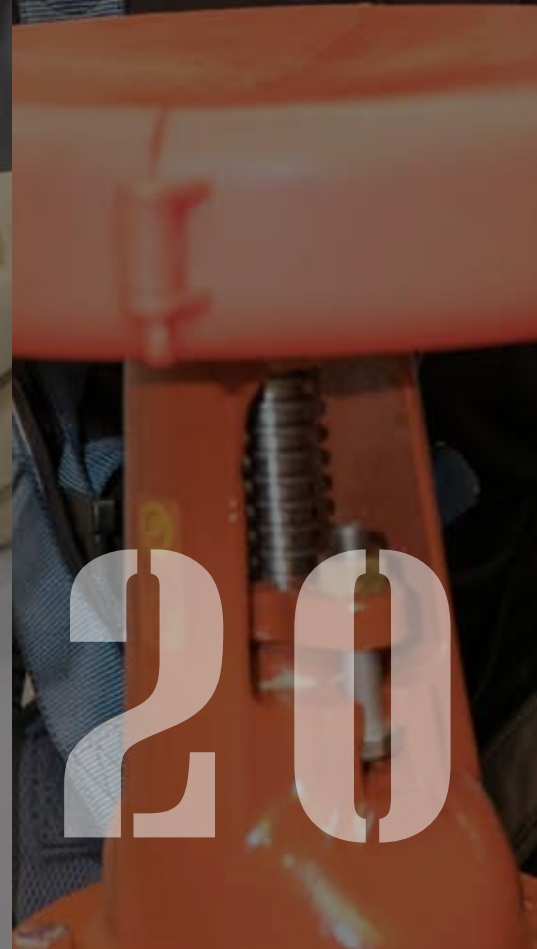
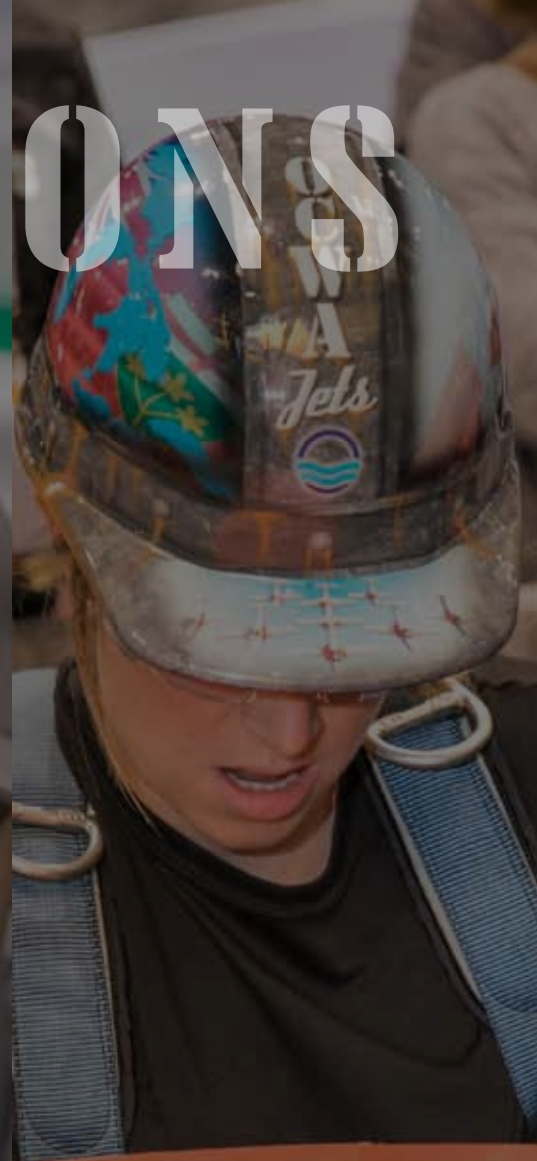
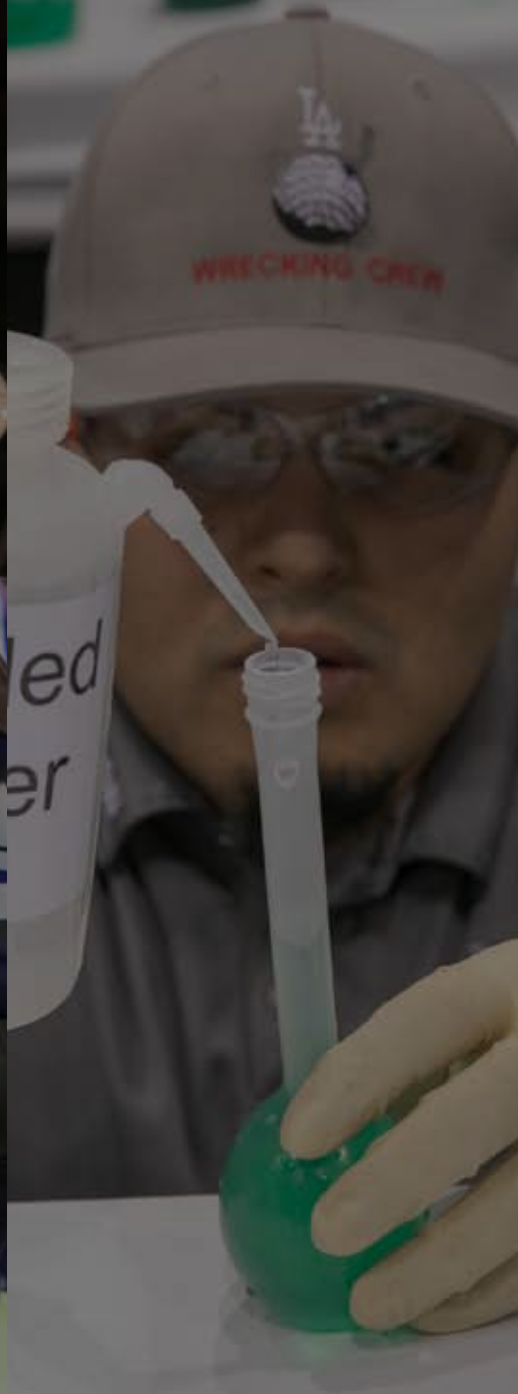


OPERATIONS



20

CHALLENGE



17

OPERATIONS CHALLENGE

Prepared by hours of practice, 44 Operations Challenge teams – a new record – stepped into the spotlight at WEFTEC® 2017. With focus and determination, these water sector professionals jumped into action in the competition’s five events: Process Control, Laboratory, Collection Systems, Godwin Maintenance, and Safety.

Teams worked hard in the hopes of claiming a top spot in each event, or even better, an overall trophy in Division 1 or Division 2. That moment came for the TRA CREWSers who finished first in Division 1 and the Aqua Techs who finished first in Division 2.

But the rewards come not only from earning a top spot in the events, they come from forming a lasting network of colleagues and gaining knowledge that helps advance careers.

“Today you’re competitors, but when you’re not competing in events, you’re here building networks, and you’re here building friends and people that you can call at any time,” said Jenny Hartfelder, 2017–2018 Water Environment Federation (WEF; Alexandria, Va.) president. “And that’s what makes this event so important.”

This year also marked the 30th Operations Challenge competition. The first competition was held at the WEF annual conference in 1988. While the event has evolved and changed throughout the years, the heart of the competition remains the same: teamwork, networking, and knowledge development.

– Jennifer Fulcher with Steve Harrison



CREWSING TO ANOTHER VICTORY IN DIVISION 1

The TRA CREWSers from the Water Environment Association of Texas captured first place in Division 1 despite an interrupted training schedule. The team took a week off from preparing for the competition to volunteer for Hurricane Harvey relief.

"We've had this team together for a while now," said team captain Dale Burrow. The teammates have worked together for more than a decade and began earning first-place in Division 1 trophies in 2005. But this year, the team abbreviated their practice-season to volunteer 16 hours a day for 7 days straight to help with flooding recovery in Texas.

Even with the delay getting started, the team prepared as usual: a few hours of practice a few times a week starting a few weeks before nationals, Burrow said. The team, which includes David Brown, coach Jake Burwell, Raudel Juarez, and Quintin Winters, also placed second in the Laboratory and Safety events and first in the Collection Systems Event.



Top: TRA CREWSers – Raudel Juarez, David Brown, Quintin Winters, and Dale Burrow – work to complete the Laboratory Event.
Bottom: TRA CREWSers – Burrow, Winters, Brown, and Juarez – prepare for the confined space entry portion of the Safety Event.



WRECKING THE COMPETITION



The LA Wrecking Crew from the California Water Environment Association focused on teamwork, equal preparation for all events, and choreographing runs to optimize each member's contribution to earn second place in Division 1.

Team members – captain Nick Janicke, Carlos Vasquez, Edwin Ochoa, Joe Gevas, and coach Will Hoenig – started practicing a few weeks prior to the competition.

“Daily we reevaluate our routines to discover improvements to maximize individual duties and get rid of unproductive dead time,” Hoenig said.

The team placed first in the Laboratory Event and second in both the Process Control and Collection Systems events.

The LA Wrecking Crew – captain Nick Janicke, Joe Gevas, Edwin Ochoa, and Carlos Vasquez – go hands-in before beginning the Safety Event.

JETTING TO THE FINISH LINE

Dedication and practice earned the OCWA Jets from the Water Environment Association of Ontario third place in Division 1. Even though team members work at different facilities, they dedicate personal time to attend practice sessions, which averaged 4 hours every week starting 2 to 3 months before the competition.

The team – Al Robdrup, Tom Nicol, Jason Mank, Stephanie Barronette, and coach Marcel Misuraca – set time limits for each event.

“We time ourselves and make changes accordingly to try to achieve our goal,” Misuraca said. “Muscle memory is important, and knowing where you should be at a certain time-period by listening to your teammates during a specific task.”

The team earned first place in both the Safety and Godwin Maintenance events and third in the Collection Systems Event.

Tom Nicol, Al Robdrup, and Jason Mank of the OCWA Jets install the Advanced Drainage Systems (Hilliard, Ohio) Inserta Tee compression fitting during the Collection Systems Event.



CHALLENGE 2017

TECHS TRAIN HARD TO ENHANCE SKILLS AND CLAIM FIRST IN DIVISION 2



The Aqua Techs from the Water Environment Association of Texas focused on training for the physical events to help earn first place in Division 2. The team practiced at least once a month to “keep things fresh between the competitions,” said Kevin Willey, team captain.

This year, the team participated in both California and the national competitions. Beginning about 2 months before each competition, the team practiced 8 hours per week. The week before the competitions that increased to nearly 40 hours, Willey said.

“We run multiple runs of each event daily and always try to end with a quick error-free run,” he said.

The team – Willey, Ryan Brunette, Christian Mendez, Ernesto Romero, and coach Edward Burrell – placed first in both the Godwin Maintenance and Collection Systems events and second in the Laboratory Event.

Aqua Techs team members – captain Kevin Willey, Ryan Brunette, Christian Mendez, and Ernesto Romero – work quickly to complete the Safety Event.



HUSTLING THE COMPETITION



Expanding exposure to other teams during the competition helped the New York Water Environment Association Jamaica Sludge Hustlers claim second place in Division 2.

The team tried to practice 16 hours a week starting in February for its local and state competitions. After a break during the summer, the team started practicing for nationals in September.

Competing against other high-caliber teams at the New Jersey Regional Operations Challenge competition helped prepare the team – captain Ray Antenucci, Robert Ferland, Anthony Petrone, Yu-Tung Chan, co-coach Howard Robinson, and co-coach Joseph Atkins – for the national competition.

“We learned about ourselves and where our deficiencies were, and where our competitors’ strengths were,” Robinson said.

The team placed within the top seven for all events, earning third for Process Control.

Robert Ferland and Yu-Tung Chan of the Jamaica Sludge Hustlers work side-by-side during the Laboratory Event.

CONTROLLING NERVES TO EASE ONTO THE PODIUM

Controlled Chaos from the Water Environment Association of South Carolina had a strategy to increase its preparation for this year’s competition. The plan paid off with a third-place win in Division 2.

The team, consisting of captain Troy Newton, coach Wayne Lee, Seth Duncan, Patrick Ross, and Kevin Ganley, fit in practice whenever possible. The team focused on the events they struggle with: Laboratory and Process Control. The team worked to “control the nerves and hit the mark,” Newton said.

The team placed second in the Safety Event and third in the Godwin Maintenance Event.



Controlled Chaos captain Troy Newton works on solving problems in the Hydromantis Environmental Software Solutions Inc. (Hamilton, Ontario) OpToo™ simulation, while teammates Patrick Ross and Kevin Ganley focus on the written portion of the Process Control Event.

COMPETITORS SACRIFICE PRACTICE TO PROTECT COMMUNITIES FROM HURRICANES

Operations Challenge competitors dedicate a lot of time to preparing for the event, but their jobs come first and helping their citizens takes priority. Two teams put aside practice time to respond to Hurricane Harvey and Hurricane Irma in their communities.

VOLUNTEERING FOR HURRICANE HARVEY RECOVERY

During late August, the TRA CReWSers were competing at a regional Operations Challenge competition in Ocean City, Md., while Hurricane Harvey wreaked havoc in Texas.

Team captain Dale Burrow recalls the team gathered to watch news reports of the devastating effects of the storm each night. "It was really hard to be there and not be back home to try and help," Burrow said.

Burrow said he is proud of how his company stepped up by sending a boat out to rescue 30 people from the flood waters and issuing a call for staff to volunteer and help with recovery efforts.

Even with a national competition on the horizon, the CReWSers did not hesitate to volunteer, he said. "We were some of the first to get on that list."

Burrow and his teammates, David Brown and Raudel Juarez, were approved to join one of two four-person volunteer groups from the Trinity River Authority (Arlington, Texas). The groups took a generator, two 150-mm (6-in.) trailer pumps, and two 75-mm (3-in.) trash pumps toward the coastline near Houston.

The CReWSer's group spent the majority of 7 days helping a lift station in Liberty, Texas, come out from under 3.7 m (12 ft) of flood water. Flood waters had spilled over a levee, which kept the water trapped at the facility even after flooding receded, Burrow said. "That was our job, to pump that out."

The group relieved the facility's staff who had been working around the clock. "They were worn out and they needed help," Burrow said. "They were very grateful."

The CReWSers spent their week working 16 to 18 hours per day. "We went prepared to stay outside," Burrow said. But the team was lucky enough to stay inside a service center for the first night and at a hotel for the rest of the time. The team pumped out the flood water, deragged a submersible pump, conducted electrical repairs, and helped restore three other lift stations in the area.

"I'm really thankful that our company gave us that opportunity," Burrow said. "Even if we don't do well here [at Operations Challenge], it was worth it."



Top: TRA CReWSers David Brown, Raudel Juarez, and Dale Burrow work to repair a leaking section of pipe during the Collection Systems Event. Bottom: Samuel Howard II, member of Fecal Matters, attaches a harness to the victim during the Safety Event.

OPERATIONS CHALLENGE

FLORIDA WORKS ON RECOVERY FROM HURRICANE IRMA

Hurricane Irma made landfall in Florida on Sept. 10 and cheated Fecal Matters from the Florida Water Environment Association out of 2 weeks of practice time.

The Jacksonville, Fla., competitors were preparing to for their first Operations Challenge. “We have competed at the regional level for the past 3 years, but this is the first year we have made it to nationals,” said team member Mike Fowler.

When Irma hit, team members, which includes Fowler, Casey Soieau, Ryan Cohee, Sam Howard II, and coach Chris Swihart, worked to minimize overflows, fix water main breaks, maintain potable water and sanitary sewer services, respond to consumer problems, and keep the grid to the Duval County service territory running. After the storm, a majority of their facility’s pump stations

were without power, so the team members took generators and pumps around to pump down water. “We were really busy,” Swihart said.

“But we rose to the occasion,” Fowler said. “We’ve got a good bunch of people. ... Immediately prior to Irma, some of our people were working 14 to 20 hours and then for the 2 weeks after Irma we ended up working 14- to 16-hour days, 7 days a week.”

The team also had to replace a couple of team members at the last minute. The competing team only had one or two practices together before nationals. But just as these water sector professionals responded to Hurricane Irma with grit and determination, they tackled all the events during the national competition with times comparable to the regional level of the competition.

PERFECT ATTENDANCE: DAVE VOGEL, JIM MILLER HIT 30 COMPETITIONS AND COUNTING

Two guys have been involved in all 30 Operations Challenge competitions. Dave Vogel and Jim Miller both competed in the first national event in 1988 in Dallas and have come back every year since.

FROM CAPTAIN TO HEAD SCOREKEEPER

In 1988, Vogel served as captain of the City of Tampa team; they placed third overall. (This was before the divisions were introduced.) That first competition had “mismatched” equipment, first-time judges, and rules being created as the competition occurred, but, it was an “adrenaline rush” to be in the spotlight on a national stage, Vogel said. “It was an amazing experience that got me hooked on continued participation.”

“I have supported Ops Challenge for 30 years now,” Vogel said. He has been a competitor, coach, overall coordinator for a Member Association competition, and judge. At WEFTEC® 2017, he was the head scorekeeper. “It is one of my ways of giving back to the profession,” he said.

Participating in the competition has provided Vogel with many friendships as well as memories of seeing teams celebrate their successes, which he said was especially sweet when new teams beat the odds and earn a top spot in the rankings.

In addition to fostering teamwork, camaraderie, and friendly competition, the event showcases the profession, he said. “It is a unique opportunity for us to demonstrate and ‘professionalize’ the role of the unsung water professional heroes who protect our



Dave Vogel re-creates a moment from the first Operations Challenge in 1988. Vogel, who has participated in every Operations Challenge, in 1988 served as captain of the City of Tampa team. This year, Vogel served as the head scorekeeper for the entire competition.

CHALLENGE 2017



Jim Miller examines a pump in 2017 just as he did at the first Operations Challenge in 1988. Miller, who has participated in every Operations Challenge, has been involved with the Central States Water Environment Association team since the beginning, first as a competitor and now as a coach.



valuable water assets every day, 24 hours a day," Vogel said.

"Operations Challenge is always evolving, always improving. We've become more sophisticated in the depth of the events, adding more layers to technical challenges and judging criteria," he said. Each of the competition's physical events have an increased focus on safety. For the future, Vogel sees more technology being incorporated.

DEMONSTRATED DEDICATION

Miller volunteered to participate in the first competition when members of the Central States Water Environment Association (CSWEA) put out a call out to operators interested in participating in a competition. But details about the competition's format did not make it to his team. "We didn't even know we were going to do it as a team until we actually got to Dallas," he said.

After competing on a team for 4 years, Miller decided to become a coach and give others a chance to participate. He has continued in that role ever since; he coached the Shovelers this year.

If he wasn't coaching, he would be judging, he said. "I think it's

the one, the best opportunity to exchange information, knowledge, and professionalism for the operations, maintenance, and lab folks that WEF has," Miller said.

CSWEA has had two teams in the competition since 1988, but has changed how members are chosen from volunteers to CSWEA award winners. The teams showcase talented professionals from Illinois, Minnesota, and Wisconsin, Miller said. His favorite memory is when the Shovelers won first place in the Division 2 Laboratory Event in 2014.

Because these teams consistently include new members who are scattered across three states, members often hope to just not finish last. But in 2014, the team exceeded everyone's expectations, he said.

While the competition itself has evolved, it is the people you meet and the network you form that you really remember, Miller said. "The competition comes and goes ... but the people are the ones that stand out and that's what makes it a lot of fun."

GOING INTERNATIONAL: DANISH AND ARGENTINIAN TEAMS GAIN A NEW NETWORK AT WEFTEC

Since 1988, the number of teams and the distance they travel to compete has grown. This year, teams from both Argentina and Denmark made the journey to Chicago to compete. To help them prepare, the Illinois Water Environment Association team, the Sewer Rats, hosted a local training session.

TRAINING GIVES INTERNATIONAL COMPETITORS AN EDGE

"A lot of the equipment, they don't have," said Matt Jurjovec,

captain of the Sewer Rats. The Sewer Rat's training facility has all the Operations Challenge equipment. Volunteers from the Illinois team, a Texas team, and two veteran competitors, showed the Danish and Argentinian competitors the ropes.

The U.S. competitors ran through each event at full speed, then went through each event more slowly while being shadowed by an international competitor; then, they reversed roles and offered advice and tips, Jurjovec said.

"One or two times through, they understood what we

OPERATIONS CHALLENGE



The Great Danes, Nerea Uri, captain Dia Kjellerup, Frank B. Davidsen, and Jens H. Christiansen, work together to finish fixing a pipe during the Collection Systems Event. The team traveled from Denmark to compete.

were doing, they had all the right cues ... [and] took it very seriously," he said.

ARGENTINA TEAM ENJOYS A WARM WELCOME

The practice session gave the Argentinian team, the AySA Demonios, an opportunity to work with new equipment. The team knew the procedures for each event but practicing proved challenging, especially for the Godwin Maintenance and Safety events.

The AySA Demonios, which includes co-coaches Pablo Quiroga and Hector Vaccaro, Sofia Millan, Norberto De Rosa, Nicolas Parisi, and Gabriel De Vita, earned its spot at WEFTEC after winning a competition in Colombia against 15 other teams. The team practiced back at home, but found some events, especially Safety, challenging because they did not have access to the same tools and equipment, Vaccaro said. The practice helped the team get more familiar with each event.

"We're very thankful that we were invited to Ops Challenge," Vaccaro said. The team experienced hospitality from the other teams and enjoys the camaraderie of the event.

DENMARK TEAM COMPETES FOR THE FIRST TIME

For the first time, a Danish team competed at Operations Challenge. The Great Danes formed after Claus Homann, a member of the WEF Board of Trustees and COO of Aarhus Vand, approached Flemming B. Møller, who became the coach of the Great Danes, with the idea.

"It's so important for me to have staff involved in the development of the water sector," Homann said. He wanted this to be an opportunity for staff who otherwise would not have a chance to attend an event such as WEFTEC. The team members practiced hard and now can show what they are working on overseas to their American counterparts, he said.

"I think it's a good trend that we are starting," said Møller, who coached the team. "There's a lot of things we can learn from the American teams, and they can learn from us. ... Together we'll be stronger."

Employees of Denmark's three largest utilities were chosen for the team, including captain Dia Kjellerup, Jens H. Christiansen, Frank B. Davidsen, Nerea Uri, and Møller. Team members were chosen for their positivity, drive to go above and beyond their normal task, and complementary skill sets.

"I got the best team for the job," Møller said. "I'm pretty sure we won't win, but we're going to be the team that has the most fun ... and gets to know the most people."



AySA Demonios – Gabriel De Vita, Sofia Millan, Norberto De Rosa, and Nicolas Parisi – prepare to send a competitor down a manhole to rescue a victim during the Safety Event. The team traveled from Argentina to compete.



CHALLENGE 2017

THE OPERATIONS CHALLENGE ORIGIN: SHOWCASE OPERATORS

Details of the Operations Challenge origin story can be foggy, but the story-arc remains the same. The first competition was pitched to WEF in the fall of 1987, and held at WEFTEC® 1988 in Dallas. The idea came from a conversation Al Goodman, WEF past president, had with Thomas Kutcher, director of Public Works & Utilities for the City of Murray, Ky.

SPARK OF AN IDEA CREATES AN INFERNO

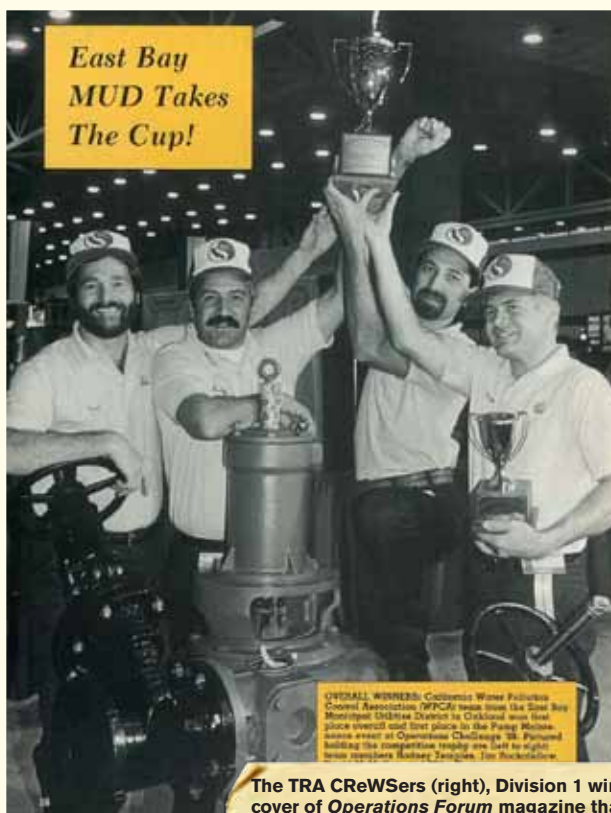
In 1984, Kutcher organized the first Operations Challenge competition at an Ohio Water Environment Association meeting. Teams of four competed in seven events – laboratory, maintenance, safety, operations, process control, management, and sludge disposal. “The event was a huge success with 12 teams competing, plus 225 people in attendance to watch,” Kutcher said.

Goodman learned about the event and started hosting an Indiana Water Environment Association (IWEA) Operations Challenge competition. He reformulated the event to focus more on education.

“I thought it was a fantastic idea,” Goodman said.

During an IWEA conference in 1987, Goodman started talking about the competition with Beth Turner, WEF president-elect at the time. She asked if it could be done at a national scale. The idea fit in with WEF’s efforts to provide value to operators as members, Turner said.

WEF had formed an operations division and had started publishing *Operations Forum* magazine, but had little else to offer this membership group, Turner said. WEF’s annual conference was not something that operators could easily obtain permission to attend.



The TRA CReWSers (right), Division 1 winners of Operations Challenge 2017, re-create the cover of *Operations Forum* magazine that featured the East Bay Municipal Utility District (MUD) team (left) that won the first Operations Challenge competition in 1988. The East Bay MUD team included Rodney Temples, Jim Rockafellow, David McMullen, and Mike Heaton. The TRA CReWSers team included Raudel Juarez, Quintin Winters, coach Jake Burwell, captain Dale Burrow, and David Brown.

OPERATIONS CHALLENGE



“At the end of the day, it’s the operators that take what the consultants design and make it work,” Turner said. “I just thought it was very important for operators to be active in the Federation.”

Goodman presented a plan to WEF leaders in fall 1987 and with support from Turner and numerous volunteers, hosted the first competition at WEFTEC 1988 in Dallas.

COMPETITION GETS REFINED

The competition always has had the same five events – Process Control, Laboratory, Collection Systems, Maintenance, and Safety – but they have evolved throughout the years. “There’s a refinement of the events,” Goodman said.

The Collection Systems event started as a video that teams watched to evaluate the problems in a sewer system. Then it became a clay-pipe-cutting event in 1989. In 1990, the pipe material switched to polyvinyl chloride (PVC). The equipment used in all the physical events have changed. The Safety Event, which started with simulating a chlorine leak that had to be fixed while on supplied air, has transformed into an event with scaffolding, safety harnesses, and gantry.

Throughout the years, the technical steps, number of judges, and overall skill and preparation required to compete have grown.

ORIGINATORS TAKE PRIDE IN COMPETITION

Some things, however, remain the same.

Turner remembers the atmosphere during the first competition. “You could just see the excitement in people and the pride they had in how their teams performed,” she said. “There was just a lot of energy. I was really proud of the

operators and how well they did.”

“I see the camaraderie of the team members and how much more knowledgeable the competitors are in each of the competitions’ areas and it makes me proud that this idea took off and has worked,” Kutcher said. “That energy is still flowing in and through the competition today. It takes my breath away.”

“Demonstration of the skill sets that these operators have is the best thing,” Goodman said. “Seeing their enthusiasm is definitely rewarding.”

“We started with an intention of wanting to highlight and feature the skills that operators bring and offer them an avenue for participation in the Federation,” Turner said. “I think that 30 years later we’re achieving both of those objectives in a wildly, more-successful way than I think Al and I could have envisioned in the beginning.”



30 Years of Operations Challenge articles available online

WEF has been publishing coverage of Operations Challenge since the first competition in 1988. In honor of 30 years of operations excellence, all 30 of these articles have been collected online.

Take a stroll down memory lane by reading each of these sections.

Access the archive at www.weftec.org/OChistory.

VETERAN AND NEW TEAM HRSD COMPETITORS REAP REWARDS

Team HRSD has a long history of involvement with Operations Challenge. At WEFTEC® 1988, Hampton Roads Sanitation District (HRSD; Virginia Beach, Va.) employees saw the first competition and brought word of it back home. In 1989, teams from HRSD started participating at the national competition.

HRSD’s Operations Challenge competitors have a history of moving up the ranks and increasing involvement in their Member Association and within the Water Environment

Federation (Alexandria, Va.). Recently, the team has embraced this professional development more directly. They shifted focus from sending veteran competitors to Operations Challenge to encouraging young professionals from the HRSD apprenticeship program to compete.

MOVING UP THE RANKS

Bob Rutherford, senior plant manager at HRSD, has participated in Operations Challenge for 26 years. He has

CHALLENGE 2017



Team HRSD encourages participation by young professionals, especially those involved in its Apprenticeship Program. Top: Team members Seth Blake and Lawrence Dickerson work through tasks during the Laboratory Event. Bottom: Team members Dickerson, Ken McMinn, and Blake compete in the Godwin Maintenance Event. The team also includes (not pictured) Keegan Ankofski, alternate Patrick Porto, and coach Scott Mattice.



organized the Safety Event for the Virginia Water Environment Association; judged at WEFTEC; coordinated the Safety Event at the national-level; been the master-of-ceremonies at WEFTEC; and volunteered as vice chair, chair, and liaison for the Operations Challenge Committee.

He has experienced professional benefits from participating; watched other HRSD employees advance; and witnessed an increase in the new, young operators, such as Pat Porto, who got involved.

“The intent of Operations Challenge is for operators to learn and grow,” Rutherford said. In addition to the literal skills learned for each event, competitors bring to work new competencies in teamwork, communication, planning, organization, and efficiency, he said.

“At HRSD, we see operators who have been on Operations Challenge teams master those skills. Many of our current and past supervisors have come from Operations Challenge teams,” Rutherford said. The competition “develops the whole operator,” which also benefits the organization’s Apprenticeship Program, he said.

BEGINNING THE JOURNEY

Pat Porto has only been a member of Team HRSD for a year, but the 19-year-old already has seen the benefits.

“It’s a learning experience,” Porto said. “It is a lot to remember, but it is good knowledge to know.” Porto interned for HRSD during a summer break in high school and again after graduation. He became a part of the Apprenticeship Program when a position opened for a facility assistant in September 2016.

While interning, Porto saw Operations Challenge team members practice and immediately wanted to join. “This is something that I want to do, this is fun to me,” he said. When a position on Team HRSD opened right after becoming an apprentice, Porto showed up for try-outs and earned his spot as an alternate.

Being a member of Team HRSD has been hard work, but preparing for the Process Control Event helped him interview to become an operator. Knowing technical details and the science behind processes at the facility helped him answer questions confidently, he said. Porto received his new position a couple months before the national competition.

At WEFTEC, Porto was in awe of the size of the competition and exhibition. He plans to finish the apprenticeship program and earn an engineering degree to help him at HRSD. He also hopes to continue competing. “I hope to stay with Ops Challenge for a very long time,” Porto said.

OPERATIONS CHALLENGE 2017

SIMULATION PORTION OF PROCESS CONTROL EVENT RECEIVES RAVE REVIEWS

During the Process Control Event, competitors had to complete a written test and a computer simulation. The Hydromantis Environmental Software Solutions Inc. (Hamilton, Ontario) program, OpTool™, simulated operational problems in a water resource recovery facility that team members had to correct to meet target effluent quality goals.

"Hydromantis Technology is a fascinating, slick, quick tool to aid in evaluating, preemptively, plant process changes," said Will Hoening, coach of the LA Wrecking Crew. The Division 1 second-place team enjoys the new addition to the Process Control test.

"It is interesting to look at plant operations interaction from a purely theoretical standpoint," said Jamaica Sludge Hustlers coach Howard Robinson.

While real-world operations require making changes and watching for the outcome over days or weeks, practicing with this technology gives the team members "a better understanding of the process interaction, which in turn is helping us obtain our grade license certifications," Robinson said.

"The simulator can be adapted to a number of different configurations to make it mimic differences in the plants," said OCWA Jets coach Marcel Misuraca. "I believe it is a great tool for operators to help diagnose issues."



OPERATIONS CHALLENGE 2017 OVERALL SCORES

Division 1			
Place	Team	Member Association	Final Score
1	TRA CReWSers	WEA of Texas	463.51
2	LA Wrecking Crew	California WEA	442.75
3	OCWA Jets	WEA of Ontario	436.06
Division 2			
Place	Team	Member Association	Final Score
1	Aqua Techs	WEA of Texas	446.56
2	Jamaica Sludge Hustlers	New York WEA	426.86
3	Controlled Chaos	WEA of South Carolina	417.65

*See the full list of results in *WEF Highlights* at news.wef.org.

LA WRECKING CREW WINS THE POPULAR VOTE

Throughout the month of October, you voted for who you think deserves the title of "Best Operations Challenge Team of All-Time." The contest was set up as a 32-team bracket in four regions. The single-elimination structure led to some early upsets and many of the matchups were extremely close. For example, one matchup in the first round was decided by just 2 votes.

In the end, the LA Wrecking Crew from the California Water Environment Association emerged as the clear winner. In their closest matchup, the team captured 63% of the vote. In their easiest win – the finals – they took 98.6%.

BRACKET STATS

While this vote is unscientific and unaudited, the amount of participation lends a sense of authenticity and heartiness to the results. These statistics demonstrate just how seriously Operations Challenge teams, fans, and supporters take any competition:

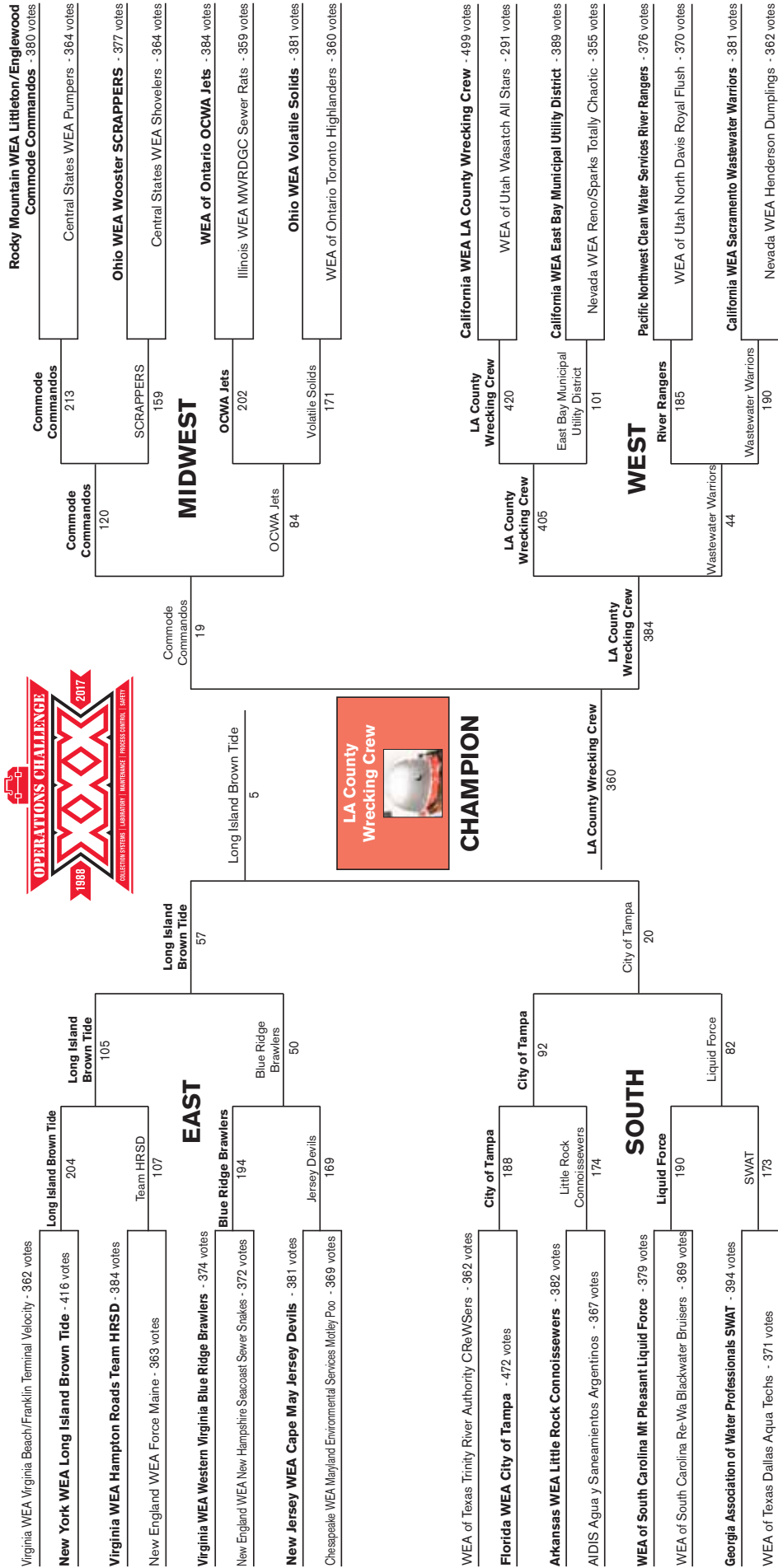
- 23,144 votes cast,
- 916 users, and
- an average of 794 users per round.

BRACKET LOGIC

Because users cast all their votes at once – instead of the bracket progressing round-by-round – some votes in later rounds are not counted. Every vote counted in the first round, but round two votes cast for teams eliminated in round one were not counted in the final bracket shown here.

This means that some teams officially knocked out early still racked up a huge number of votes in later rounds, but because of their early-round defeat, they were ineligible to move forward in the bracket. The four top vote-getting teams from the championship round are listed on p. 45.

YOU CHOSE THE BEST OPERATIONS CHALLENGE TEAM OF ALL-TIME



Top vote-getters in the championship round

Team	Championship votes	Total votes received in all rounds
LA County Wrecking Crew	360	2068
Virginia Beach/Franklin Terminal Velocity	270	1506
Trinity River Authority CReWSers	45	856
Hampton Roads Team HRSD	22	629

*See explanation of bracket logic on p. 44.