.

Make checks payable to: Conference Management
M5(C 6tra\ 9oltage

Please charge to the following account:

Visa MC AMEX DISC

Expiration Date _____

Credit Card # _____

Name on Card _____

Signature _____