

*Explore. Connect. Learn.*



**REGISTER NOW** for the  
world's biggest irrigation show!

[www.irrigationshow.org](http://www.irrigationshow.org)



## Registration Brochure

**IRRIGATION SHOW** | Dec. 4-5, 2019  
**EDUCATION WEEK** | Dec. 2-6, 2019  
Las Vegas Convention Center  
Las Vegas, Nevada

AGRICULTURE  
LANDSCAPE  
GOLF  
NURSERY & FLORICULTURE  
SPORTS TURF

Co-located with **NGWA** and **ARCSA**.



## ATTENDEES AGREE

94%

"I LEARNED ABOUT  
NEW PRODUCTS AND  
TECHNOLOGIES."

85%

"DURING THE SHOW,  
I MADE NEW BUSINESS  
CONNECTIONS."

91%

"THE IRRIGATION SHOW IS A GOOD  
PLACE TO GET INSIGHT ON HOW  
MY ORGANIZATION CAN IMPROVE  
IRRIGATION PRACTICES."



Co-located with  
**NGWA** and **ARCSA**

**IRRIGATION SHOW** | Dec. 4-5, 2019  
**EDUCATION WEEK** | Dec. 2-6, 2019  
Las Vegas Convention Center  
Las Vegas, Nevada

## About the Irrigation Show

The Irrigation Show and Education Week is a program of the Irrigation Association, a nonprofit 501(c)(6) organization dedicated to promoting efficient irrigation. Unlike for-profit trade shows, revenue from the Irrigation Show supports IA initiatives to benefit members and the irrigation industry by

- improving industry proficiency through continuing education.
- recognizing and promoting experience and excellence with professional certification.
- ensuring industry standards and codes reflect irrigation best practices.
- influencing water-use public policy at the local, state, regional and national levels.

# One location. Unlimited opportunities.

It's not often an industry brings together everything it offers under one roof, but those in irrigation know the Irrigation Show and Education Week does just that. Once a year the show gathers the best in the industry for a weeklong event with all the education, networking and technology you need to fuel your business. Join us as the industry comes together to explore, connect and learn.

And this year's Irrigation Show takes the opportunities even further by co-locating with the National Ground Water Association and American Rainwater Catchment Systems Association. The collaboration provides a truly action-packed week focused on the resource we all strive to manage responsibly — water.

Whether you are a first time attendee or a seasoned vet, the 2019 Irrigation Show has something for everyone. It's not every day you can get together with 10,000 of your industry peers under the spectacular backdrop of glimmering Las Vegas. It is a surefire way to enhance yourself and your business with 600 total exhibi-

tors who have the solutions you are looking for. Sharpen your skills by attending dozens of educational sessions, and make valuable connections with others in your profession through the numerous special events.

Those who've attended the show say they've come away with meaningful connections from potential new suppliers and gained a better understanding of where the irrigation industry is headed. If irrigation is part of how you make your living, then the 2019 Irrigation Show and Education Week is the place to be. We will see you there!



## Explore.

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# On the Show Floor

Wednesday, Dec. 4 | 10:00 a.m.-5:00 p.m.

Browse the show floor to get a firsthand look at all of the latest products, services and technologies in agriculture, landscape, golf and sports turf irrigation to help you expand your business, satisfy customers and grow your bottom line.

With two days to explore the exhibits, be sure to

- inspect the latest technologies at the new product contest and watch the judging.
- visit potential new partners in precision ag irrigation.
- find solutions to ancillary landscape markets such as ponds and waterscapes and outdoor lighting.

## ARCSA Rainwater Harvesting Pavilion

Predating the Old Testament, rainwater harvesting is an affordable, environmentally friendly solution to many water challenges. Explore the latest equipment and available services to collect this increasingly popular water source at the ARCSA Rainwater Harvesting Pavilion.

Sponsored by



## Pond & Waterscape Pavilion

The Pond and Waterscape Pavilion is a must-see for those doing business in this growing market segment. Discover cutting-edge products and technologies for pond and waterscape installation and maintenance.

Water feature sponsored by



## Student Poster Competition

The future of the irrigation industry is bright and will shine this year on the Irrigation Show floor. Students from various colleges and universities will showcase their latest irrigation projects. Attendees are encouraged to interact with and learn from these bright young minds and the future of the irrigation industry when visiting the show floor on Thursday, Dec. 4.

Thursday, Dec. 5 | 10:00 a.m.-3:00 p.m.

## Harley-Davidson Motorcycle Raffle

Picture yourself cruising down the road on a shiny new hog. The IA will be raffling a brand-new Harley during the show. Proceeds will support workforce development efforts.



## Live From the Show Floor!

NEW!

The IA is bringing some of the Industry Insights presentations to the show floor! While browsing exhibits, don't miss out on these unique live presentations. The sessions will offer interesting and thought-provoking information on a variety of topics, highlighting issues that are timely and relevant to the industry.

## Radio Row

The IA is excited for Radio Row to return to the Irrigation Show floor. Radio Row is a dedicated space for radio stations and podcasts from across the United States to either broadcast live or conduct interviews with irrigation professionals and experts attending the show. Radio Row is a great opportunity for all attendees to see some of their favorite ag radio and podcast hosts live and in action.



NEW!

## IA Resource Center

If you have a question about the Irrigation Show or the IA, the Resource Center has your answer. The Resource Center is also your source for the numerous agriculture, turf-landscape and golf irrigation books and resources available through the IA, as well as information about the association's two printed publications: *Irrigation & Green Industry* (landscape-focused magazine) and *Irrigation Today* (agriculture-focused magazine).

While you are there, check out the resume wall stocked full of resumes from recent and upcoming graduates. If you are looking to hire, this a great place to find top-notch candidates.



## 2019 NEW PRODUCT CONTEST Irrigation Association

Sponsored by  
**Hunter®**

See the latest innovative products to hit the irrigation and lighting markets. The new product contest puts the spotlight on technologies and products introduced during the past year.

Attendees not only have the opportunity to see these products up close any time on the show floor, but they can also listen to the product creator present to the expert judges during the new product contest presentations on Wednesday, Dec. 4, 2:00 p.m.-5:00 p.m. **This year, the contest judging will take place on the show floor, giving more people the opportunity to hear about these great new products and technologies.**

The contest includes new products in categories covering agriculture, landscape and golf irrigation, landscape lighting, and specialty areas. Each product is evaluated by a panel of judges, and winners in each category are announced during the general session.

## New Product Contest Judging 2019 – Seeking Volunteer Judges

Wednesday, Dec. 4, 2:00 p.m.-5:00 p.m.

Are you interested in being a judge in one of the new product contest categories? The IA is collecting applications for new product contest judges for agriculture irrigation, landscape and golf irrigation, landscape lighting and a specialty category that covers products that are not an integral part of the irrigation or lighting system.

The IA is looking for individuals who have an open mind to innovation and an expertise in one of the product categories. To be eligible to serve as a judge, an individual must be an IA

member. Ideally, a judge is an end user, installer, specifier, or water agency or academic institution employee. Those working for manufacturers or who have a direct connection to a product in the contest are not eligible. Judges must be available early afternoon Dec. 4 in Las Vegas.

For additional details, see [www.irrigationshow.org](http://www.irrigationshow.org) or contact Brent Mecham, CID, CLWM, CIC, CLIA, CAIS ([brentmecham@irrigation.org](mailto:brentmecham@irrigation.org)).

Want  
to help?

# Special Events

## Keynote Address

Wednesday, Dec. 4, 8:30 a.m.-9:45 a.m.

### Keynote Speaker Jim Abbott

Making it to the pitcher's mound in a Major League Baseball game is a major accomplishment that few young baseball players achieve. Jim Abbott did. And he was born with only one hand.

You won't want to miss hearing this former MLB pitcher as he shares his story about adapting and overcoming adversity to achieve his goals and have a successful pitching career.



As a child growing up in Flint, Michigan, Abbott remembers always enjoying sports and wanting a career in professional sports in some capacity. He could always throw well — and even played quarterback on his high school football team in addition to being a top pitcher.

Although he was drafted by the Toronto Blue Jays in 1985, Abbott declined and went to play baseball at the University of Michigan. As the first baseball player to win the Sullivan Award as the nation's outstanding amateur athlete in 1987, Abbott went on to represent Team USA and became the first American pitcher in 25 years to beat a Cuban team on Cuban soil. The team won a silver medal at the Pan-American Games, and Abbott won the U.S. Baseball Federation's Golden Spikes Award as the best amateur player in the country.

In the 1988 Olympics, Abbott was the winning pitcher in a 5-3 victory over Japan that brought the United States its first gold medal in baseball. He was then drafted by the California Angels in the first round (8th pick) and was one of only three pitchers during the 1980s to win his first professional game at the major league level. His most famous high point came in 1993 when he threw a no-hitter for the New York Yankees at Yankee Stadium. Abbott played for 10 seasons on four different teams, ending his big-league playing career in 1999.

Abbott will share how he was able to overcome perceived limitations and reach his dreams. He encourages audiences to find something they love and to go after it with all their heart. He is the author of his autobiography titled *Imperfect*. His story has been featured in numerous magazines, and he has appeared on several television shows.

*The keynote address is open to all attendees and exhibitors. Coffee will be provided. Join us for a book signing in the resource center immediately following the keynote address.*



## General Session

Thursday, Dec. 5, 8:30 a.m.-9:45 a.m.

The general session marks the culmination of a year filled with progress and innovation in the industry. The event celebrates the success of the past year, while looking forward to the bright future ahead.

The session includes valuable information about the IA's strategic plan and recognizes those who have made significant contributions in the industry with the annual awards.

During the session, the IA will present the Industry Achievement Award, Innovator Award, Board of Directors Award, Vanguard Award and the Excellence in Education Award. We are proud to celebrate the excellence in the industry represented through the recipients of these awards. Come and hear more about their valuable contributions to irrigation.

The finale of the session is the anticipated announcement of the winners of the new product contest. After seeing these new technologies firsthand on the show floor, come hear which products the panel of judges chose as the best in each category.

*The general session is open to all attendees and exhibitors. Coffee will be provided.*



# Exhibitors *(as of July 31, 2019)*

Action Machining Inc.  
 Action Technology – Tekni-Plex  
 Advanced Drainage Systems Inc.  
 Agri-Inject Inc.  
 Airmar Technology  
 Alliance Outdoor Lighting  
 American Lighting Inc.  
 Amiad Water Systems USA  
 Andros Engineering  
 Anhui Irritech Agriculture Equipment Corporation Limited  
 Anjon Manufacturing  
 Antelco Corporation  
 Applied Engineering Products  
 Aqualine Inc.  
 Arborjet/Ecologel  
 Armada Technologies  
 Association of Outdoor Lighting Professionals  
 Atlantic Water Gardens  
 B.A. Fischer Sales Co. Inc.  
 BALDR International  
 Barrett Engineered Pumps  
 Bauer North America Inc.  
 Bermad Inc.  
 Blackburn Manufacturing Co.  
 Blue Planet Environmental  
 Bluelab Corporation US  
 Bowsmith Inc.  
 Brilliance LED, LLC  
 Buckner Superior  
 Bushman Rain Harvesting  
 Carlisle SynTec Systems  
 Center for Irrigation Technology, California  
 State University – Fresno  
 CLS Outdoor Environments  
 CMF Global Inc.  
 Cornell Pump Company  
 Corona Tools  
 Cresline Plastic Pipe Company Inc.  
 Danner Manufacturing Co. Inc.  
 Davis Instruments  
 Dawn Industries Inc.  
 DeWitt Company  
 DIG Corporation  
 Dragon-Line  
 Dura Plastic Products Inc.  
 Dynamax Inc.  
 Earth Science Labs  
 Ecoturf Midwest Inc.  
 Effeby USA  
 Epic Plastics  
 Everfilt  
 Ewing Irrigation Products Inc.

E-Z Weld Group LLC  
 EZ-FLO Fertilizing Systems  
 Farmers Review Africa  
 FB Balzanelli USA Inc  
 FEBCO – A WATTS BRAND  
 FIBOX Enclosures  
 FLOMEC  
 Focus Industries Inc.  
 Fresno Valves & Castings Inc.  
 Gheen Irrigation Works  
 Greentek Energy Systems  
 GroGuru  
 Ground Cover Industries Inc.  
 Gulf Agriculture  
 HARCO Fittings  
 Hastings Irrigation Pipe Co.  
 Hendrickson Bros.  
 Heritage Plastics  
 Highline Products  
 HindSite Software  
 HIT Products Corporation  
 Horizon Distributors  
 HSTI  
 Hubbell Enclosures  
 Hunter Industries Inc.  
 HydroPoint Data Systems Inc.  
 Hydro-Rain Inc.  
 Illumicare Group Limited  
 In-Situ  
 Inject-O-Meter Mfg. Co. Inc.  
 International Sustainable Irrigation Expo  
 Irrigation Components International Inc.  
 Irrigation Listings  
 Irrigation Solutions  
 Irrigation Training & Research Center  
 Irrigazette  
 Irritech USA Inc  
 Irritrol  
 Irrrometer Company Inc.  
 JCM Industries Inc.  
 JM Eagle Inc.  
 Kasco Marine Inc.  
 Kifco Inc.  
 King Innovation  
 KJ Ketterling Enterprises LLC  
 K-Rain Manufacturing Corp.  
 Kroy Industries  
 Kuriyama of America  
 KZValve  
 Lake Company  
 Land F/X  
 Landscape Products  
 LASCO Fittings Inc.  
 Lawn & Landscape  
 Leemco Inc.  
 Lindsay Corporation  
 LX Pumps North America Inc.

Matco-Norca Inc.  
 Maxijet Inc. & Mister Landscaper Inc.  
 Maximum H2O  
 Mazzei Injector Co. LLC  
 MCC USA Inc.  
 McCrometer Inc.  
 Miller-Leaman Inc.  
 Morrill Industries Inc.  
 Motorola/Mottech USA Inc.  
 Munro  
 MurCal, Inc.  
 Murray Corporation  
 N-Drip Ltd.  
 NDS - National Diversified Sales Inc.  
 Nebraska Irrigation  
 Nelson Irrigation Corp.  
 Neptune Chemical Pump Co.  
 New Ag International  
 North American Pipe Corp.  
 Oldcastle Infrastructure  
 Olson Irrigation Systems  
 Omni Gear  
 Orival Inc.  
 Paige Electric Company, LP  
 Philmac  
 Phoenix Specialty Manufacturing Co.  
 Pierce Corporation  
 PM Group Irrigation Technologies  
 Ponaflex Hose Manufacturing Inc.  
 Potato Grower Magazine  
 Praxxis  
 Precision Laboratories  
 Precision Pumping Systems  
 Pro Products LLC  
 Rachio Inc.  
 Rain Bird Corporation  
 Rainwater Management Solutions  
 Ranch Systems LLC  
 Realm Five Inc.  
 Reef Industries Inc.  
 Regency Wire & Cable  
 Reinke Manufacturing Company Inc.  
 Responsive Drip Irrigation LLC  
 Revista Deriego  
 Robbco Pumps  
 Roth North America  
 Seametrics Inc.  
 Senninger Irrigation Inc.  
 Sensoterra  
 Shine On Lighting  
 ShinMaywa

Sistemas de Filtrado y Tratamiento de Fluidos S.A.  
 SiteOne Landscape Supply  
 SNF Inc.  
 Soileau Industries Inc.  
 Sollos Landscape Lighting  
 Southern Nevada Water Authority  
 Spagetti Stickler  
 Spears Manufacturing Company Inc.  
 Spectrum Technologies Inc.  
 Spiio Inc.  
 Sprinkl  
 SRW Products  
 Strongbox Manufacturing  
 Subeca Inc.  
 Sun-Flow Inc.  
 Sure-Flo Fittings  
 T&C Mfg & Operating Inc.  
 T. Christy Enterprises Inc.  
 TECO Srl  
 Tempo Communications  
 Texas A&M AgriLife Extension Service  
 The Oatey Company  
 The Toro Company  
 T-L Irrigation Company  
 Travis Pattern & Foundry  
 TrynEx, a Douglas Dynamics Company  
 Tsurumi America Inc.  
 Tucor Inc.  
 Underhill International Corp.  
 Unique Lighting Systems Inc.  
 Universal Irrigation Sales Corp.  
 Universal Motion Components  
 USDA – NASS  
 Valley Irrigation  
 Valplastic USA LLC  
 Victaulic  
 Volt Lighting  
 WAC Lighting  
 Wade Rain  
 Walrus America Inc.  
 WaterBit  
 Waterman Valve LLC  
 Watertronics  
 Weathermatic  
 Winin Enterprise Co. Ltd.  
 Wiseconn Engineering Inc.  
 XCAD Valve & Irrigation Inc.  
 YAMIT USA  
 Yardney Water Management Systems Inc.  
 Zotexa LLC  
 Zurn Wilkins

## Featured Products & Systems

Aerators  
 Alternate water sources equipment  
 Backflow prevention equipment  
 Canal automation equipment  
 Center pivot/lateral move systems & components  
 Chemical & fertilizer equipment  
 Clamps & pipe restraints  
 Computer software design & management  
 Consulting services  
 Controllers  
 Couplings  
 Data loggers  
 Drainage systems & fittings  
 Drip/microirrigation systems & components  
 Electric motors & components  
 Enclosures  
 Fittings  
 Flags, tape & marking products  
 Flow controls, sensors & meters  
 Freeze protection  
 Gated pipe systems & components  
 Gauges  
 Global positioning systems  
 Geographic information systems  
 Greenhouse/nursery products  
 Hand move systems & components  
 Hand tools  
 Landscape lighting & products  
 Liners & moisture sealant products  
 Locators – electrical/pipe & metal detectors  
 Misting & cooling systems  
 Pipe & accessories  
 Pond & water features equipment & supplies  
 Pressure fittings, gauges & regulators  
 Pumps & pump drives, stations & controls  
 Rain sensors  
 Rainwater harvesting equipment  
 Remote control products  
 Side roll systems & components  
 Soil moisture sensors  
 Solid set systems & components  
 Spray nozzles  
 Sprinkler systems & components  
 Storage tanks  
 Swing joints  
 Travelers – hose, reels & components  
 Valves & valve boxes  
 Wastewater  
 Water disinfection equipment  
 Water features & fountains  
 Water filters, strainers & sand separators  
 Water resources management  
 Water treatment  
 Weather monitoring equipment  
 Well screens  
 Wire & wire connectors

**When partnering with NGWA and ARCSA, the number of exhibitors available to you doubles! Please visit [www.ngwa.org](http://www.ngwa.org) to see their exhibitor list.**

# Schedule of Events *(subject to change)*

## SUNDAY, DEC. 1

**REGISTRATION OPEN** 4:00 p.m.-6:00 p.m.

## MONDAY, DEC. 2

**REGISTRATION OPEN** 7:00 a.m.-6:00 p.m.

IA University (see pg. 20-24) 8:00 a.m.-5:00 p.m.

ARCSA Annual Conference  
(coffee at 8:00 a.m.) 8:00 a.m.-5:20 p.m.

Exhibitor Move-In 8:00 a.m.-6:00 p.m.

## TUESDAY, DEC. 3

**REGISTRATION OPEN** 7:00 a.m.-6:00 p.m.

Certified Low Voltage Lighting  
Technician (CLVLT) Exam (see pg. 26) 7:30 a.m.-5:00 p.m.

IA University (see pg. 20-24) 8:00 a.m.-5:00 p.m.

ARCSA Annual Conference  
(coffee at 8:00 a.m.) 8:00 a.m.-5:00 p.m.

Exhibitor Move-In 8:00 a.m.-6:00 p.m.

Irrigation Consumer Bill of Rights **A** 8:00 a.m.-8:30 a.m.

SWAT & Apps for Water  
Conservation on Turfgrass **L** 8:00 a.m.-8:30 a.m.

Lessons From the 2019 Green  
Industry Benchmark Report **B** 8:00 a.m.-9:00 a.m.

A Novel System for Designing Lay-  
Flat Irrigation Pipe Systems for  
Flood & Furrow Irrigation **A** 8:35 a.m.-9:05 a.m.

Comparing Weekly Irrigation to  
Rain Sensor Performance **L** 8:35 a.m.-9:05 a.m.

Social Media: Stop Pushing  
& Start Engaging! **B** 9:05 a.m.-10:05 a.m.

Timed Flooding Yields Significant  
Gains in Rice Farming **A** 9:10 a.m.-9:40 a.m.

Rain First - Maximizing Effective  
Rainfall for Conservation **L** 9:10 a.m.-9:40 a.m.

Fewer Drinks for the Links **L** 9:45 a.m.-10:15 a.m.

Soil Water Sensing From Afar: How the  
Cloud Is Enabling Remote Data Collection **A** 10:00 a.m.-10:30 a.m.

Why a Certified Professional  
Beats Its Competitors **B** 10:10 a.m.-10:40 a.m.

Soil Moisture Sensor-Based Irrigation  
Scheduling on Fairways **L** 10:20 a.m.-10:50 a.m.

Sensor Feedback & Variable Rate  
Irrigation for Potatoes **A** 10:35 a.m.-11:05 a.m.

Leveraging Water Agency Incentives  
by Smart Site Selections **B** 10:45 a.m.-11:15 a.m.

Autonomous Turfgrass &  
Groundcover Irrigation Management  
Using Smart Irrigation **L** 10:55 a.m.-11:25 a.m.

The Case for IoT Data - ROI  
& How to Reach It **A** 11:10 a.m.-11:40 a.m.

Fundamentals of the Smart  
Water Triangle Irrigation **L** 11:30 a.m.-12:00 p.m.

IA Certification Exams (see pg. 25) 1:00 p.m.-6:00 p.m.

Mobile Drip Irrigation - What  
We Know So Far **A** 2:00 p.m.-2:30 p.m.

Severe Weather Safety: Protecting  
Your Crew & Clients **B** 2:00 p.m.-3:30 p.m.

Panel Discussion: What Is Mobile Drip  
Irrigation - How It Works & Proper Design **A** 2:35 p.m.-4:05 p.m.

Understanding Meteorology & Making  
Weather-Based Decisions **B** 3:35 p.m.-5:05 p.m.

Past Presidents' Dinner (*invitation only*) 6:00 p.m.-8:00 p.m.

Math Tutorial 6:00 p.m.-8:00 p.m.

Opening Night Party 7:00 p.m.-9:00 p.m.

## WEDNESDAY, DEC. 4

Exhibitor Move-In 7:00 a.m.-8:00 a.m.

**REGISTRATION OPEN** 7:00 a.m.-5:30 p.m.

IA Certification Exams (see pg. 25) 8:00 a.m.-12:00 p.m.

IA University (see pg. 20-24) 8:00 a.m.-5:00 p.m.

ARCSA Rainwater Catchment  
Systems Designer Workshop 8:00 a.m.-5:00 p.m.

Keynote Address (*coffee at 8:00 a.m.*) 8:30 a.m.-9:45 a.m.

**EXHIBIT HALL OPEN**  
Live From the Show Floor!  
Radio Row  
New Product Contest Judging  
10:00 a.m.-5:00 p.m.  
10:30 a.m.-12:50 p.m.  
10:30 a.m.-5:00 p.m.  
2:00 p.m.-5:00 p.m.

Sprinkler Drop Characteristics via  
Weather Monitoring System **A** 10:00 a.m.-10:30 a.m.

Rainwater Collection **L** 10:00 a.m.-11:00 a.m.

Panel Discussion: Sustainable  
Manufacturing **B** 10:00 a.m.-11:00 a.m.

How to Become a Leader in  
Water Conservation **S** 10:30 a.m.-11:00 a.m.

Center Pivot Application Uniformity **A** 10:35 a.m.-11:05 a.m.

Regulatory Precipitation Rate Limits -  
Water Saver or Waster? **S** 11:05 a.m.-11:35 a.m.

Designing & Building Landscapes  
Using Only Rainwater **L** 11:05 a.m.-12:05 p.m.

**Industry Insights:** **A** Agriculture Track | **L** Landscape Track | **B** Bonus Track | **S** Live From the Show Floor!

**WEDNESDAY, DEC. 4** *(continued)*

Incorporating Wi-Fi Technology Into Your Business Plan <b>B</b>	11:05 a.m.-12:05 p.m.
A More Efficient Way to Collect PSI During Drip Assessments <b>A</b>	11:10 a.m.-11:40 a.m.
Water Hazard Ahead! Assessing Aging Irrigation Systems <b>S</b>	11:40 a.m.-12:10 p.m.
Certification Luncheon ( <i>certified individuals only, RSVP required</i> )	12:00 p.m.-1:00 p.m.
IA Certification Exams (see pg. 25)	1:00 p.m.-6:00 p.m.
Options for Estimating Plant Water Requirements for Irrigation Scheduling in Louisiana <b>A</b>	2:00 p.m.-2:30 p.m.
Rainwater BMPs: Plants, Soil Irrigation & Regulations <b>L</b>	2:00 p.m.-2:30 p.m.
Protect the Heart of the Irrigation System – The Pump <b>B</b>	2:00 p.m.-2:30 p.m.
Use Satellite Imagery to Calibrate Crop Coefficient <b>A</b>	2:35 p.m.-3:05 p.m.
Pumps – Long-Term Thinking vs. Short-Term Cost <b>B</b>	2:35 p.m.-3:05 p.m.
LID & Landscape: Best Design Practices for Stormwater BMPs <b>L</b>	2:35 p.m.-4:05 p.m.
State Association Roundtable	3:00 p.m.-4:00 p.m.
Water Needs for Irrigated Mombaça Grass <b>A</b>	3:10 p.m.-3:40 p.m.
Pump Station Retrofits – When Might It Make Sense? <b>B</b>	3:10 p.m.-3:40 p.m.
Water-Energy Footprint in Blueberry Crops in Argentina <b>A</b>	3:45 p.m.-4:15 p.m.
Energy Efficiency vs. Water Efficiency: What's the Difference? <b>B</b>	3:45 p.m.-4:45 p.m.
Surface Water vs. ET <sub>c</sub> in the Southern San Joaquin Valley <b>A</b>	4:20 p.m.-4:50 p.m.
Women in Irrigation Social	5:00 p.m.-6:00 p.m.

**THURSDAY, DEC. 5**

Drip-Micro Common Interest Group	7:00 a.m.-8:00 a.m.
<b>REGISTRATION OPEN</b>	7:00 a.m.-5:30 p.m.
Young Professionals Breakfast	7:30 a.m.-8:30 a.m.
ARCOSA Rainwater Catchment Systems Designer Workshop	8:00 a.m.-5:00 p.m.
IA General Session ( <i>coffee at 8:00 a.m.</i> )	8:30 a.m.-9:45 a.m.
Regulating Valves: Overview & Best Practices <b>A</b>	10:00 a.m.-10:30 a.m.

**EXHIBIT HALL OPEN**

Live From the Show Floor!	10:00 a.m.-3:00 p.m.
Student Poster Competition	10:30 a.m.-12:10 p.m.
Radio Row	10:30 a.m.-2:00 p.m.
	10:30 a.m.-3:00 p.m.
Developing Systems That Are Repeatable & Scalable <b>L</b>	10:00 a.m.-10:30 a.m.
WaterSense Update <b>B</b>	10:00 a.m.-11:00 a.m.
IPS Weld-On ECO ASTM D2855 Solvent Cement Welding Seminar <b>S</b>	10:30 a.m.-11:30 a.m.
Manufacturers' Representatives Common Interest Group	10:30 a.m.-11:30 a.m.
Basics of Backflow Prevention Systems <b>L</b>	10:35 a.m.-11:35 a.m.
Understanding Pressure Regulation <b>A</b>	10:35 a.m.-11:35 a.m.
Sustainability Common Interest Group	11:00 a.m.-12:30 p.m.
Irrigation Innovation Consortium: First-Year Data Unveiled <b>B</b>	11:05 a.m.-12:35 p.m.
Know the Facts – H-2A & H-2B Guest Worker Program Updates <b>S</b>	11:35 a.m.-12:05 p.m.
Panel Discussion: Subsurface Irrigation Solutions: Forced vs. Responsive <b>L</b>	11:40 a.m.-12:40 p.m.
Irrigation LABS, Leadership & Business Success Peer Group (see pg. 11)	1:00 p.m.-6:00 p.m.
IA Certification Exams (see pg. 25)	1:00 p.m.-6:00 p.m.
Irrigation Scheduling Methods for Drip Irrigated Potato <b>A</b>	2:00 p.m.-2:30 p.m.
Lighting Design – Beyond the Basics <b>L</b>	2:00 p.m.-3:30 p.m.
Precision Irrigation Management in Young & Mature Almonds <b>A</b>	2:35 p.m.-3:05 p.m.
IA University (see pg. 20-24)	3:00 p.m.-5:00 p.m.
Irrigation Scheduler for Soybean in the Mississippi Delta <b>A</b>	3:10 p.m.-3:40 p.m.
The Missing Link in Irrigation Efficiency <b>A</b>	3:45 p.m.-4:45 p.m.
Exhibitor Move-Out	3:30 p.m.-9:00 p.m.

**FRIDAY, DEC. 6**

<b>REGISTRATION OPEN</b>	7:00 a.m.-10:00 a.m.
IA University (see pg. 20-24)	8:00 a.m.-12:00 p.m.
Irrigation LABS, Leadership & Business Success Peer Group (see pg. 11)	8:00 a.m.-12:00 p.m.
IA Certification Exams (see pg. 25)	8:00 a.m.-1:00 p.m.
Exhibitor Move-Out	8:00 a.m.-1:00 p.m.
Hoover Dam Discovery Tour	8:30 a.m.-1:30 p.m.
Behind-the-Scenes Tour of Bellagio Fountains	10:30 a.m.-12:00 p.m.

**Industry Insights:** **A** Agriculture Track | **L** Landscape Track | **B** Bonus Track | **S** Live From the Show Floor!

# Connections & Networking



**Use the Irrigation Show and Education Week to connect with current and potential business partners and develop peer contacts for resources throughout the year.**

- Explore common challenges and gather effective solutions with like-minded professionals.
- Find quiet nooks to host impromptu meetings while information is fresh.
- Catch up with old friends and make new ones at numerous social events.

## Opening Night Party

**Tuesday, Dec. 3 | 7:00 p.m.-9:00 p.m.**

You've arrived! It's time to get this exciting week jump-started. The opening night party is a great opportunity to catch up with colleagues and make new business connections. This year's event will capture the exciting and entertaining lights and colors of Las Vegas, a glitzy city like no other. Come and take it all in while enjoying good food, good drinks and great conversation. If it is your first time to attend the show or if you are taking a business class, watch for special designated areas to meet and connect during the party.

*The opening night party is open to all IA exhibitors and attendees with a full registration. Tickets can also be purchased separately.*

Sponsored by **ewing**



## Certification Luncheon

**Wednesday, Dec. 4  
12:00 p.m.-1:00 p.m.**

Celebrate your certification by attending the Certification Luncheon! The IA wants to thank you for your commitment and dedication to the industry. Please plan to attend!

*Luncheon attendance is limited to certified individuals in good standing. Invitations will be sent; RSVPs are required.*



## Women in Irrigation Social

**Wednesday, Dec. 4  
5:00 p.m.-6:00 p.m.**

This social is quickly becoming a must-attend event for women of all areas of expertise in the industry. Join us as we gather together like-minded business-women to connect, exchange valuable ideas, and discuss the unique challenges and opportunities in this industry.

*The social is open to all female attendees and exhibitors.*



## Young Professionals Breakfast

**Thursday, Dec. 5 | 7:30 a.m.-8:30 a.m.**

Are you under 40 years old? This breakfast is for you. The young professionals breakfast is open to all attendees under the age of 40 and interested in networking with and learning from other rising stars of the irrigation industry. Each year, attendees at the breakfast hear from industry leaders about their career success and advice they have for those in the beginning phase of their career. This year, IA CEO Deborah Hamlin, CAE, FASAE, will discuss the importance of leadership development, serving as ambassadors of our industry and the personal benefits that come from volunteering with the IA.

*The breakfast is open to all young professionals 40 years old and younger.*

Women in Irrigation Social  
& Young Professionals  
Breakfast sponsored by **Hunter**

**SOLD OUT!**

## Common Interest Groups

**Expand your personal network at an Irrigation Association common interest group meeting. Common interest groups bring together irrigation professionals to discuss shared issues related to a specific technology, specialty or end-use market.**

*No advance registration required.*

### Drip/Micro Irrigation

**Thursday, Dec. 5 | 7:00 a.m.-8:30 a.m.**

This common interest group focuses on opportunities to promote and grow the drip/micro market in agriculture. Learn what is new in the world of research at various universities across the country. Discuss the current advocacy issues and standards concerning our industry. Join your peers at the Drip/Micro CIG.

### Manufacturers' Representatives

**Thursday, Dec. 5 | 10:30 a.m.-11:30 a.m.**

This meeting will feature a presentation focused on how to market your business and services in the academic world. Manufacturers' representatives and manufacturers — IA members and nonmembers — are all welcome. Take advantage of this opportunity to network and problem-solve with other irrigation professionals.

### Sustainability

**Thursday, Dec. 5 | 11:00 a.m.-12:30 p.m.**

The future of the irrigation industry is at our fingertips. Does our future account for the economic, social and environmental benefits of our society? In other words, are we sustainable? Join the IA as we launch our new Sustainability CIG. Focusing on solutions to our industry's challenges, this group will look at everything from product end life to recycling to the role irrigation plays in our everyday lives. Whether you are a manufacturer, dealer, distributor, consultant, contractor or water provider, you play a role in the long-term sustainability of the irrigation industry. Come see how you can be part of the solution.

## State Association Roundtable

**Wednesday, Dec. 4 | 3:00 p.m.-4:00 p.m.**

New in 2019, this interactive roundtable is open to staff and volunteer leadership from state and provincial turf, landscape, agriculture and/or irrigation associations. Moderated by IA staff, this roundtable is an opportunity to learn more about state-driven advocacy initiatives, public affairs campaigns and other partnerships available with the Irrigation Association.

## Irrigation LABS

### A Leadership & Business Success Peer Group

**Thursday, Dec. 5 | 1:00 p.m.-6:00 p.m.**

**Friday, Dec. 6 | 8:00 a.m.-12:00 p.m.**

Attention all landscape irrigation contractors! Are you worried about finding and retaining good staff? Are you hoping to set your business apart from your competition? Do you want new strategies on how to identify and close on solid leads for new business? On Dec. 5-6, we will attempt to answer these questions and more.

One of the best ways to grow and improve your irrigation business is by hearing the experiences of others who face the same challenges. To facilitate discussion and identify tools to help your company succeed, the Irrigation Association is launching an exciting new Leadership and Business Success peer group, known as Irrigation LABS. With your success in mind, Irrigation LABS will open doors to resources you didn't know existed: a network of business experts and peers who face the same challenges as you.

Join us for an informational session and sample a LABS peer group meeting to learn more about this new opportunity. IA board member John J. Newlin, CIC, CIT, CLIA; irrigation business leader Christopher J. Pine, CIC, CID, CIT, CLIA, CLWM; and business consultant Jim Huston will host this event, which will span over an afternoon and a morning session, to begin the learning process, to test the waters on Irrigation LABS and to begin unlocking your future business success.

*Cost: \$99 (open to IA members only)*

## Tours

The IA is taking advantage of being in the Las Vegas area and the exciting famous landmark water attractions this location has to offer. Two tours are available for you and your co-workers to get a rare behind-the-scenes look at the inner workings of these world-famous sites. Joining other like-minded irrigation professionals for one of these events is not only a great way to connect with others in the profession, but it will also allow the tour to be more focused on your interests as a water professional, leading to interesting discussions among colleagues.



### Hoover Dam Discovery Tour

Friday, Dec. 6 | 8:30 a.m.-1:30 p.m.

Enjoy a history-filled ride as you travel from the Las Vegas Strip, 30 miles east to Boulder City, to the location of the Hoover Dam. Upon arrival to the dam, you will begin the self-guided tour making several stops, including a brief video introduction followed by a trip down 530 feet through the rock wall of the Black Canyon to view eight of the 17 generators.

A stroll on the observation deck is essential, as it offers the perfect panoramic views of the Hoover Dam, Colorado River and Lake Mead. You will also enjoy seeing the O'Callaghan/Pat Tillman Memorial Bridge that was built to alleviate the traffic caused by 15,000 people passing through each day. Additional stops on the tour include the Winged Figures of the Republic, the spillways (large enough to float a WWII battleship) and the intake towers.

Participants will have approximately two hours at the Hoover Dam to leisurely tour and learn about this masterful site. Snacks and beverages will be provided. The tour departs from the Las Vegas Convention Center.

Cost: \$115 per person

### Behind-the-Scenes Tour of the Bellagio Fountains

Friday, Dec. 6 | 10:30 a.m.-12:00 p.m.

Get an in-depth look at what it takes to put on one of the famed fountain shows at the Bellagio Hotel and Casino. A fountain control engineer will take you on a one-hour behind-the-scenes tour of the Bellagio fountains and show you what it takes to make sure that this iconic attraction stays operational day in and day out.

Please note that there is a fair amount of walking, so please wear comfortable walking shoes.

Cost: \$20 per person



CREDIT: Sam Morris/Las Vegas News Bureau



# Industry Insights

NEW  
in 2019!

## Take a look at education's new look!

We've taken this year's education at the Irrigation Show to a whole new level! Yes, you will still hear about the latest cutting-edge research covering a variety of irrigation topics, but the new Industry Insights sessions take it a step further and offer you even more.

Here's a taste of new and different topics you can hear about during this year's Industry Insights:

- the Irrigation Consumer Bill of Rights
- mobile apps for water conservation in turfgrass
- the H-2A & H-2B guest worker program
- severe weather and ways to protect your crew and clients
- social media and how to use it in your business
- rainwater collection
- Wi-Fi technology and how to incorporate it in your business
- research updates and reports around the country



**Industry Insights is where irrigation professionals go to learn about the latest industry trends, research projects, best practices and today's relevant topics — all from knowledgeable experts in the industry.**

These sessions vary from 30- to 90-minute formats and include everything from single presentations to panel discussions. There are four tracks to choose from: agriculture, landscape, bonus and live from the show floor. Browse the presentations in each track and customize your schedule with those that interest you.

# Industry Insights

Tuesday, Dec. 3-Thursday, Dec. 5

The sessions are open to all attendees with a full registration or an Industry Insights and exhibit hall registration.

## Agriculture Track

### Tuesday, Dec. 3

#### Consumer Advocacy

8:00 a.m.-8:30 a.m.

##### Irrigation Consumer Bill of Rights

Charles Burt, PhD, PE, CAIS, CID, ITRC

Endorsed by the Irrigation Dealers Association of California and the Irrigation Association, the Irrigation Consumer Bill of Rights was developed over 20 years ago with support from the California Energy Commission. Explore the benefits of supporting this program, including customer satisfaction and improved quality of irrigation systems. | [0.5 CEU](#)

#### Surface Irrigation

8:35 a.m.-9:05 a.m.

##### A Novel System for Designing Lay-Flat Irrigation Pipe Systems for Flood & Furrow Irrigation

Chris Henry, PhD, PE, University of Arkansas

The lay-flat pipe system uses a low-pressure polyethylene pipe of 7-20 millimeter thickness to distribute water to surface irrigation systems. Gain an understanding of the lay-flat pipe system, learn about computerized hole sizing options and selection, and receive an introduction into the system that translates those plans to the pipe during installation. | [0.5 CEU](#)

9:10 a.m.-9:40 a.m.

##### Timed Flooding Yields Significant Gains in Rice Farming

Leif Chastaine, WaterBit, and Greg Van Dyke, Kanpeki Rice

Rice provides 60% of the world's caloric daily intake. During this interactive session, learn how a fifth-generation rice farmer successfully implemented timed flooding using precision ag irrigation solutions. Chastaine and Van Dyke will discuss how growers of all crops can benefit from these solutions. | [0.5 CEU](#)



### Remote Sensing & Data Collection

10:00 a.m.-10:30 a.m.

##### Soil Water Sensing From Afar: How the Cloud Is Enabling Remote Data Collection

Steven R. Evett, PhD, USDA-ARS

Soil water sensors and systems are becoming ubiquitous and are increasingly requested by growers, but there is a lack of robust solutions for transmitting data wirelessly from the field to where it can be accessed for decision-making. The cloud offers a solution. | [0.5 CEU](#)

10:35 a.m.-11:05 a.m.

##### Sensor Feedback & Variable Rate Irrigation for Potatoes

Susan O'Shaughnessy, PhD, USDA-ARS

Potatoes are a high-value crop that require a moderate amount of water. Their yield is sensitive to stress from water deficit, yet they are also susceptible to disease and rot due to over-irrigation. This session will explore three irrigation treatments to accomplish the best crop water productivity. | [0.5 CEU](#)

11:10 a.m.-11:40 a.m.

##### The Case for IoT Data – ROI & How to Reach It

Bas van der Velden, Sensorterra

Growers and landscapers from around the world are working with "internet of things" solutions to optimize land and freshwater resources. Learn how smart IoT data is beneficial for land management, review best practices and determine how to define the moment when real ROI is reached. | [0.5 CEU](#)

### Mobile Drip Irrigation

2:00 p.m.-2:30 p.m.

##### Mobile Drip Irrigation: What We Know So Far

Jonathan Aguilar, PhD, Kansas State Research & Extension

Mobile drip irrigation, which integrates drip line onto a mechanical irrigation system such as a center pivot, has attracted attention lately. After four years of conducting research, including data and observations from water technology farms, there is now enough information to share with the public regarding this technology. | [0.5 CEU](#)

2:35 p.m.-4:05 p.m.

##### Panel Discussion: What Is Mobile Drip Irrigation? How It Works & Proper Design

Monty J. Teeter, Dragon-Line LLC

What is mobile drip irrigation? It is not your conventional sprinkler head! Monty Teeter, developer of successful mobile drip irrigation in 20 states and five countries, will welcome a panel to discuss the truth about this technology. | [1.5 CEUs](#)

## Agriculture Track *(continued)*

### Wednesday, Dec. 4

#### Agriculture Irrigation System Performance

10:00 a.m.-10:30 a.m.

##### Sprinkler Drop Characteristics via Weather Monitoring System

Bradley King, PhD, PE, USDA-ARS, Northwest Irrigation and Soils Research Laboratory

Sprinkler drop size is an important consideration when selecting center pivot sprinklers for maximum water-use efficiency. Techniques used to obtain accurate sprinkler drop size distributions with each system will be presented, along with measured drop size distributions of some common center pivot sprinklers. | [0.5 CEU](#)

10:35 a.m.-11:05 a.m.

##### Center Pivot Application Uniformity

Troy J. Ingram, MS, University of Nebraska-Lincoln

Center pivots are designed to operate within a certain set of parameters, such as pressure and flow rate, which are unique to each system. This session will look at how pressure affects application uniformity and how users should assess the pressure at the end of the system. | [0.5 CEU](#)

11:10 a.m.-11:40 a.m.

##### A More Efficient Way to Collect PSI During Drip Assessments

Kris Loomis, CID, CLIA, CLIA-D, Santa Rosa Junior College and Mendocino Community College

This hands-on session will demonstrate how drip pounds per square inch can be collected without having to use a pitot tube, saving time and effort while providing data in an expedited fashion. | [0.5 CEU](#)

#### Plant Water Requirements

2:00 p.m.-2:30 p.m.

##### Options for Estimating Plant Water Requirements for Irrigation Scheduling in Louisiana

Stacia L. Davis Conger, PhD, LSU AgCenter

The determination of whether to apply irrigation to agronomic crops in Louisiana was historically instinctive rather than by plant water requirement. Indicative results will be presented from soil moisture sensor studies and the ongoing ET gauge study to summarize overall progress and next steps. | [0.5 CEU](#)

2:35 p.m.-3:05 p.m.

##### Use Satellite Imagery to Calibrate Crop Coefficient

James Han, PhD, Lindsay Corporation

Crop coefficients ( $K_c$ ) are widely used for predicting crop evapotranspiration for irrigation management; however, the spatial and temporal variation of  $K_c$  for different crops can significantly affect ET estimation. Using satellite imagery to calibrate  $K_c$  has the potential to solve the issue due to cloud-based technologies and hi-res satellite imagery being more cost-effective. | [0.5 CEU](#)

3:10 p.m.-3:40 p.m.

##### Water Needs for Irrigated Mombaça Grass

Gustavo H.S. Vieira, PhD, IFES, Santa Teresa Campus

Explore the water consumption by sprinkler-irrigated Mombaça grass by means of the water balance and to evaluate the impact of the use of irrigation management on water consumption, energy expenditure and cost by comparison between two different irrigation use conditions (with and without water balance). | [0.5 CEU](#)

3:45 p.m.-4:15 p.m.

##### Water-Energy Footprint in Blueberry Crops in Argentina

Alejandro A. Pannunzio, Universidad de Buenos Aires

This session highlights the drip system evaluation performance done in a blueberry commercial crop of 10 years in Argentina. The shallow roots of blueberry crops combined with the sandy soil of Argentina present a particular challenge regarding irrigation. | [0.5 CEU](#)

4:20 p.m.-4:50 p.m.

##### Surface Water vs. $ET_c$ in the Southern San Joaquin Valley

Daniel J. Howes, PhD, ITRC and California Polytechnic State University

All economic evaluations of the Sustainable Groundwater Management Act impacts have examined the valley as a whole, without consideration of infrastructure and surface water to individuals on a field level. This session will look at the study on a field-by-field basis so that clear delineations are understood. | [0.5 CEU](#)

### Thursday, Dec. 5

#### Pressure Regulation

10:00 a.m.-10:30 a.m.

##### Regulating Valves: Overview & Best Practices

Kyle E. Feist, MS, PE, CID, CAIS, ITRC

Many pressurized irrigation systems are fitted with automatic regulating valves for on/off functions and maintaining relatively constant target flow rates or pressures. Get an overview of how regulating valves work in different applications as well as practical design and best practices. Data collected from the Irrigation Training and Research Center will be discussed. | [0.5 CEU](#)

10:35 a.m.-11:35 a.m.

##### Understanding Pressure Regulation

Mark Fletcher, CID, CAWM, CAIS, CIT, Senninger Irrigation, and Gene Ross, CID, Nelson Irrigation

Irrigation systems are designed to distribute a predetermined amount of water over a specific area. Applicators operate within a specific range of flows and pressures. Discover the basics of pressure regulators and learn how to install pressure regulation in different types of irrigation systems. | [1.0 CEU](#)



**REGISTER BY NOV. 1 and take advantage of our early bird rates – [www.irrigationshow.org](http://www.irrigationshow.org).**

## Agriculture Track *(continued)*

Thursday, Dec. 5 *(continued)*

### Scheduling & Irrigation Management

**2:00 p.m.-2:30 p.m.**

#### **Irrigation Scheduling Methods for Drip-Irrigated Potato**

*Clinton C. Shock, PhD, Oregon State University, Malheur Experiment Station*

Irrigation scheduling for potatoes can use soil water tension, soil water content or crop evapotranspiration estimates. This session will review several irrigation scheduling methods for potatoes using evapotranspiration estimates. | [0.5 CEU](#)

**2:35 p.m.-3:05 p.m.**

#### **Precision Irrigation Management in Young & Mature Almonds**

*Isaya Kisekka, PhD, University of California Davis*

Almonds are currently the largest irrigated crop in California with over 1.2 million acres. Almond production in California has unique water issues, including post-harvest irrigation and the presence of different almond varieties. Take an in-depth look at irrigation management, as it pertains to the almond crop. | [0.5 CEU](#)

**3:10 p.m.-3:40 p.m.**

#### **Irrigation Scheduler for Soybeans in the Mississippi Delta**

*Saseendran S. Anapalli, PhD, USDA-ARS*

Develop an understanding of smartphone-based irrigation scheduling software for soybeans in the Mississippi Delta. | [0.5 CEU](#)

**3:45 p.m.-4:45 p.m.**

#### **The Missing Link in Irrigation Efficiency**

*Donald A. Spier, Precision Laboratories*

Maximum efficiency is the goal for any consumer of limited resources and water, which are under constant demand and require a comprehensive approach to utilization. Innovations in chemistry are enhancing water-use efficiency, linking the path between delivery and monitoring. | [0.5 CEU](#)



## Landscape Track

**Tuesday, Dec. 3**

### Landscape Irrigation Management

**8:00 a.m.-8:30 a.m.**

#### **SWAT & Apps for Water Conservation on Turfgrass**

*Bernard Cardenas, University of Florida*

Smart Water Application Technologies (known as SWAT) and mobile apps could improve irrigation efficiency on turfgrass. Get a better understanding of how these tools are reducing environmental impacts and promoting water conservation. | [0.5 CEU](#)

**8:35 a.m.-9:05 a.m.**

#### **Comparing Weekly Irrigation to Rain Sensor Performance**

*Charles Swanson, MAgr, Texas A&M AgriLife Extension*

Creating irrigation schedules based on historic or seasonal rainfall can be challenging to irrigation professionals when determining weekly run times. A recent study was initiated to help address this predicament by evaluating what effect rain sensor operation has on controller operation and the resulting irrigation schedule. | [0.5 CEU](#)

**9:10 a.m.-9:40 a.m.**

#### **Rain First – Maximizing Effective Rainfall for Conservation**

*Mark Crookston, PE, CAIS, CIC, CID, CIT, CLIA, CLWM, Northern Water*

Improved management of irrigated landscapes can increase effective rainfall and provide significant water conservation benefits. Learn the steps to using rainfall to your advantage, while, in return, reducing watering requirements and improving landscape vigor and health. | [0.5 CEU](#)

**9:45 a.m.-10:15 a.m.**

#### **Fewer Drinks for the Links**

*Ariana C. Wilfley, CLIA, California Water Service*

California Water Service, committed to responsibly reducing water use specifically during a drought, partnered with some of their heaviest users: golf courses. Learn how this innovative project helped assist golf course management reduce water use, without sacrificing beauty or playability of their turf. | [0.5 CEU](#)

**10:20 a.m.-10:50 a.m.**

#### **Soil Moisture Sensor-Based Irrigation Scheduling on Fairways**

*Mark S. Nakatsui; Priti Saxena, PhD; Alan Moss; and Sean McLaughlin; California State Polytechnic University*

In recent years, California has been significantly affected by drought conditions, leading to the adoption of soil moisture sensor technology to measure and conserve water. This session focuses on solutions the industry can implement using soil moisture sensors to conserve water. | [0.5 CEU](#)

## Landscape Track *(continued)*

Tuesday, Dec. 3 – Landscape Irrigation Management (continued)

**10:55 a.m.-11:25 a.m.**

### **Autonomous Turfgrass & Groundcover Irrigation Management Using Smart Irrigation**

*Amir Haghverdi, University of California, Riverside*

This session will analyze the findings of several landscape irrigation research trials in Southern and Central California, including performance evaluation or evapotranspiration-based and soil moisture sensor-based smart controllers and response of turfgrass to multiple deficit irrigation strategies. | [0.5 CEU](#)

**11:30 a.m.-12:00 p.m.**

### **Fundamentals of the Smart Water Triangle**

*Rich Miller, CIC, CLIA, Rich Miller Landscape Service Inc.*

Knowledge of available water, system design and installation best practices avoids problems. This session highlights the importance of knowing your equipment offerings and applying best practices and more fundamentals to controlling water. | [0.5 CEU](#)

## **Wednesday, Dec. 4**

### **Rainwater Harvesting**

**10:00 a.m.-11:00 a.m.**

#### **Rainwater Collection**

*Matthew Finch, Rechtsand*

Low-impact development and core technology can contribute to the innovation of LID as a best management practice to manage stormwater runoff, as well as improve water quality through sustainable and cost-effective land planning and engineering design. Delve into the need for LID and core technology as it pertains to rainwater collection and reuse. | [1.0 CEU](#)

**11:05 a.m.-12:05 p.m.**

### **Designing & Building Landscapes Using Only Rainwater**

*Darrel McMaster, Sustainable Homes Inc.*

Sustainable Homes has the largest number of homes that use rainwater catchment as their sole source of water than any other builder in the nation. Get a better understanding of how these houses are changing the way water is being used in and around the home in times of limited water availability. | [1.0 CEU](#)

**2:00 p.m.-2:30 p.m.**

### **Rainwater BMPs: Plants, Soil, Irrigation & Regulation**

*Russell Ackerman, CLIA-D, SITES AP, City of Santa Monica*

Learn how green infrastructure and rainwater best management practices address runoff water pollution by filtering rainwater on-site through the use of green roofs, rain gardens and biotreatment areas that meet local, state and federal stormwater requirements. | [0.5 CEU](#)

**2:35 p.m.-4:05 p.m.**

### **LID & Landscape: Best Design Practices for Stormwater BMPs**

*Mari Garabedian, EPIC Total Water Solutions*

Have you ever wondered how planting and irrigation are affected by stormwater best management practices and what requirements must be met by the landscape and irrigation design professional? This session will review how stormwater BMPs are selected, sized and designed by the civil engineer. | [1.5 CEUs](#)

## **Thursday, December 5**

### **Irrigation System Management**

**10:00 a.m.-10:30 a.m.**

#### **Developing Systems That Are Repeatable & Scalable**

*Jake Mathre and Russ Jundt, Conserva Irrigation*

Taking a business to new heights can be challenging in the lawn and irrigation industry. Are you setting your business up for failure if you do not have the right systems in place to accommodate incremental growth? Receive key insight on how properly employed systems will help overcome and avoid common pitfalls that lawn and irrigation contractors face. | [0.5 CEU](#)

**10:35 a.m.-11:35 a.m.**

#### **Basics of Backflow Prevention Systems**

*Sean Perry, FEBCO, a WATTS Brand*

This session will provide an introduction to further the understanding of basic backflow principles, the agencies associated with water protection and the various hydraulic systems used to protect the environment from hazardous cross-contamination regarding irrigation systems. | [1.0 CEU](#)

**11:40 a.m.-12:40 p.m.**

#### **Panel Discussion: Subsurface Irrigation Solutions: Forced vs. Responsive**

*David Conklin; Tam Le; Jan Gould; and Mike Mackerer; Responsive Drip Irrigation LLC*

Most SDI systems deliver water based on a timer, controller or human control, while responsive delivery of irrigation use signals from individual plant roots. Learn the pros and cons of these competing irrigation delivery systems. | [1.0 CEU](#)

### **Landscape Lighting Session**

**2:00 p.m.-3:30 p.m.**

#### **Lighting Design – Beyond the Basics**

*Lisa Ruggiers, Association of Outdoor Lighting Professionals*

Let outdoor lighting take your business to the next level! Outdoor lighting has become very competitive, and it's important for green industry professionals to have proper training and education to be successful. Learn how to position and market yourself as a lighting designer, not just a contractor, and see the difference in your sales! | [No CEUs earned](#)



## Bonus Track

### Tuesday, Dec. 3

#### Business Tracks

8:00 a.m.-9:00 a.m.

##### 10 Lessons From the 2019 Green Industry Benchmark Report

*Chad Reinholz, HindSite Software*

Being a green industry business owner is isolating, and it can be hard to compare your business to others. The Green Industry Benchmark Report, created by HindSite Software, surveyed nearly 300 green industry businesses about best practices and typical issues they currently face. This session takes the received data and turns it into actionable insight that the green industry can use to improve their business. | [Landscape](#) | 0.25 CEU

9:05 a.m.-10:05 a.m.

##### Social Media: Stop Pushing & Start Engaging!

*Warren Weeks, Weeks Media*

Social media has become the fastest growing free tool for business owners and manufacturers, yet so many do not take advantage of these platforms. Learn tips on using social media to engage with your audience and stakeholders, while promoting your business. | [Agriculture & Landscape](#) | 0.25 CEU

10:10 a.m.-10:40 a.m.

##### Why a Certified Professional Beats Its Competitors

*Jay Gray, CIC, CID, CIT, CLIA, CLWM; Jake Mathre, CIT, CLIA; and Russ Jundt, Conserva Irrigation*

While many business owners are focused on solely growing within their industry through expansion, it is just as important to focus on personal growth. Learn the importance of certification in your respective field. | [Landscape](#) | 0.125 CEU

10:45 a.m.-11:15 a.m.

##### Leveraging Water Agency Incentives by Smart Site Selections

*Andrew Pirrone, Town of Gilbert*

We know irrigation rebates and incentives exist in almost every major service area, but why deal with the hassle? Learn how incentives and upgrades can help with customer retention, water savings and your own management by reducing irrigation and plant health issues. | [Landscape](#) | 0.125 CEU

#### Weather Management

2:00 p.m.-3:30 p.m.

##### Severe Weather Safety: Protecting Your Crew & Clients

*Brad Jakubowski, Penn State University*

Each year people are killed or seriously injured by thunderstorms despite advanced warning. Become more aware of the potential hazards, learn to spot signs of impending severe weather and create guidelines for making storm-related safety decisions by attending this session. | [Agriculture & Landscape](#) | 1.5 CEUs

3:35 p.m.-5:05 p.m.

##### Understanding Meteorology & Making Weather-Based Decisions

*Brad Jakubowski, Penn State University*

Weather is a critical component of our daily responsibilities. We can make better decisions and provide consistent growing conditions by better understanding weather patterns and concepts. This interactive session introduces fundamental weather concepts and provides the tools to interpret weather reports, maps and forecasts. | [Agriculture & Landscape](#) | 1.5 CEUs

### Wednesday, Dec. 4

#### Business Tracks

10:00 a.m.-11:00 a.m.

##### Panel Discussion: Sustainable Manufacturing

*Gregg Roesink, CIT, CLIA; Bryce Carnehl; and Warren Gorowitz, CLIA; Hunter Industries Inc.*

This panel session will cover topics including recycling and reuse programs in a manufacturing facility, recycling programs with industry partners, the sustainability of the way we power factories, and the things our industry professionals can do to empower the sustainability push in our industry. | [Agriculture & Landscape](#) | 0.25 CEU

11:05 a.m.-12:05 p.m.

##### Incorporating Wi-Fi Technology Into Your Business Plan

*John Newlin, CIC, CIT, CLIA, Quality Sprinkling Systems*

Incorporating new technology and products into your company can provide a new revenue source. Take a look at new trends that point to continuing consumer demand for off-site monitoring, as well as the importance of software integration in the office without the need to add staff. | [Landscape](#) | 0.25 CEU

#### Pumps & Pump Stations

2:00 p.m.-2:30 p.m.

##### Protect the Heart of the Irrigation System – The Pump

*Jim Phene, Epiphene*

Often in irrigation design, the system's water source and water quality issues are overlooked and detrimental to the crop or appearance of the landscape. This session will examine existing and new solutions addressing pump issues along with different types of water sources and key issues with each. | [Agriculture & Landscape](#) | 0.5 CEU

2:35 p.m.-3:05 p.m.

##### Pumps: Long-Term Thinking vs. Short-Term Cost

*Guy Collins and Gail Mueller, Munro*

The irrigation system is a great enhancement to any property and a critical part of creating a beautiful landscape. The pump is an integral part of an irrigation system; however, it is often considered last. This session will provide some thoughtful advice on the equipment that pressurizes the water in an irrigation system. | [Agriculture & Landscape](#) | 0.5 CEU

## Bonus Track *(continued)*

Wednesday, Dec. 4 – Pumps & Pumping Systems *(continued)*

**3:10 p.m.-3:40 p.m.**

### **Pump Station Retrofits – When Might It Make Sense?**

*Guy Collins and Justin McDaniel, Munro*

The pump station is often one of the more expensive items in the irrigation system. Technology improvements, site change and equipment fails are all reasons to consider a new pump. Get a better understanding of when it makes the most sense to retrofit your pump station. | [Agriculture & Landscape](#) | 0.5 CEU

**3:45 p.m.-4:45 p.m.**

### **Energy Efficiency vs. Water Efficiency: What's the Difference?**

*Robert L. Welke, Tallemenco Pty Ltd.*

Energy efficiency should not be confused with water efficiency. Explore the parameters for both and see how they relate and differ. | [Agriculture & Landscape](#) | 1.0 CEU

## Thursday, Dec. 5

### Special Topics

**10:00 a.m.-11:00 a.m.**

### **WaterSense Update**

*Stephanie Tanner, U.S. Environmental Protection Agency*

WaterSense is a voluntary partnership program sponsored by the Environmental Protection Agency. The EPA will provide an update on WaterSense activities related to irrigation products, specifically EPA's review of the WaterSense specification for weather-based irrigation controllers and soil moisture-based control technologies. | [Landscape](#) | 1.0 CEU

**11:05 a.m.-12:35 p.m.**

### **Irrigation Innovation Consortium: First-Year Data Unveiled**

*Stephen Smith, PhD, FASIC, Irrigation Innovation Consortium*

This session will be an overview of the research results to date from the first inaugural research year. Several projects were funded, and preliminary results will be shared on topics including satellite- and unmanned aircraft system imagery-driven irrigation, developing an artificial intelligence model for estimating crop water demand and next generation soil moisture technology. | [Agriculture & Landscape](#) | 1.5 CEUs



## Live From the Show Floor!

## Wednesday, Dec. 4

**10:30 a.m.-11:00 a.m.**

### **How to Become a Leader in Water Conservation**

*Russ Jundt and Jake Mathre, Conserva Irrigation*

The world continues to suffer from a water waste epidemic, and 1.5 billion gallons of water are wasted daily — on irrigation alone. Learn key stats and figures that show why those in the irrigation industry need to do more in their roles to accomplish water conservation. | [Landscape](#) | 0.125 CEU

**11:05 a.m.-11:35 a.m.**

### **Regulatory Precipitation Rate Limits: Water Saver or Waster?**

*Ron Wolfarth, Rain Bird Corporation*

Some writers of standards, codes and voluntary programs have adopted precipitation rate limits as a means of reducing runoff and therefore improving irrigation efficiency. This session will challenge the thinking that precipitation rate limits are the answer and propose alternate solutions for eliminating runoff while improving efficiency. | [Landscape](#) | 0.5 CEU

**11:40 a.m.-12:10 p.m.**

### **Water Hazard Ahead! Assessing Aging Irrigation Systems**

*Phil Dyck, University of Lethbridge*

The possibility of mainline failures will keep superintendents and managers awake at night. This session will focus on how to assess aging irrigation systems and how to minimize risks. Attendees are encouraged to participate and provide their own best practices. | [Landscape](#) | 0.5 CEU

## Thursday, Dec. 5

**10:30 a.m.-11:30 a.m.**

### **IPS Weld-On ECO ASTM D2855 Solvent Cement Welding Seminar**

*Stephen Gardiner, IPS Weld-On*

Minimizing leak and pipe joint failures can increase productivity and profitability within a company. Learn best practices and see a hands-on demonstration of the solvent cement welding process of joining PVC pipe and fittings. | [Landscape](#) | 1.0 CEU

**11:35 a.m.-12:05 p.m.**

### **Know the Facts: H-2A & H-2B Guest Worker Program Updates**

*John Farner, Irrigation Association, and Andrew Bray, National Association of Landscape Professionals*

Labor issues facing landscape and agricultural irrigation companies are real and a main cause for business and profit losses. Join this interactive discussion about the current status of the H-2A and H-2B programs and how the industry is responding to this labor crisis facing the industry. | [Landscape](#) | 0.5 CEU

# IA University

Monday, Dec. 2-Friday, Dec. 6

IA University is the core curriculum for irrigation professionals. These classes are offered every year to ensure you have the fundamental and practical skills necessary to design, install or maintain an irrigation system, as well as the business skills to manage a small irrigation company.

IA University classes include

- real-world applications and irrigation case studies.
- current techniques, field-tested results and best practices.
- instructors with industry expertise and proven teaching experience.



## Choose the class that's right for you:

**Beginner** — for individuals with no or very limited irrigation experience.

**Intermediate** — for individuals with basic knowledge of irrigation concepts and techniques and some experience in the field.

**Advanced** — for individuals with an in-depth understanding of irrigation concepts and techniques and extensive experience in the field.

IA University classes are priced separately and are not included in the full registration fee. Each class registration includes a free exhibits-only pass, which includes exhibits, Live From the Show Floor! presentations, the new product contest, general session and keynote address.

**Register by Nov. 1 and take advantage of our early bird rates.** Register for three or more classes by Nov. 1 and save 5% on your total registration fee. When prompted, enter coupon code "3classes" in your shopping cart to receive the discount. Early registration is encouraged to receive discounted pricing and a guaranteed seat. Class pricing is based on registration by Nov. 1. Classes are taught in Imperial units.

Pumps & Soils	Instructor(s)	Date & Time	Fee
<b>Understanding Pumps</b> (formerly Pumps & Pumping Systems) <b>Beginner</b>   Agriculture, Landscape & Golf   4 CEUs Learn about the types of pumps used in irrigation, pump performance, reading pump curves, making pump selections and an intro to basic pump controls.	Rick Arena, SiteOne Landscape Supply & John Maxwell, Maxwell Irrigation	<b>Wednesday, Dec. 4</b> 8:00 a.m.-12:00 p.m.	Member \$125 Nonmember \$165 (includes manual)
<b>Pump Controls &amp; Package Systems</b> (formerly Advanced Pumps) <b>Advanced</b>   Agriculture, Landscape & Golf   4 CEUs Learn about pump controls with a focus on variable frequency drives as well as "packaged" pump stations.	Rick Arena, SiteOne Landscape Supply & Don Franklin, Hunter Industries Inc.	<b>Wednesday, Dec. 4</b> 1:00 p.m.-5:00 p.m.	Member \$125 Nonmember \$165 (includes handouts)
<b>Irrigated Soils</b> <b>Intermediate</b>   Agriculture, Landscape & Golf   2 CEUs Learn the essentials of the soil-water relationship. This course covers soil components, formation, physical properties and textural classes; water movement in the soil; and water uptake by plants.	Andy Veatch, Retired & Don Franklin, Hunter Industries Inc.	<b>Thursday, Dec. 5</b> 3:00 p.m.-5:00 p.m.	Member \$80 Nonmember \$105 (includes handouts)
<b>Soil-Plant-Air-Continuum</b> <b>Advanced</b>   Agriculture, Landscape & Golf   2 CEUs Master advanced concepts related to the soil-plant-air-continuum. This course covers how plants use water for transpiration and photosynthesis, store energy from the sun for use by other living things, and use and emit carbon and oxygen in a continuous cycle that is essential to life.	John Raffiani, Raffiani's Automatic Sprinkler Service & Larry King, USDA-NRCS West National Technology Support Center	<b>Thursday, Dec. 5</b> 3:00 p.m.-5:00 p.m.	Member \$80 Nonmember \$105 (includes handouts)

Agriculture		Instructor(s)	Date & Time	Fee
<b>Agricultural Drip/Micro Design</b> Advanced   Agriculture   16 CEUs Design efficient, economic irrigation systems for orchards and row crops. Two full days cover crop requirements, filtration, pumping, pressure regulation and emitter/sprayer selection. Recommended review for the certified irrigation designer drip/micro specialty exam.		John Maxwell, Maxwell Irrigation & Kyle Feist, ITRC, Cal Poly State University	<b>Monday, Dec. 2</b> 8:00 a.m.-5:00 p.m. (Day 1) <b>Tuesday, Dec. 3</b> 8:00 a.m.-5:00 p.m. (Day 2)	Member \$295 Nonmember \$395 (includes manual)
<b>Center Pivot Design</b> Advanced   Agriculture   16 CEUs Understand center pivot design and system management. Two full days cover theory and practical applications, including nozzle selection, application rates and scheduling. Recommended class preparation includes Principles of Irrigation.		Steve McCoon, Nelson Irrigation Corp. & Blake Reid, Reid Brothers Irrigation & Equipment Co. LLC	<b>Monday, Dec. 2</b> 8:00 a.m.-5:00 p.m. (Day 1) <b>Tuesday, Dec. 3</b> 8:00 a.m.-5:00 p.m. (Day 2)	Member \$250 Nonmember \$330 (includes manual)
<b>Principles of Irrigation: Agriculture</b> Intermediate   Agriculture   16 CEUs Master theory and application principles for agriculture in this intensive session. Two full days cover soil-water-plant relationships, advanced hydraulics, electricity, pumps, valves and irrigation equipment. Recommended review for the certified irrigation designer general agriculture exam.		Larry King, Retired & Clarence Prestwich, USDA-NRCS West National Technology Support Center	<b>Monday, Dec. 2</b> 8:00 a.m.-5:00 p.m. (Day 1) <b>Tuesday, Dec. 3</b> 8:00 a.m.-5:00 p.m. (Day 2)	Member \$250 Nonmember \$330 (includes manual)
<b>Agricultural Irrigation Specialist</b> Advanced   Agriculture   13 CEUs Master irrigation management for surface (furrow and border strip) and pressurized (micro and sprinkler) systems. This one-and-a-half-day session includes irrigation volume and frequency, evapotranspiration and crop coefficients, scheduling, and salinity effects. This class is recommended as a review for the certified agricultural irrigation specialist exam.		Kyle Feist, ITRC, Cal Poly State University & Larry King, Retired	<b>Tuesday, Dec. 3</b> 8:00 a.m.-5:00 p.m. (Day 1) <b>Wednesday, Dec. 4</b> 8:00 a.m.-1:00 p.m. (Day 2)	Member \$250 Nonmember \$330 (includes manual)
Landscape & Golf		Instructor(s)	Date & Time	Fee
<b>Electrical Troubleshooting: Diagnosing Field Wiring Problems</b> <i>(English &amp; Spanish Versions)</i> Beginner   Landscape & Golf   4 CEUs <b>ENGLISH</b> Save time and money with this practical course in electrical troubleshooting. This half-day class covers diagnosing field wiring problems and proper use of volt-ohm meters. Learn to systematically assess and resolve confusing electrical problems. <b>SPANISH</b> Learn about evaluating local weather, soil moisture, flow control, water volume and valve operation with electricity, using irrigation controllers, solenoids, sensors and electric wires. Discover how these components operate and how to repair or replace them.		<b>ENGLISH</b> Craig Borland, The Toro Company & John Eggleston, Service First Irrigation  <b>SPANISH</b> Jaime Bayona, Ewing Irrigation and Landscape Supply	<b>ENGLISH</b> <b>Monday, Dec. 2</b> 8:00 a.m.-12:00 p.m.  <b>SPANISH</b> <b>Friday, Dec. 6</b> 8:00 a.m.-12:00 p.m.	Member \$125 Nonmember \$165 (includes handouts)
<b>Irrigation Components for Residential/Small Commercial Systems</b> Beginner   Landscape   4 CEUs Increase your understanding of components for residential and small commercial irrigation systems. This half-day course covers system components from the point of connection to the point of water application, including how control systems, valves, sprays and rotors work.		John Raffiani, Raffiani's Automatic Sprinkler Service & Don Franklin, Hunter Industries Inc.	<b>Monday, Dec. 2</b> 8:00 a.m.-12:00 p.m.	Member \$125 Nonmember \$165 (includes handouts)
<b>Landscape Irrigation Auditor</b> Intermediate   Landscape   16 CEUs Learn how to assess irrigation system performance. This two-day session covers field tests and calculating accurate watering schedules based on plant water use, soils and local weather data. Recommended review for the certified landscape irrigation auditor exam.		Eric Olson, City of Fort Collins - Parks & Andy Slack, Slack Landscape & Irrigation	<b>Monday, Dec. 2</b> 8:00 a.m.-5:00 p.m. (Day 1) <b>Tuesday, Dec. 3</b> 8:00 a.m.-5:00 p.m. (Day 2)	Member \$250 Nonmember \$330 (includes manual)

Landscape & Golf (continued)	Instructor(s)	Date & Time	Fee
<b>Landscape Irrigation Contractor</b> Advanced   Landscape   16 CEUs This two-day class is a comprehensive refresher for experienced contractors. Topics include soil-water-plant relationships, hydraulics, basic electricity, grounding, pumps, building codes, scheduling and system uniformity. Recommended review for the certified irrigation contractor exam.	Kurt Thompson, K. Thompson and Associates LLC; Kevin McCaleb, City of Lake Oswego; & Andrew Chase, Brightview Landscape Services	<b>Monday, Dec. 2</b> 8:00 a.m.-5:00 p.m. (Day 1) <b>Tuesday, Dec. 3</b> 8:00 a.m.-5:00 p.m. (Day 2)	Member \$250 Nonmember \$330 (includes manual)
<b>Landscape Irrigation Design</b> Beginner   Landscape   16 CEUs Take your landscape designs to the next level. This fast-paced course covers basic hydraulics, sprinkler head layout, zoning, pipe sizing, routing and matched precipitation rate principles. Students will complete two designs during the two-day class.	Don Davis, SiteOne Landscape Supply & Nick Millard, City Rain Inc.	<b>Monday, Dec. 2</b> 8:00 a.m.-5:00 p.m. (Day 1) <b>Tuesday, Dec. 3</b> 8:00 a.m.-5:00 p.m. (Day 2)	Member \$250 Nonmember \$330 (includes manual)
<b>Principles of Irrigation: Landscape</b> Intermediate   Landscape & Golf   16 CEUs Master theory and application principles for turf-landscape in this intensive session. Two full days cover soil-water-plant relationships, advanced hydraulics, electricity, pumps, valves and irrigation equipment. Recommended review for the certified irrigation designer general landscape/turf exam.	Keith Schweiger, SiteOne Landscape Supply & Brian Vinchesi, Irrigation Consulting Inc.	<b>Monday, Dec. 2</b> 8:00 a.m.-5:00 p.m. (Day 1) <b>Tuesday, Dec. 3</b> 8:00 a.m.-5:00 p.m. (Day 2)	Member \$250 Nonmember \$330 (includes manual/handouts)
<b>Advanced Irrigation Wiring Methods &amp; Troubleshooting</b> Intermediate   Landscape & Golf   4 CEUs Master wiring for today's sophisticated control systems. Learn about different types of transformers, proper phasing (primary and secondary), diagnosing problems using different meters, wire sizing for communication cables and two-wire systems, DC controllers, special solenoids, and proper splicing techniques.	Craig Borland, The Toro Company; John Eggleston, Service First Irrigation; & John Raffiani, Raffiani's Automatic Sprinkler Service	<b>Monday, Dec. 2</b> 1:00 p.m.-5:00 p.m.	Member \$125 Nonmember \$165 (includes manual)
<b>Two-Wire Technology Systems for Landscapes</b> Advanced   Landscape & Golf   4 CEUs Advance your troubleshooting skills for two-wire systems. This class will address typical problems and diagnoses, procedures to avoid typical two-wire problems, and hands-on practice in solving problems in a classroom setting. You will also learn how to design and install flow sensors, decoders and grounding systems to protect expensive equipment.	Craig Borland, The Toro Company & Christine Hawkins, Hunter Industries Inc.	<b>Tuesday, Dec. 3</b> 8:00 a.m.-12:00 p.m.	Member \$125 Nonmember \$165 (includes handouts)
<b>Advanced Landscape Irrigation Design &amp; Management</b> Advanced   Landscape & Golf   8 CEUs Improve landscape water efficiency with better design, including uniformity, equipment selection and technology. This full-day session will address advanced irrigation concepts.	Marvin Pascual, Reinke Manufacturing Company Inc. & Christine Hawkins, Hunter Industries Inc.	<b>Wednesday, Dec. 4</b> 8:00 a.m.-5:00 p.m.	Member \$190 Nonmember \$250 (includes manual)
<b>Alternative Water for Landscape Irrigation</b> Advanced   Landscape & Golf   8 CEUs Targeted at experienced designers, this full-day course covers the basics of sustainable irrigation systems. Topics include using reclaimed water and rainwater harvesting and how they apply to LEED and other sustainability programs.	Kevin McCaleb, City of Lake Oswego & John Raffiani, Raffiani's Automatic Sprinkler Service	<b>Wednesday, Dec. 4</b> 8:00 a.m.-5:00 p.m.	Member \$190 Nonmember \$250 (includes manual)
<b>Landscape Drip Irrigation Design &amp; Management</b> Intermediate   Landscape   8 CEUs Incorporate drip irrigation in landscape applications with this comprehensive review of key design elements, including emitter selection, system layout, applications and scheduling. This full-day session covers line and point source products.	Nick Millard, City Rain Inc & John Eggleston, Service First Irrigation	<b>Wednesday, Dec. 4</b> 8:00 a.m.-5:00 p.m.	Member \$190 Nonmember \$250 (includes manual)

## Math Tutorial

**Tuesday, Dec. 3**  
6:00 p.m.-8:00 p.m.

Don't let anything stand in the way of exceptional performance in the field, in IA University classes and on certification exams. This two-hour tutorial is an intensive review of the most common calculations and formulas used in irrigation system design, installation, audits and maintenance.

Chris Pine, C. Pine Associates Inc.; Andy Veatch, Retired; Christine Hawkins, Hunter Industries Inc.; & Andrew Chase, BrightView Landscape Services

**FREE**

Landscape & Golf <i>(continued)</i>	Instructor(s)	Date & Time	Fee
<b>Landscape Irrigation Technician</b> <i>(English &amp; Spanish Versions)</i> Beginner   Landscape & Golf   8 CEUs  <p>Learn the basics of hydraulics and irrigation system installation and maintenance, including an overview of irrigation system components and how they operate. Learn about gluing and repairing PVC pipe, installing nozzles and adjusting heads, setting and repairing electric valves, and field and controller wiring techniques. Recommended review for the certified irrigation technician exam.</p>	<b>ENGLISH</b> Keith Schweiger, SiteOne Landscape Supply & Scott Knowles, Wolf Creek Company Inc.  <b>SPANISH</b> Jaime Bayona, Ewing Irrigation and Landscape Supply	<b>Wednesday, Dec. 4</b> 8:00 a.m.-5:00 p.m.	Member \$190 Nonmember \$250 <i>(includes manual – English only)</i>
<b>Landscape Water Management &amp; Planning</b> Intermediate   Landscape   8 CEUs <p>Learn how to create water budgets, develop irrigation schedules, document water usage, and plan for periods of drought. This full-day class will help attendees maximize the benefits of smart technology and work effectively with water providers.</p>	Kurt Thompson, K. Thompson and Associates LLC & Mark Crookston, Irrigation Innovation Consortium	<b>Wednesday, Dec. 4</b> 8:00 a.m.-5:00 p.m.	Member \$190 Nonmember \$250 <i>(includes handouts)</i>
<b>Valve Troubleshooting</b> <i>(Spanish Version)</i> Beginner   Landscape   2 CEUs  <p>Review the essentials of valves for properly working landscape irrigation systems. Learn about valve operation, identifying the parts, and maintenance and repairs.</p>	Jaime Bayona, Ewing Irrigation and Landscape Supply	<b>Thursday, Dec. 5</b> 3:00 p.m.-5:00 p.m.	Member \$80 Nonmember \$105 <i>(includes handouts)</i>
<b>Hydraulic Troubleshooting</b> Intermediate   Landscape   4 CEUs <p>Review the essentials of hydraulics for properly working landscape irrigation systems. This half-day class covers troubleshooting, design, system upgrades and more.</p>	Craig Borland, The Toro Company & Andy Veatch, Retired	<b>Friday, Dec. 6</b> 8:00 a.m.-12:00 p.m.	Member \$125 Nonmember \$165 <i>(includes handouts)</i>
Landscape Business Basics			
<b>The Business of Landscape Irrigation Contracting</b> Intermediate   Business   8 CEUs <p>Be exposed to current business practices in strategic planning, business finances and marketing through presentations, group discussions and exercises on best practices. This is designed to be an engaging day focused on business management that irrigation contractors can use to successfully grow their companies.</p>	Chris Pine, C. Pine Associates Inc. & John Newlin, Quality Sprinkling Systems Inc.	<b>Monday, Dec. 2</b> 8:00 a.m.-5:00 p.m.	Member \$190 Nonmember \$250 <i>(includes handouts)</i>
<b>Managing a Landscape Irrigation Service Company: Technicians, Pricing &amp; Marketing</b> Intermediate   Business   4 CEUs <p>Explore the difficulties contractors encounter and discover strategies for finding, hiring, training and keeping service technicians. The course will also present hands-on models for pricing and discuss marketing topics.</p>	Chris Pine, C. Pine Associates Inc. & John Eggleston, Service First Irrigation	<b>Tuesday, Dec. 3</b> 8:00 a.m.-12:00 p.m.	Member \$125 Nonmember \$165 <i>(includes handouts)</i>
<b>Managing a Landscape Irrigation Service Company: Water Management &amp; Technology</b> Intermediate   Business   4 CEUs <p>Develop an understanding of the differences between an installation and a service business and how today's service business has changed into a "landscape water management business." Explore the tools and technologies impacting this type of business.</p>	Chris Pine, C. Pine Associates Inc. & John Eggleston, Service First Irrigation	<b>Tuesday, Dec. 3</b> 1:00 p.m.-5:00 p.m.	Member \$125 Nonmember \$165 <i>(includes handouts)</i>
<b>Bidding &amp; Estimating Landscape Irrigation Systems</b> Intermediate   Business   8 CEUs <p>Develop bids that win jobs based on accurate estimates that keep your company in the black. This full-day course includes hands-on practice on the best contractor bidding systems. This class requires a laptop with Microsoft Office Excel 1997 or later (no MacBook or other Apple product).</p>	John Newlin, Quality Sprinkling Systems Inc.; Andy Veatch, Retired; & Jim Huston, J.R. Huston Consulting Inc.	<b>Wednesday, Dec. 4</b> 8:00 a.m.-5:00 p.m.	Member \$250 Nonmember \$330 <i>(includes manual/software)</i>

## CAD Learning Labs

**Irrigation designers interested in improving their efficiency and accuracy can take advantage of the CAD learning lab sessions.**

The CAD learning lab features both agriculture and landscape irrigation design techniques and best practices and allows participants to experience the speed, efficiency and accuracy offered by CAD-based irrigation software.

Sponsored by  and 

### Hands-On CAD Basics: Learning How to Draft in AutoCAD for Landscape

Beginner | Landscape | 4 CEUs

**Tuesday, Dec. 3** | 8:00 a.m.-12:00 p.m.

Are you just getting into CAD design or need a refresher? This interactive lab will provide you with the fundamentals of CAD. We'll go over the essentials plus give you a rundown of blocks and how to use them in your designs. Once you've completed the course, you'll be able to attach images and other files to your drawings as external references (Xrefs) and set up your irrigation plan properly. Laptops will be provided.

Member \$125 | Nonmember \$165

### Hands-On Irrigation Design Within AutoCAD for Landscape

Intermediate/Advanced | Landscape | 4 CEUs

**Tuesday, Dec. 3** | 1:00 p.m.-5:00 p.m.

If you've already attended our CAD Basics training class or already have some CAD familiarity, pick up some more hands-on experience in this higher-level lab. You'll exit this course with a thorough understanding of tools for placing and designing with AutoCAD. Advanced irrigation design in CAD such as piping, hydraulics and revisions will also be covered. Laptops will be provided.

Member \$125 | Nonmember \$165

### Introduction to the Basics of CAD for Agriculture

Beginner | Agriculture | 4 CEUs

**Tuesday, Dec. 3** | 8:00 a.m.-12:00 p.m.

Discover how CAD can be used in agriculture irrigation design. Basic CAD tools will be covered that facilitate the importation of base data, drawing the layout of irrigation systems, working with elevation and interacting with online sources of information like Google Earth. For those with limited or no previous CAD experience, this class will be a great entry point and will lead into the intermediate class in the afternoon. Laptops will not be provided. It is recommended that attendees bring their own laptop. Software installation will be done either prior to or at the beginning of class.

Member \$125 | Nonmember \$165

### Advancing Your CAD Skills for Agriculture

Intermediate/Advanced | Agriculture | 4 CEUs

**Tuesday, Dec. 3** | 1:00 p.m.-5:00 p.m.

This class covers the use of irrigation-specific CAD software for designing agricultural irrigation systems. Irrigation-specific CAD software contains features beyond those of standard CAD software. Each step in the design process is automatically linked to other parts of the process. Major elements include the importation of base information, aerial imagery and topography; tools to layout and subdivide irrigation blocks; hydraulic analysis tools to size pipes within designer-specified tolerances; calculation of a bill of materials using a customizable database; and production of hydraulic reports, material reports, management reports and an irrigation system plan for installation details. Laptops will not be provided. It is recommended that attendees bring their own laptop. Software installation will be done either prior to or at the beginning of class.

Member \$125 | Nonmember \$165



## Keep track of event programs & education classes in the palm of your hand!

Stay connected with the 2019 Irrigation Show mobile app! View, search, map, browse and tune in to everything about the show on your mobile device. Look for details in the show guide.

# Certification Exams

**Tuesday, Dec. 3-Friday, Dec. 6**

**Set yourself apart from your competition and show your customers your commitment to providing the highest level of expertise and knowledge.**

The IA's Select Certified program sets the bar for industry professionals, recognizing exceptional commitment to efficient water management and irrigation best practices. This program is the most rigorous in the industry and provides an impartial, third-party endorsement of your knowledge and experience.

IA certification

- prepares you for greater on-the-job responsibility.
- opens doors to new projects and employment opportunities.
- documents your expertise for potential clients and employers.
- demonstrates your personal professional achievement.



## Get Ready to Get Certified

1. **Choose the right program.** Visit [www.selectcertified.org](http://www.selectcertified.org) to learn more about each program's requirements.
2. **Pick a date.** Find a date that works with your schedule or take the exam at your convenience with computer-based testing (learn more at [www.irrigation.org/certificationcbt](http://www.irrigation.org/certificationcbt)).
3. **Register in advance.** Exams at the show require advance registration and a separate fee. Visit [www.irrigation.org/showexams](http://www.irrigation.org/showexams) to register by Nov. 21.
4. **Prepare for success.** Find self-study resources at [www.irrigation.org/examprep](http://www.irrigation.org/examprep) or register to take an IA education class at the show for a final review.



**GET AHEAD OF  
THE COMPETITION —  
get certified at the  
Irrigation Show!**

Examination Options Offered at the Irrigation Show	Tuesday, Dec. 3	Wednesday, Dec. 4	Wednesday, Dec. 4	Thursday, Dec. 5	Friday, Dec. 6
	1 p.m.-6 p.m.	8 a.m.-12 p.m.	1 p.m.-6 p.m.	1 p.m.-6 p.m.	8 a.m.-1 p.m.
Certified Agricultural Irrigation Specialist (CAIS)	■	■		■	■
Certified Golf Irrigation Auditor (CGIA)	■	■		■	■
Certified Irrigation Contractor (CIC)	■		■	■	■
Certified Irrigation Designer — Agriculture General & Specialty (CID-Ag)	■		■	■	■
Certified Irrigation Designer — Landscape/Turf General & Specialty (CID-L/T)	■		■	■	■
Certified Irrigation Technician (CIT)	■	■		■	■
Certified Landscape Irrigation Auditor (CLIA)	■	■		■	■

# Affiliate Events

Monday, Dec. 2-Thursday, Dec. 5



## Certified Low Voltage Lighting Technician (CLVLT) Exam

Tuesday, Dec. 3 | 7:30 a.m.-5:00 p.m.

The CLVLT exam is administered by AOLP and is the only national certification of its kind. With no clearly defined national standards for low voltage outdoor lighting, AOLP created this standardized certification test to address the lack of standards that presently exist. The CLVLT exam measures the knowledge and capabilities of applicants and is specifically for 12-volt systems. The test consists of seven half-hour labs and a written exam. There is no classroom instruction prior to the exam. Upon receiving a passing grade, applicants are listed as Certified Low Voltage Lighting Technicians (CLVLT). Set yourself apart from the competition, gain respect, acquire knowledge and invest in your future.

**Registration fee:** AOLP member \$450 | Nonmember \$675

**To register:** <https://aolponline.org/clvlt>

**Questions?** Email [certification@aolponline.org](mailto:certification@aolponline.org) or call 717.238.2504.

*This exam requires advanced registration; on-site registration will not be available.*



## ARCSA Annual Conference

Monday, Dec. 2 | 8:00 a.m.-5:20 p.m.

Tuesday, Dec. 3 | 8:00 a.m.-5:00 p.m.

The American Rainwater Catchment Systems Association's 2019 15th Annual Conference will celebrate ARCSA's 25 years as a national nonprofit solely focused on rainwater catchment education. The conference will take place on Dec. 2-3 and will feature a full lineup of expert presentations focused on issues dealing with rainwater and the energy nexus as well as on innovative water management topics.

Those who register for the ARCSA Conference will receive free entrance to the ARCSA Social, the exhibit hall, the IA new product contest, show floor presentations, the IA keynote address and the IA general session. For more information and to register, visit [www.arcsa.org](http://www.arcsa.org).

## ARCSA Rainwater Catchment Systems Designer Workshop

Wednesday, Dec. 4 | 8:00 a.m.-5:00 p.m.

Thursday, Dec. 5 | 8:00 a.m.-5:00 p.m.

This two-day professional workshop is an in-depth rainwater harvesting course that provides the 16 hours of subject-specific classroom training required to sit for the ASSE Series 21120 Rainwater Catchment Systems Designer Certification exam. The workshop will be held on Wednesday, Dec. 4 and Thursday, Dec. 5, from 8:00 a.m. to 5:00 p.m.

No ASSE in-person proctored exam is currently scheduled for this specific workshop, but the personal online proctored exam is always available. The online proctored exam will give a student time to go home and review the workshop data and read the manual prior to taking the exam. For more information and to register, visit [www.arcsa.org](http://www.arcsa.org).

# Our Sponsors

The Irrigation Association is pleased to host this annual trade show and education conference and sincerely thanks these sponsors for their generous support.

An event of this size and caliber would not be possible without the numerous companies that support the IA through show sponsorship. The IA commends these sponsors for their continued commitment to the agriculture, landscape and golf irrigation industries.

The following listing includes show sponsors as of July 31, 2019.

**Hunter**®

**HYDRO-RAIN**®  
Built for Speed™

**RAIN BIRD**

**TORO**®

**EWING**

**AIRMAR**®  
TECHNOLOGY CORPORATION

**Buckner** **SUPERIOR**

**Oldcastle Infrastructure**™  
A CRH COMPANY

**Irritrol**®

land **F/X**

**NELSON**

**UNIQUE**  
LIGHTING SYSTEMS®

## Opportunities Are Going Fast!

Build your brand awareness, increase traffic to your booth and supercharge your presence at the 2019 Irrigation Show and Education Week. **This year's sponsorships provide myriad opportunities to reach your target audience attending the show.** Covering all price points, opportunities range from digital media advertising to signage and products to event sponsorship. We can customize a sponsorship package to maximize your company's exposure. This year's co-location with Groundwater Week will bring as many as 10,000 attendees to Las Vegas, giving sponsors an even broader reach and increasing your ability to put your message in front of many new customers.

There are many great turnkey and custom sponsorships to meet your budget and message needs:

- Certification/Education
- Keynote Address
- General Session
- Wi-Fi **SOLD**
- Landmarks **SOLD**
- Trade Show Bags **SOLD**
- Registration
- Mobile App **SOLD**
- Hotel Key Cards **SOLD**
- Charging Stations
- Show Floor Lounges
- Opening Night Party **SOLD**
- Notepads
- Pens
- New Product Contest **SOLD**
- Water Cooler Stations
- Young Professional Breakfast **SOLD**
- Women in Irrigation Social **SOLD**
- Education Breaks
- RFID



CALL OR EMAIL TIFFANY WILSON,  
exhibit services manager  
([tiffanywilson@irrigation.org](mailto:tiffanywilson@irrigation.org) or  
703.536.7080), to find out more.



## Ways to Save

- **Register early:** Register by Nov. 1 and save on full registration, exhibits-only registration and class registration packages.
- **Learn more:** Register for three or more classes by Nov. 1 and save 5% on your total registration fee. When prompted, enter coupon code "3classes" in your shopping cart to receive the discount.
- **Become a member:** Discounted pricing is available to IA members and show partner associations. Visit [www.irrigation.org/join](http://www.irrigation.org/join) to join IA.
- **Government employees:** If you have a valid government email address (.state, .gov, .mil) you are eligible to receive early bird pricing throughout the show. Register under Full Registration Government to receive the discount.

**Register early to receive discounted pricing and guarantee a seat!** Classes with low participation may be canceled.

# Registration Instructions

## It's Easy to Register

Choose the registration package that's right for you, then

- **register online.** Register at [www.irrigationshow.org](http://www.irrigationshow.org) (credit card payment required).
- **register by fax.** Fax completed registration form\* with credit card payment information to 703.536.7019. One form per attendee; registration forms without credit card information will not be processed.
- **register by mail.** Mail completed registration form\* with check, credit card information or money order (payment must accompany form) to:

Irrigation Association  
8280 Willow Oaks Corporate Drive, Suite 400  
Fairfax, VA 22031

For questions and assistance, contact the Irrigation Association at [registration@irrigation.org](mailto:registration@irrigation.org), 703.536.7080.

\*Paper registration forms may be downloaded from the website at [www.irrigationshow.org/registration](http://www.irrigationshow.org/registration).

## Registration Packages

Full Registration Full Government/Academia Registration Speaker Registration	<b>NEW!</b> Industry Insights & Exhibit Hall Registration	Exhibits-Only Registration IA University-Only Registration
<ul style="list-style-type: none"><li>• Exhibits</li><li>• New product contest</li><li>• Industry Insights</li><li>• Live From the Show Floor!</li><li>• General session</li><li>• Keynote address</li><li>• Opening night party</li></ul>	<ul style="list-style-type: none"><li>• Exhibits</li><li>• New product contest</li><li>• Industry Insights</li><li>• Live From the Show Floor!</li><li>• General session</li><li>• Keynote address</li></ul> <p><i>Tickets for opening night party can be purchased separately.</i></p>	<ul style="list-style-type: none"><li>• Exhibits</li><li>• New product contest</li><li>• Live From the Show Floor!</li><li>• General session</li><li>• Keynote address</li></ul> <p><i>Tickets for opening night party can be purchased separately.</i></p>

To register guests, download the guest registration form at [www.irrigationshow.org/registration](http://www.irrigationshow.org/registration).



**REGISTER BY NOV. 1 and take advantage of our early bird rates — [www.irrigationshow.org](http://www.irrigationshow.org).**

## Policies

**Registration fees:** All fees are subject to verification, including confirmation of member status. The IA will adjust fees as needed to correct math and other errors.

**Member pricing:** Member pricing is available to members of the Irrigation Association and show partner associations. Proof of membership in show partner organizations may be requested.

**Check payments:** Checks must be in U.S. dollars and drawn on a U.S. bank. Make checks payable to the Irrigation Association.

**Cancellation & privacy policy:** Written cancellation and refund requests must be received by Nov. 15. Cancellations received between Nov. 15 and

Nov. 29 will be assessed a \$50 administrative fee. Cancellations and refund requests should be emailed to [registration@irrigation.org](mailto:registration@irrigation.org) or faxed to 703.536.7019 no later than Nov. 29. No refunds will be given for cancellations received after Nov. 29 or for no-shows. By registering for the Irrigation Show and Education Week, you agree to receive Irrigation Association-related material via email or mail. European citizens and residents please call the office at 703.536.7080 with any concerns.

**Photo policy:** Irrigation Show attendees recognize that their photograph and/or likeness may be used for promotional purposes and grant the Irrigation Association the right to use their image in promotional materials for the Irrigation Show and other IA programs and events.

	IA Member		Nonmember	
	By 11/1	After 11/1	By 11/1	After 11/1
<b>REGISTRATION OPTIONS</b>				
Full Registration	\$249	\$299	\$399	\$469
Full Government/Academia Registration	\$249	\$249	\$249	\$249
Industry Insights & Exhibit Hall Registration	\$199	\$249	\$349	\$429
Exhibit Hall Registration	\$49	\$59	\$49	\$59
Speaker Registration	\$195	\$195	\$195	\$195
IA University-Only Registrations	\$0	\$0	\$0	\$0
<b>EDUCATION CLASSES</b> <i>(Advance registration and separate fee required. For exam registration, visit <a href="http://www.irrigation.org/showexams">www.irrigation.org/showexams</a> by Nov. 21.)</i>				
<b>MONDAY, DEC. 2</b>				
Agricultural Drip/Micro Design (Monday and Tuesday)	\$295	\$395	\$395	\$525
Center Pivot Design (Monday and Tuesday)	\$250	\$330	\$330	\$440
Landscape Irrigation Auditor (Monday and Tuesday)	\$250	\$330	\$330	\$440
Landscape Irrigation Contractor (Monday and Tuesday)	\$250	\$330	\$330	\$440
Landscape Irrigation Design (Monday and Tuesday)	\$250	\$330	\$330	\$440
Principles of Irrigation: Agriculture (Monday and Tuesday)	\$250	\$330	\$330	\$440
Principles of Irrigation: Landscape (Monday and Tuesday)	\$250	\$330	\$330	\$440
The Business of Landscape Irrigation Contracting	\$190	\$250	\$250	\$330
Advanced Irrigation Wiring Methods & Troubleshooting (half day)	\$125	\$165	\$165	\$225
Electrical Troubleshooting Diagnosing Field Wiring Problems (half day)	\$125	\$165	\$165	\$225
Irrigation Components for Residential/Small Commerical Systems (half day)	\$125	\$165	\$165	\$225
<b>TUESDAY, DEC. 3</b>				
Agricultural Irrigation Specialist (Tuesday and Wednesday)	\$250	\$330	\$330	\$440
Advancing Your CAD Skills for Agriculture (half day)	\$125	\$165	\$165	\$225
Hands-On CAD Basics: Learning How to Draft in AutoCAD for Landscape (half day)	\$125	\$165	\$165	\$225
Hands-On Irrigation Design Within AutoCAD for Landscape (half day)	\$125	\$165	\$165	\$225
Introduction to the Basics of CAD for Agriculture (half day)	\$125	\$165	\$165	\$225
Managing an Irrigation Service Company: Technicians, Pricing & Marketing (half day)	\$125	\$165	\$165	\$225
Managing an Irrigation Service Company: Water Management & Technology (half day)	\$125	\$165	\$165	\$225
Two-Wire Technology Systems for Landscapes (half day)	\$125	\$165	\$165	\$225
Math Tutorial (2 hours)	\$0	\$0	\$0	\$0
<b>WEDNESDAY, DEC. 4</b>				
Bidding & Estimating Landscape Irrigation Systems	\$250	\$330	\$330	\$440
Advanced Landscape Irrigation Design & Management	\$190	\$250	\$250	\$330
Alternative Water for Landscape Irrigation	\$190	\$250	\$250	\$330
Landscape Drip Irrigation Design & Management	\$190	\$250	\$250	\$330
Landscape Irrigation Technician – English or Spanish	\$190	\$250	\$250	\$330
Landscape Water Management & Planning	\$190	\$250	\$250	\$330
Pump Controls & Package Systems (half day)	\$125	\$165	\$165	\$225
Understanding Pumps (half day)	\$125	\$165	\$165	\$225
<b>THURSDAY, DEC. 5</b>				
Irrigated Soils (two hours)	\$80	\$105	\$105	\$135
Soil-Plant-Air Continuum (two hours)	\$80	\$105	\$105	\$135
Valve Troubleshooting – Spanish (two hours)	\$80	\$105	\$105	\$135
<b>FRIDAY, DEC. 6</b>				
Electrical Troubleshooting Diagnosing Field Wiring Problems – Spanish (half day)	\$125	\$165	\$165	\$225
Hydraulic Troubleshooting (half day)	\$125	\$165	\$165	\$225
<b>OPTIONAL EVENTS</b>				
Opening Night Party Ticket – Tuesday, Dec. 3	\$95	\$95	\$95	\$95
Women in Irrigation Social – Wednesday, Dec. 4	\$0	\$0	\$0	\$0
Irrigation LABS (two half days) – Thursday, Dec. 5	\$99	\$99	NA	NA
Young Professionals Breakfast – Thursday, Dec. 5	\$0	\$0	\$0	\$0
Behind-the-Scenes Tour of Bellagio Fountains – Friday, Dec. 6	\$20	\$20	\$20	\$20
Hoover Dam Discovery Tour – Friday, Dec. 6	\$115	\$115	\$115	\$115

# Travel Information

HQ  
Hotel

## Westgate Las Vegas Resort & Casino

**Premium/Signature  
Room Rate – \$79** (Sunday,  
Dec. 1-Monday, Dec. 2)

**Premium/Signature Room  
Rate – \$118** (Tuesday, Dec. 3-  
Saturday, Dec. 7)

3000 Paradise Rd.  
*1/2 block from the convention  
center*

## Courtyard by Marriott Las Vegas Convention Center

**King Bed Room Rate – \$124**

**Double Queen Bed  
Room Rate – \$124**

3275 Paradise Rd.  
*1 block from the convention  
center*

## Hilton Grand Vacations on Paradise (Convention Center)

**Studio Suite Room Rate – \$110**

**1 Bedroom Suite  
Room Rate – \$140**

455 Karen Ave.  
*1 block from the convention  
center*

## Las Vegas Marriott Convention Center

**King Bed Suite  
Room Rate – \$149**

**Double Queen Bed Suite  
Room Rate – \$149**

325 Convention Dr.  
*1 block from the convention  
center*

## Renaissance Las Vegas

**King Bed Room Rate – \$159**

**Double Queen Bed  
Room Rate – \$159**

3400 Paradise Rd.  
*1/2 block from the convention  
center*

## Residence Inn by Marriott Las Vegas Convention Center

**Studio Suite  
Room Rate – \$124**

3225 Paradise Rd.  
*1 block from the convention  
center*

## SAHARA Las Vegas Hotel & Casino

**King/Double Queen Bed  
Room Rate – \$89** (Sunday,  
Dec. 1-Thursday, Dec. 5)

**King/Double Queen Bed  
Room Rate – \$131**  
(Friday, Dec. 6-Saturday,  
Dec. 7)

2535 Las Vegas Blvd.  
*4 blocks from the convention  
center*

## SpringHill Suites Las Vegas Convention Center

**Studio Suite  
Room Rate – \$104**

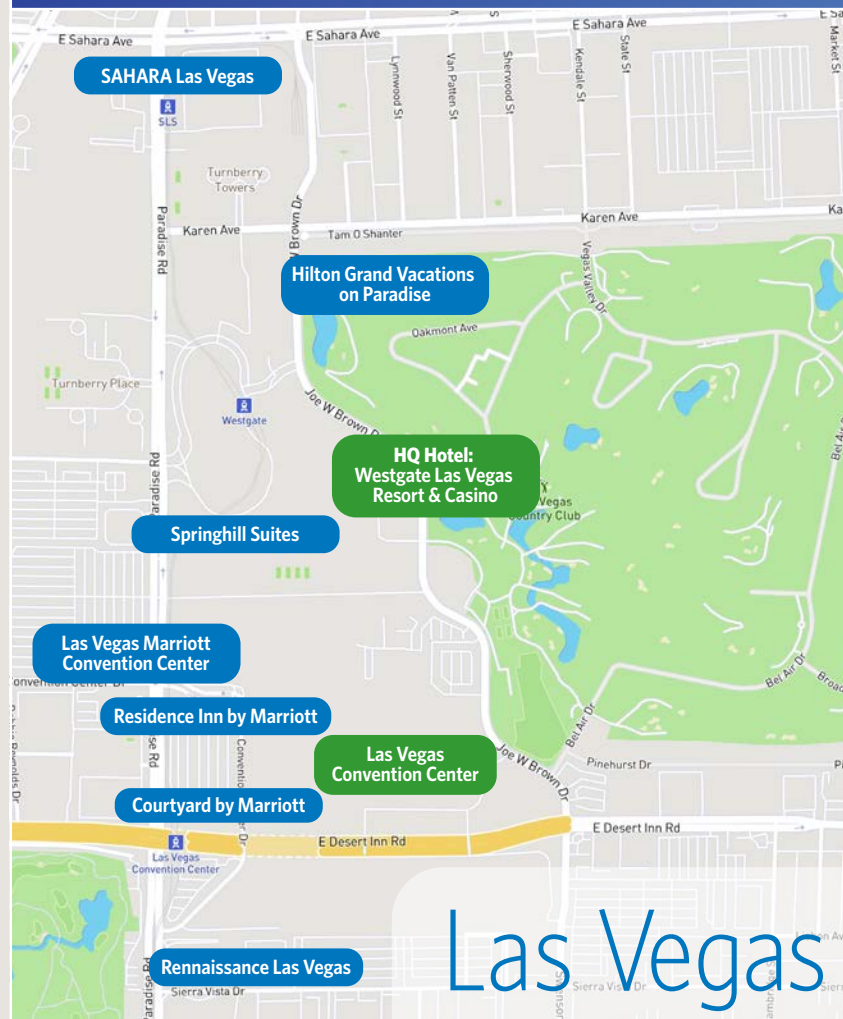
2989 Paradise Rd.  
*1 block from the convention  
center*

## Hotels

The Irrigation Association has partnered with Connections Housing to offer discounted hotel rates for the 2019 Irrigation Show and Education Week. All hotels are conveniently located near the Las Vegas Convention Center. Book your room through Connections Housing, the official show housing company, for access to exclusive discounts. All hotels, with the exception of the Las Vegas Marriott Convention Center, offer complimentary guest room internet and use of a fitness center and business center. Complimentary internet is available at the Las Vegas Marriott Convention Center for all Marriott Bonvoy members. You may sign up for this program at check-in.

To receive the special show rate, book your hotel reservation at [www.irrigationshow.org/hotels](http://www.irrigationshow.org/hotels) no later than Nov. 6.

For help, contact Connections Housing (855.4IRRIGATE, 855.447.7442 or [irrigation@connectionshousing.com](mailto:irrigation@connectionshousing.com)).



Las Vegas

## Air Travel

Fly into McCarran International Airport (LAS). The airport is 15 minutes/5 miles from the Las Vegas Convention Center and IA hotels.

## Ground Transportation

The IA has partnered with Super Shuttle to offer discounted airport transportation to Irrigation Show attendees. Please visit the hotel/travel tab on [www.irrigationshow.org](http://www.irrigationshow.org) for more information and to book your shuttle. Taxi and ride-share information is also available.

## International Travelers

The IA is happy to issue letters of invitation to international attendees and exhibitors applying for a visa application. Visit [www.irrigationshow.org/intl-travelers](http://www.irrigationshow.org/intl-travelers) to download the request form. You must register to attend the Irrigation Show before you submit your request. An IA invitation letter does not guarantee that you will be granted a visa. Find visa application information and instructions from the U.S. Department of State at <https://travel.state.gov>.

Special event!

While in Las Vegas, check out the Wrangler National Finals Rodeo and Cowboy Christmas, Dec. 5-14.

For more information, visit [www.nfrexperience.com](http://www.nfrexperience.com).

## Bag & Coat Check

Bag and coat check will be available at the Las Vegas Convention Center. It is a safe and secure way to lighten your load while on the show floor, eliminating the possibility of leaving important, expensive items behind. This also allows you to meet others hands-free without the hassle of lugging property around. Bag and coat check will be available Wednesday, Dec. 4-Thursdays, Dec. 5 from 8:00 a.m. to 6:00 p.m. in the FedEx office located in the Grand Lobby and Friday, Dec. 6 from 8:00 a.m. to 5:00 p.m. in the FedEx office located at the main entrance. The cost is \$5 per bag; cash and credit are accepted.





8280 Willow Oaks Corporate Drive  
Suite 400  
Fairfax, VA 22031-4507  
Tel: 703.536.7080  
[info@irrigationshow.org](mailto:info@irrigationshow.org)



When the Irrigation Show comes to Vegas,  
the craps table takes a back seat to innovation  
and industry advancement.

**REGISTER NOW**  
and reserve your spot at our  
winning table!

## 2019 IRRIGATION SHOW

*Explore. Connect. Learn.*

The 2019 Irrigation Show and Education Week is a program of the Irrigation Association, a not-for-profit 501(c)(6) organization dedicated to promoting efficient irrigation. Unlike for-profit trade shows, revenue from the Irrigation Show supports IA initiatives to benefit its members and the irrigation industry by improving industry proficiency through continuing education; recognizing and promoting experience and excellence with professional certification; ensuring industry standards and codes reflect irrigation best practices; and influencing water-use public policy at the local, state, regional and national levels.

The 2019 show will be co-located with the National Ground Water Association and the American Rainwater Catchment Systems Association.

[www.irrigationshow.org](http://www.irrigationshow.org)

