

2021 Online CEU Event

Technician Tract Program

Online Zoom Webinar
Thursday, January 21, 2021
8:00 a.m. - 4:30 p.m.

Technician Tract Schedule: Please note that due to the nature of this event, start and end times are approximate, however, 8 (eight) full hours of training will be completed.

7:30 am - 8:00 am Time for attendee log in, introductions, and training specifics & instructions
8:00 am - 8:55 am Pressure Regulation & Check Valves - Brent Mecham
8:55 am - 9:05 am Break (10 min.)
9:05 am - 10:55 am Two Wire Troubleshooting - Craig Borland
10:55 am - 11:05 am ... Break (10 min.)
11:05 am - 12:00 pm... Electrical Troubleshooting - Ramzi White
12:00 pm - 12:30 pm .. Lunch
12:30 pm - 2:20 pm..... Irrigation Scheduling - Brent Mecham
2:20 pm - 2:30 pm..... Break (10 min.)
2:30 pm - 3:25 pm..... Drip Irrigation Design for Plant Establishment & Long-term Maintenance - Brent Mecham & Robert von Bernuth
3:25 pm - 3:35 pm..... Break (10 min.)
3:35 pm - 4:30 pm..... Best Management Practices - Patrick Dickinson

Webinar Technical Requirements:

- Each individual participant must have their own device connected to a reliable internet source and, due to the length of the webinar, should also be plugged into a power source.
- Only one person may use your webinar link. Each link is specific to the person registered and logs both attendance and participation.

Participation Requirements:

- After logging in, your attendance and participation will be logged for the purpose of reporting CEU hours according to TCEQ's Technology Based Training requirements.
- Throughout the webinar, you will see polling questions pop up for you to answer. Please make sure you answer each question in a timely manner so that your participation is recorded.
- You must stay logged into Zoom for the entire webinar on January 21st to receive CEU hours. Do not log out or end your webinar session after logging in on the day of the event until it is officially closed.

Technical support hotline:

- If at any time during the webinar you experience technical difficulties, contact dallasiahelp@gmail.com by email for technical support. Send your technical issue and a phone number where you can be reached.
- Common technical issues include being logged off the internet or your device's battery being drained. Please check your device for viable internet service, including having internet logon credentials on hand if possible, and have your device plugged into a power source.
- If, for some reason, your internet drops the webinar feed, simply use your Zoom link to re-enter the webinar classroom and proceed as normal.

Event Completion Certificates: After the webinar closes, all attendees will be reviewed for attendance hours and participation. A link will then be sent to the email address on record with the event certificate attached.

We would like to express our sincere thank you to all of the instructors and sponsors for year's event. We are grateful for their knowledge and contributions this year and to the Texas irrigation industry as a whole.

• Technician Tract Outlines •

Pressure Regulation & Check Valves for Landscape Irrigation - Brent Mecham - 1 hour

- A. Definitions of pressure regulation terms
- B. Why to use pressure regulation
- C. How and where to use pressure regulation
 - 1. At the POC
 - 2. At the zone control Valve
 - 3. At the sprinkler
 - 4. At the emission device
- D. Types of pressure regulating devices

Two Wire Troubleshooting - Craig Borland - 2 hours

- A. Understand Two-wire Systems
- B. Understand Design Characteristics
- C. Take accurate Electrical Readings
- D. Troubleshoot DC Systems
- E. Troubleshoot Two-wire Systems

Electrical Troubleshooting - Ramzi White - 1 hour

- A. Troubleshooting
 - 1. Do You know which way to Turn
 - 2. Critical Knowledge Triangle
 - a. Mechanical
 - b. Electrical
 - c. Everything Else i.e. Design, installation, maintenance, etc.
- B. Electrical troubleshooting path
- C. Similarities between water and electricity
- D. Electric circuit
- E. Basic tools
- F. Look for the obvious
- G. Testing
 - 1. Controller
 - 2. Wire
 - 3. Solenoids
 - a. How a solenoid operates a valve
- H. Locating
 - 1. Wire path
 - 2. Valves
 - 3. Breaks/nicked wire

Irrigation Scheduling - Brent Mecham - 2 hours

- A. Examine how to calculate plant water needs
- B. Ways to determine sprinkler precipitation rate
- C. Basic irrigation scheduling
 - 1. Run Time
 - 2. Cycle & Soak
 - 3. Frequency of Irrigation

Drip Irrigation Design for Plant Establishment & Long-term Maintenance - Brent Mecham & Robert von Bernuth - 1 hour

- A. Understand important soil characteristics
- B. Understand Water movement in the soil
- C. Drip system design factors
- D. Analyzing expected drip performance
- E. Drip component placement
- F. Drip component selection
- G. Drip emission device layout
- H. Zoning
- I. Plan for new versus existing plantings

Best Management Practices - Patrick Dickinson - 1 hour

- A. State of Water in Texas
 - 1. Current Water Supply
 - 2. Future Water Supply & Demand
 - 3. Storm water & Run off effects on water supply
- B. Best Management Practices
 - 1. Overview of the benefits of BMPs
 - 2. BMP #1-Design irrigation systems for water efficiency
 - 3. BMP #2-Install irrigation systems to meet design for water efficiency
 - 4. BMP #3-Manage irrigation systems for water efficiency
- C. Filling the gap between landscape & irrigation trades for better water efficiency
- D. Understanding Plant Water Needs

• Technician Tract Instructor Bios •

Craig Borland, CIC, CID, CIT, CLIA, CLWM, has worked for The Toro Company for the past 20 years. During that time, he has managed the controller repair department and the service center repair program. He also held positions as warranty administrator, inside sales representative, and is currently working as a senior customer resource specialist in the irrigation division's customer resource center. Craig provides technical support for the engineering, legal, technical support and marketing departments, and the Toro Micro Irrigation division, among many others. He holds a B.S. degree in fruit science with a minor in ornamental horticulture from Cal Poly State University, San Luis Obispo. He has also been an Irrigation Association instructor for the past 18 years.

Patrick Dickinson is horticulturist and licensed irrigator. He has a Bachelor of Science in Horticulture from Tarleton State University, is an ISA Certified Arborist, a TCEQ Licensed Irrigator, and has over 15 years' experience in the Texas Horticulture industry. Patrick was instrumental as part of the Water University Program under Texas A&M AgriLife Research, focusing on water conservation and storm water issues through professional training, public education programs and demonstrations. Patrick has a proven record addressing professionals and the public to provide the most sustainable information about landscape water use from design and plant selection to water conserving landscape management practices.

Brent Mecham, CID, CLWM, CIC, CLIA, CAIS, brings more than 35 years of experience working in the landscape and irrigation industries as well as for a large water agency in Colorado focusing on landscape water management. He has written numerous industry articles, is frequently a speaker at industry events and has co-authored many of the training manuals and books offered by the Irrigation Association. He is certified as an irrigation designer, contractor, water manager and agricultural irrigation specialist. He enjoys helping others find success in the irrigation industry.

Robert von Bernuth, PhD, PE, CID, CLWM, CIC, holds a doctorate in engineering as well as an MBA. Bob has also authored more than 40 peer-reviewed articles, more than 60 papers and technical publications, and contributed to the development of industry software. He has served as administrator for more than \$2.7 million in grants for various organizations and projects, and he holds a patent for a wear-proof spray nozzle device. Bob is a fellow of the American Society of Agricultural and Biological Engineers and a current ASABE board member. Bob is a lifetime technical member of IA, was named IA's Person of the Year in 1994, and served on the Irrigation Foundation's Board of Trustees from 2006 to 2011 was a member the professional staff of the IA.

Ramzi White is a Key Account Manager for SiteOne Landscape Supply, in the Lubbock and Amarillo market. He started with SiteOne in February 2016 and has been in the industry since 2003. He has a Master of Science in Horticulture from Texas Tech University with a specific field of study in Turfgrass, as well as, being a licensed irrigator in Texas. As a SiteOne Irrigation instructor, Ramzi enjoys giving back to the team and paying forward the development he received along the way. He also strives to learn something new daily as he works with the team to better serve their customers. Prior to being in the Landscape industry he served in the Air Force as a TACP.

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• CEU Event Notes •

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