2011 Operations

Virginia's Terminal Velocity repeats as Division 1 champs

As the clock ticks, pressure is evident in Operations Challenge team members' movements. Even the most well-rehearsed, choreographed runs can go awry under the close eye of the judges and audience. The need to work quickly wars with the need to be precise.

But hard work, practice, and experience paid off for Division 1 winners, Terminal Velocity. The Virginia Water Environment Association team – Donnie Cagle, Paul Cubilla, Stephen Motley, Jason Truitt, and coaches Bobby Williams and Elijah Smith – defended its first-place title, winning the second year in a row.

"During practices we were having really consistently fast times and felt that we could distance ourselves from the competition," said Cagle, who captains the team. The team felt most confident in the lab and safety events. "Our lab and safety events are what won the competition for us," he said. But the pressure is something that gets to even the best teams.

"I realize that isn't raw sewage leaking out of a pipe during the Collection Systems event; however, the stopwatch is running, which to me is more frightening," Cagle said. "Your time in the event is indelible."

Even the home team, the LA Wrecking Crew from the California Water Environment Association, said pressure and nerves play a part.

"Things can get changed around, so you're nervous about all of [the events]," said Paul Johnson, LA Wrecking Crew captain. The team members – Johnson, Jesus Garibay, Tom Jauregui, Sam Mapatunage, and coach Steve Johnson – attribute their performance to their motto, "slow down to speed up," Johnson said. "We don't have to set records; we just have to have a clean run." The strategy worked to earn them second place overall for the second year in a row.

continued on p. 48

Division 1 top five

Team	Member Association	Points
1. Terminal Velocity	Virginia	457.10
2. LA Wrecking Crew	California	444.11
3. TRA CReWSers	Texas	430.96
4. Team HRSD	Virginia	410.42
5. Jersey Devils	New Jersey	398.30

Terminal Velocity from the Virginia Water Environment Association took home its second Division 1 win in 2 years. The team – Stephen Motley, Paul Cubilla, Donnie Cagle, and Jason Truitt – also earned first place in the Safety Event. Kieffer Photography

Challenge

Jennifer Fulcher with Steve Spicer and Steve Harrison

New England's Seacoast Sewer Snakes take first in Division 2

Working in tandem, Operations Challenge competitors move with a well-rehearsed fluidity that comes from many hours of practice and teamwork. Teams hone their skills by identifying each other's strengths to assign responsibilities for each of the competition's five events, making a plan, and repeating the process many times over. This year, the Seacoast Sewer Snakes from the New England Water Environment Association took advantage of this strategy to take first place in Division 2.

Division 2 top five		
Team	**Member Association**	**Points**
1. Seacoast Sewer Snakes	New England	458.53
2. River Rangers	Pacific Northwest	448.92
3. Wasted Gas	Utah	448.81
4. OCWA Jets	Ontario	442.87
5. Blueridge Brawlers	Virginia	440.45

"Ops Challenge forces you to identify the critical path, plan ahead, and realize that teamwork is the key to success," said Tim Vadney, captain of the Seacoast Sewer Snakes. Team members also include Michael Carle, John Sykora, Daniel Driscoll, and coach Paula Anania.

Participating in the event makes Vadney a more valuable asset to his Operations Challenge team and provides him with skills that he can take back to his utility, he said.

Bob Fitzgerald, captain of the Pacific Northwest Clean Water Association River Rangers, attributes his team's second-place Division 2 win to camaraderie. The River Rangers – Fitzgerald, Justine George, James O'Reilly, Jon Randall, and coach Mark Poling – work well together and are friends outside of the competition, Fitzgerald said.

He added that the competition has taught him how to work with team members who have different personalities, backgrounds, and knowledge bases. This is especially true this year since the team has three new members, he said. "I had to teach these people how to do maintenance," he said, adding that he has learned skills in other events from other team members. "I really enjoy it," he said. "What makes a good team is if you work well together," he said.

The Utah Water Environment Association team Wasted Gas worked well together, too, clinching third place in Division 2. Team members include captain Darin Morris, Tiffini Adams, Kevin Gallagher, Jared O'Brien, and coach Jeff Weiss.

OCWA Jets team captain Marcel Misuraca said teamwork is important, but it also can add pressure to the competition. "The hardest part of participating in the Operations Challenge is the fear of making a mistake, [or] mistakes, which could cause the team to be penalized or fail in the goal set out by the team."

continued on p. 48

The Seacoast Sewer Snakes – John Sykora, Tim Vadney, Daniel Driscoll, and Michael Carle (not pictured) – from the New England Water Environment Association credit teamwork for earning them first place overall in Division 2. Kieffer Photography

Division 1 continued from p. 46

The Water Environment Association of Texas team, the TRA CReWSers – David Brown, Steve Price, Dale Burrow, Jacob Burwell, and coach Patrick Lynn – battled through the competition to earn third. The team has taken first in Division 1 four times before. Each time team members are up on the podium, it gives them a great sense of pride, said Burrow, who serves as captain.

When teams perform well, the pride they take in the accomplishments is clear, especially since the competition is so tough in Division 1.

"We could probably run the competition 3 days in a row and have three different winners; that is how close the competition is," Cagle said. He explained that teamwork is critical to be competitive "with the caliber of teams in Division 1."

Virginia Water Environment Association Team HRSD – captain Eric Washbon, Tim Scott, Chuck McMahon, Laura Shields, and coach Wesley Warren – finished fourth in Division 1. The team's strategy is "practice, practice, practice," Warren said. He added that it is important to form a strategy that focuses on the strengths of each team member. "You have to build your routine around your people and what they can do." ■

Sam Mapatunage, Jesus Garibay, Paul Johnson, and Tom Jauregui are the LA Wrecking Crew from the California Water Environment Association. This year the Division 1 team earned first place in the Collection Systems Event and second place overall. Kieffer Photography

The TRA CReWSers from the Water Environment Association of Texas – David Brown, Jacob Burwell, Dale Burrow, and Steve Price – work to complete the Maintenance Event. The team earned third place overall in Division 1. Kieffer Photography

Division 2 continued from p. 47

The OCWA Jets – Misuraca, Tom Nicol, Michael Paola, Alan Robdrup, and coaches Beverly Mollard and Dennis Rau – placed fourth in Division 2 this year. But winning is just the beginning, Misuraca said. "The wealth of knowledge that is at [Operations Challenge] is endless," he said. In addition the competition "teaches you composure, increases the morale around your facilities," provides information and experience that "make you a better operator," and "teaches you to think on your feet," he said. ■

Wasted Gas from the Water Environment Association of Utah didn't waste any effort and took home third place overall in Division 2. Here team members Kevin Gallagher, Darin Morris, Tiffini Adams, and Jared O'Brien hurry to finish the Collection Systems Event. Kieffer Photography

The bright yellow shirts of the Pacific Northwest Clean Water Association River Rangers nearly camouflage them during the Safety Event, but the team made its presence known by winning second place overall in Division 2. James O'Reilly, Bob Fitzgerald, and Jon Randall prepare the emergency hoist, while Justine George (not pictured) readies other equipment. Kieffer Photography

Process Control Event helps operators learn all aspects of wastewater treatment

Teams had just 25 minutes to work on the Process Control test. Most divide up the test's multiple-choice and operational-type scenario questions to cover more ground.

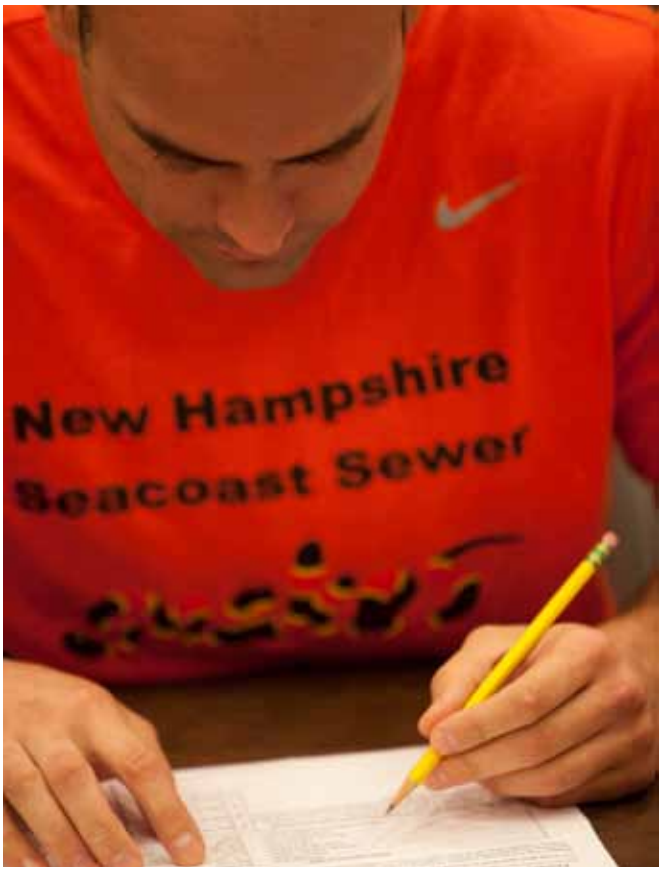
For Tim Vadney, captain of the Seacoast Sewer Snakes, preparing for the test makes him more valuable to his utility, he said. "The Process Control Event involves everyone equally and requires the most focus, communication, and speed." The Sewer Snakes took first place in the event in Division 2.

Paul Johnson, captain of the LA Wrecking Crew, said that the Process Control Event helps competitors build skills the most, especially for operators from larger plants who don't often work outside their specific area. The Wrecking Crew earned the first-place trophy for Process Control in Division 1.

Erik Bailey, captain of the VorTechs from the New England Water Environment Association, explained that Process Control was one of his team's strongest events because "Vermont's so small that everybody's a jack-of-all-trades," he said.

Wesley Warren, coach of Team HRSD, explained the importance of teamwork, which is apparent even in this event. "In the process test, you're sitting around the table figuring out who's going to do what," he said. ■

Kenneth Wuerker from the Jersey Devils works through the Process Control Event. The team, which represents the New Jersey Water Environment Association, secured the Division 1 second-place win in this event. Kieffer Photography



Tim Vadney, captain of the New England Water Environment Association Seacoast Sewer Snakes, takes the Process Control exam. The team took home top Division 2 honors in the event. Kieffer Photography

Process Control Event		
Division 1		
Place	**Team**	**Member Association**
1	LA Wrecking Crew	California
2	Jersey Devils	New Jersey
3	Team HRSD	Virginia
Division 2		
Place	**Team**	**Member Association**
1	Seacoast Sewer Snakes	New England
2	River Rangers	Pacific Northwest
3	Regulators	Ohio

Watch an interview with Process Control Event coordinator Mike Ross.

bit.ly/OpsChallProcess

Laboratory Event provides operators with new hands-on experience

Eric Washbon and Laura Shields from Team HRSD focus on the Laboratory Event. The team captured third place in the event in Division 1. Kieffer Photography

During the Laboratory Event, teams needed to perform all of the steps of an *Escherichia coli* membrane filtration analysis.

"I think the one we were most comfortable with is the lab, and we did real well in that," said Wesley Warren, captain of Team HRSD. "We get to learn some new things," preparing for the lab event, he added, because the team consists of operators who normally don't get a chance to work in a lab. Team HRSD won third place in Division 1 in the event.

Laboratory Event		
Division 1		
Place	**Team**	**Member Association**
1	Terminal Velocity	Virginia
2	TRA CReWSers	Texas
3	Team HRSD	Virginia
Division 2		
Place	**Team**	**Member Association**
1	Ozark Royal Flush	Arkansas
2	OCWA Jets	Ontario
3	River Rangers	Pacific Northwest

Dale Burrow, David Brown, and Jacob Burwell of the TRA CReWSers work on the Laboratory Event. The team earned the event's Division 1 second-place trophy. Kieffer Photography

Dale Burrow, captain of TRA CReWSers, identified the event as one of the most difficult for his team. "That's the one that you really have to think about when you're doing it," he said. Despite the challenge, the CReWSers earned the second-place laboratory trophy for Division 1.

Donnie Cagle, captain of Terminal Velocity, attributes the team's overall first-place standing in Division 1 partly to its performance in the Laboratory Event and said his team most looked forward to performing in this event. "We really felt like we could not only win that individual event, we could also gain enough of a points-margin in that event to help us with the overall scoring in the pentathlon of events," he said. ■

Tim McGee and Michael Neil from Ozark Royal Flush carefully complete the *Escherichia coli* membrane filtration analysis during the Laboratory Event. The team from the Arkansas Water Environment Association dissected the event for a Division 2 first-place win. Kieffer Photography

Hear Team HRSD members talk about their performance in and preparation for the Laboratory Event.

bit.ly/OpsChallLab

Safety Event provides operators with a real-world, valuable lesson

For the Safety Event, teams worked to rescue an unconscious coworker (played by a mannequin) from the bottom of a confined space as well as another coworker (a team member) who has a heart attack during the original rescue.

"The Safety Event was the one we were most looking forward to," said Marcel Misuraca, captain of the OCWA Jets. The Jets, who won the event in Division 2 this year, have focused on this event because their utility, the Ontario Clean Water Agency, has set health and safety as a priority. "Capturing first in the Safety Event two times in the last 3 years really focused on the agency's goals," Misuraca said.

Donnie Cagle, captain of Terminal Velocity, said the event helped his team place first overall in Division 1 because of "a fast and, more importantly, clean safety run," he said.

But some teams found the event to be one of the most difficult because they had limited access to equipment for practice. "One of our biggest challenges was equipment availability," said Erik Bailey, captain of the VorTechs. The closest equipment setup for the team to practice on was 3.5 hours away, he said. Walter Arsis, captain of the Regulators from the Ohio Water Environment Association, said his team was in a similar situation. ■

Terminal Velocity team members Stephen Motley and Donnie Cagle work in tandem to complete the Safety Event. The team won the event's first-place Division 1 trophy. Kieffer Photography

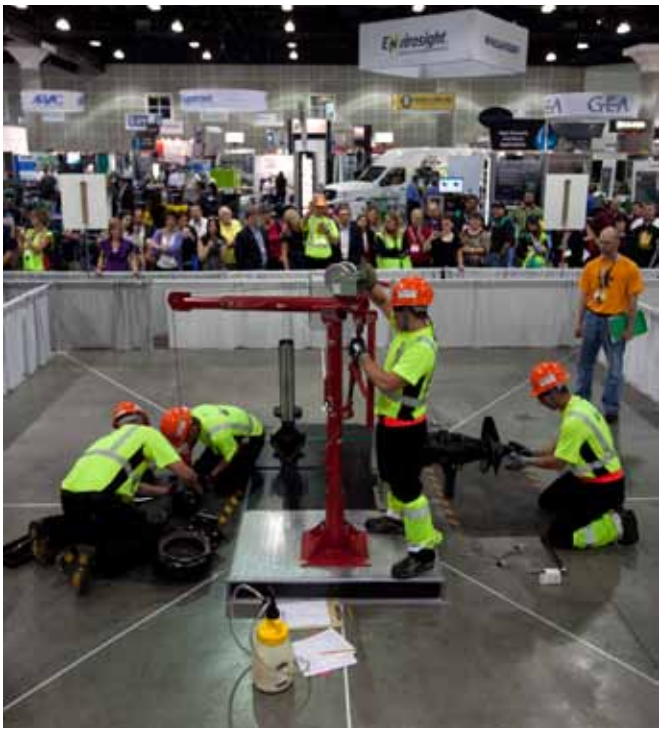
Marcel Misuraca of the OCWA Jets rescues an unconscious "coworker" during the Safety Event. The team, from the Water Environment Association of Ontario, took top Division 2 honors in the event. Kieffer Photography

Listen to Centrifugal Force discuss the Safety Event.

bit.ly/OpsChallSafety

Safety Event		
Division 1		
Place	**Team**	**Member Association**
1	Terminal Velocity	Virginia
2	Aqua Techs	Texas
3	Liquid Force	South Carolina
Division 2		
Place	**Team**	**Member Association**
1	OCWA Jets	Ontario
2	ReWa Blackwater Bruisers	South Carolina
3	Seacoast Sewer Snakes	New England

Wilo Maintenance Event requires operators to roll up their sleeves and work together



The Wasatch All Stars from the Water Environment Association of Utah compete in the Wilo Maintenance Event. The team won the Division 2 third-place trophy for this event. Kieffer Photography

In the Wilo Maintenance Event, teams responded to separate and simultaneous "moisture reset" failure conditions for a submersible pump and submersible mixer in adjacent, simulated, slide-rail-mounted installations. Competitors were tasked with safely removing the pump and mixer from service, performing and documenting the required service to repair the units, and placing them back into service.

"In many ways the Maintenance Event is the most challenging, due to both the complexity of the event and the limited time we had to practice with the equipment," said Tim Vadney, captain of the Seacoast Sewer Snakes. Erik Bailey, captain of the VorTechs, agreed, adding that his team did not see the equipment for 4 months before the national competition. "To cope with this, we focused almost entirely on the Maintenance Event for the couple of weeks we had the equipment," Vadney said.

Hear from Terminal Velocity about the Wilo Maintenance Event as well as the story behind the team's pink uniforms this year.

bit.ly/OpsChallMaint

Wilo Maintenance Event		
Division 1		
Place	**Team**	**Member Association**
1	Dillo XXPress	Texas
2	Terminal Velocity	Virginia
3	LA Wrecking Crew	California
Division 2		
Place	**Team**	**Member Association**
1	ReWa Blackwater Bruisers	South Carolina
2	Wasted Gas	Utah
3	Wasatch All Stars	Utah

"Both the pump and the mixer have to be worked on at the same time, which makes it a challenge," said Marcel Misuraca, captain of the OCWA Jets. "We practice to find shortcuts; we video to see if, and where, we can save time." He added, "To be successful the entire team must be working as a team."

"There's some coordination, like a ballet. You want to make sure that you're going one way, and they're going the other, and you're not running into each other," said Paul Johnson, captain of the LA Wrecking Crew, which won a Division 1 third-place trophy in the event.

Dale Burrow, captain of the TRA CReWSers, identified the event as one of his team's best and smoothest events and said that it requires the most teamwork. "You just basically have to get your timing down, and it's more of a physical run," Burrow said. ■

Terminal Velocity's Stephen Motley makes sure the mixer and pump are locked out of service during the Wilo Maintenance Event. Kieffer Photography

Collection Event adds evaluation to repair

To keep Operations Challenge, well, challenging, events routinely receive upgrades and makeovers. This year, the Operations Challenge committee made some changes to the Collection Systems Event.

The pipe repair portion of this year's Collection Systems Event remained the same, but, instead of programming an autosampler or flowmeter, as was required in past years, teams completed a quiz, which required identifying six pipe defects. All teams were given the same set of images.

Challenge organizers partnered with the National Association of Sewer Service Companies to introduce the pipeline assessment and certification program (PACP). PACP is a tool that enables utilities to evaluate their infrastructure to help prioritize the maintenance and rehabilitation of their collection systems.

"The Collection Systems Event is very popular among the competitors and spectators because it is fast, has a clear objective, and remains suspenseful until the integrity of the repair is evaluated by a pressure test," said John Troffatter, chairman of the Operations Challenge committee.

Moses Riley, Melvin Keys, and Aaron Montgomery, Centrifugal Force team members from the Chesapeake Water Environment Association, work to attach the service saddle on the replacement pipe. This year, in addition to the pipe repair, teams had to identify six pipe defects in a quiz. Kieffer Photography

Paul Johnson, captain of the LA Wrecking Crew, drills the 4.5-in. hole in a section of replacement pipe during the Collection Systems Event. His team earned the Division 1 first-place award for this event. Kieffer Photography

But, he added, cutting pipe with hand saws does not meet the competition's objective of providing training in emerging industry practices. By including the PACP-based defect coding quiz, the committee is able to maintain the tradition of the repair scenario as well as provide an incentive for participants to obtain a professional credential. The change also eliminates the need for teams to obtain specialized equipment for practice sessions.

For operators at larger utilities, the defect identification task exposes plant operators to collection systems topics that they never may see otherwise, said Wesley Warren, coach of Team HRSD from the Virginia Water Environment Association. "It's going to be a good educational chance for them to learn different things," Warren said. ■

Collection Systems Event		
Division 1		
Place	**Team**	**Member Association**
1	LA Wrecking Crew	California
2	Team HRSD	Virginia
3	Terminal Velocity	Virginia
Division 2		
Place	**Team**	**Member Association**
1	Collectors	Virginia
2	Sludge Hammers	Ontario
3	Seacoast Sewer Snakes	New England

See several teams run the Collection Systems Event and hear the reaction of the LA Wrecking Crew just after finishing the event.

bit.ly/OpsChallCollections

New teams show a commitment to the competition

Veterans of Operations Challenge know each other well, but this year there were several new teams participating, which meant a first national competition experience for many.

"It's very exciting that there were a number of new teams this year," said Tim Vadney, captain of the Seacoast Sewer Snakes.

"You develop friendships over the years, but it's really exciting to have new people joining," said Paul Johnson, captain of the LA Wrecking Crew.

Veteran teams take on mentoring role

Johnson explained that the Los Angeles team tries to be friendly and open with information, especially for new teams. "We want to encourage them … make sure that they enjoy themselves," Johnson said. "I think it's important to be helpful."

Many other veteran teams also are happy to help new teams. "It is especially rewarding for us when we get to work with some of the newer teams and help them with their development," said Donnie Cagle, captain of Terminal Velocity.

Dale Burrow, captain of the TRA CReWSers, added that this year his team was excited to have the opportunity to work with Ozark Royal Flush, an Arkansas Water Environment Association team. "They actually came to our plant and trained with us," Burrow said. "We've gotten to know them very well." Ozark Royal Flush team members visited for a full day of training twice, and have been invited to compete in Texas's Operations Challenge competition next year, Burrow said.

New teams learn about the challenges

As veteran teams know all too well, competing in Operations Challenge requires commitment, and coordinating schedules and finding time to practice can be tough. Bob Fitzgerald, captain of the River Rangers, had a like-new team this year with three new members. He said the hardest part was coordinating schedules among team members at different locations and one team member located 48 km (30 mi) away. But this did not deter them. They still got together to practice each week for 3 hours, beginning 3 weeks before the national competition, he said. The new team members "were a little bit in awe," at the size and scope of the competition, but "it was a lot of fun," he said.

Eight new teams participated in the competition this year, including the VorTechs from the New England Water Environment Association. The team members are Nathan Lavallee, Erik Bailey, Brian Mattison, and Dick Perez. Kieffer Photography

Erik Bailey, captain of a first-time team, the VorTechs, explained that his team members all work at different plants, in different municipalities. Distance is not that much of a factor, since all the team members fall within a 40-km (25-mi) radius, but it is difficult to find time to practice because each one is basically a chief at his own location, he said. "It can be very difficult to get away for practice," he said.

Besides getting funding to travel, the VorTechs had the challenge of not having access to equipment for the safety and maintenance events to practice. The team had to travel 3.5 hours to access the equipment. But the time commitment was worth it, Bailey said.

Competing even garnered the team the attention of the local press. The *Burlington* (Vt.) *Free Press* wrote two articles about the team and its participation in "the wastewater Olympics," Bailey said. "It definitely helps with name recognition."

Wasatch All-Stars

Vermont VorTechs

Blueridge Brawlers

OCWA Jets

The River Rangers – Justine George, Bob Fitzgerald, James O'Reilly, and Jon Randall from the Pacific Northwest Clean Water Association – included three new members this year and wound up winning second place overall in Division 2. Kieffer Photography

Since the Ohio Water Environment Association Regulators, who are made up of U.S. Environmental Protection Agency inspectors, aren't from a plant, they also had difficulty practicing with equipment, said Walter Arsis, team captain. But this did not stop their twice-weekly, 2-hour practice sessions for the 2 months leading up to the competition. The team members felt that the time, effort, and practice put in for Operations Challenge was definitely worth it since it directly helps them at their day jobs, Arsis said. "You teach yourself by doing it, and then it helps you look at what somebody else is doing to see if they're doing it right," he said.

Dedication pays off by improving operator skills

Marcel Misuraca, captain of the OCWA Jets, has noticed that the new teams this year were very competitive, comparing them to when his team debuted a few years ago. "The new teams that came in were just as strong or stronger than the teams that have been there before," he said.

The trend of new teams coming in is one Bailey hopes will continue. "Just like in the field, we need the young upstarts to get involved because it's most beneficial to them," he said. "It's great for operator development." The competition "really shines" when it helps develop the next generation of operators, he said. ■

Operations Challenge 2011 Sponsors

MWH
BUILDING A BETTER WORLD

WILO
Pumpen Intelligenz

Equipment donors

Accusonic Technologies
Fibergate Composite Structures
Hach Company
National Association of Sewer Service Companies
North American Pipe Corporation
Safe Approach
Scott Safety
Thern Inc.
Wilo USA LLC

See more photos and read how Operations Challenge gives competitors a career boost in the December/January issue of WEF *Highlights*.

www.wef.org/highlights

River Rangers

Ozark Royal Flush

Team HRSD

TRA CReWSers