

Water Environment Federation

The Official Publication of WEFTEC

WE&T

WATER ENVIRONMENT & TECHNOLOGY

WEFTEC®.04 wrapup, p. 22

Disinfection, p. 32

Energy conservation, p. 37

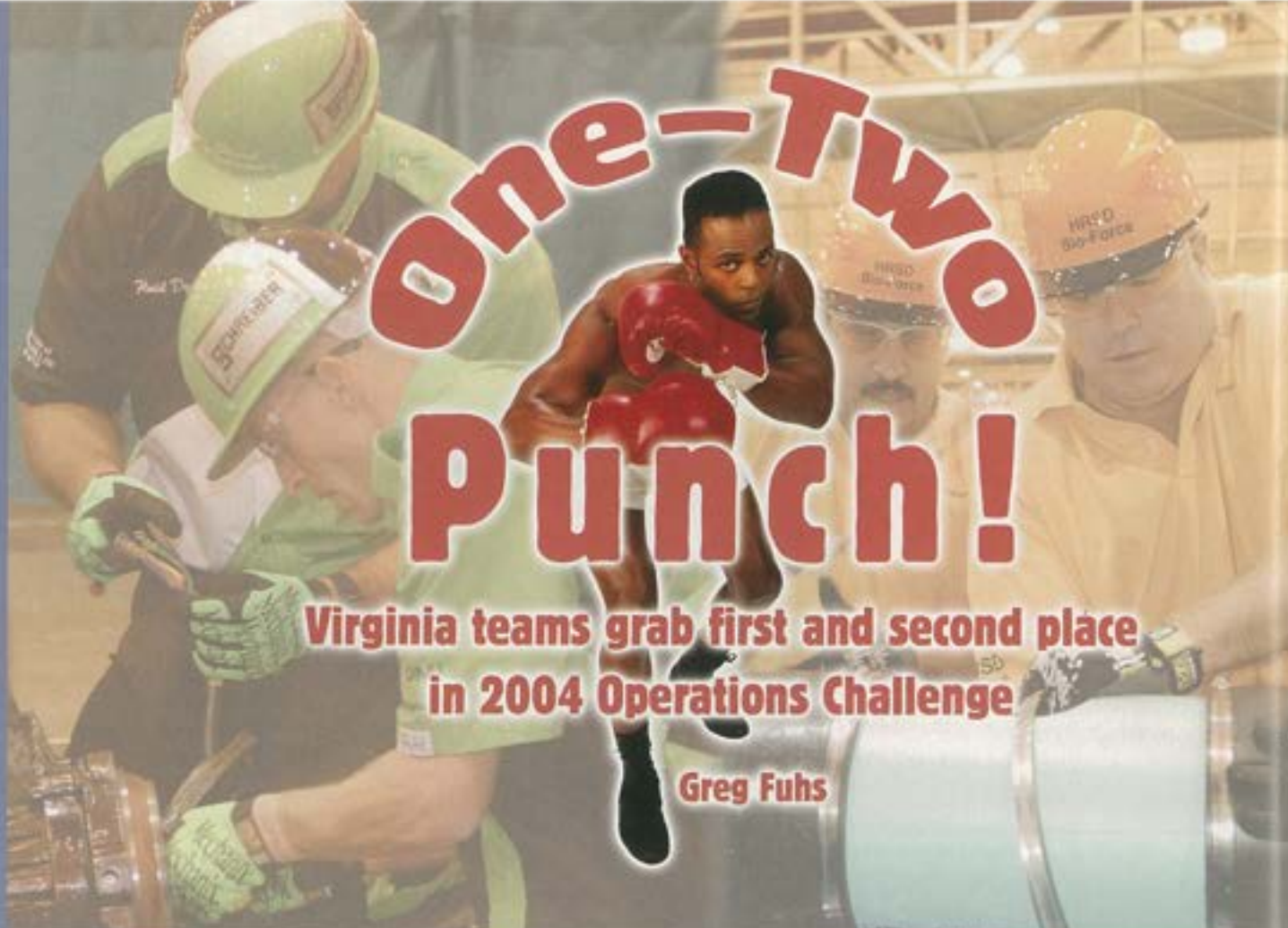
TWICE ON TOP

FLUID DYNAMICS WINS
OPERATIONS CHALLENGE
DIVISION I FOR SECOND
STRAIGHT YEAR

December 2004

OPERATIONS FORUM

A SPECIAL SECTION FOR OPERATORS, P. 49



One-Two Punch!

**Virginia teams grab first and second place
in 2004 Operations Challenge**

Greg Fuhs

Given all the high-caliber teams competing in the annual Operations Challenge at WEFTEC®, dominating the event is far from easy. As any participant will tell you, the margin of error is razor-thin and victory is never guaranteed. Nevertheless, two Virginia teams have raised the bar in recent years to become the talk of the town.

When the dust settled at the 17th annual Operations Challenge at WEFTEC.04 in New Orleans, the Virginia Water Environment Association (WEA) was on top yet again. Fluid Dynamics, whose members come from both the City of Franklin and

Operations Management International (OMI) in Richmond, won the Division I competition for the second year in a row. Meanwhile, Virginia's HRSD Bio-Force (from Hampton Roads Sanitation District) finished a close second, improving on last year's third-place showing and nearly winning their second championship in 3 years. The TRA CREWSers, representing WEA of Texas, finished a strong third.

"It's a great year for Virginia," said Donnie Cagle, captain of Fluid Dynamics and plant manager at the City of Franklin. The victory was especially sweet for Cagle, who has been on numerous championship

Operations Challenge Event Coordinators

Committee Chair

John Hart
City of Saco
Saco, Maine

Vice Chair

Larry Knight
Fay Spofford & Thorndike
Burlington, Mass.

Collection Systems

Cordell Samuels
Duffins Creek Water Pollution
Control Plant
Pickering, Ontario

Laboratory

Bill Cyrus
Trinity River Authority
Dallas, Texas

ITT-Flygt Maintenance

James Chadwick
Trinity River Authority
Dallas, Texas

Process Control

Jorj Long
Black & Veatch
Kansas City, Mo.

Safety

Richard Leger
City of Henderson
Henderson, Nev.

Scoring

David Vogel
OMI Inc.
Richmond, Va.

teams during his long Operations Challenge career but had never won in back-to-back years.

Winning twice in a row was a huge and somewhat unexpected achievement, said Fluid Dynamics member and OMI employee Tabb Justis. "I'm still reeling from last year's initial victory," he said. "I can't believe it happened again."

Winning the Challenge again was far from easy, Justis said. "We had to fight for it," he said. "There are other teams that are just as good as us and better than us in some respects. On any given day, any one of those teams in the top four could have won."

A Heroic Struggle

Fluid Dynamics pulled off this rare back-to-back victory despite a difficult practice season. Each team member had injuries or life events to deal with this year, Justis noted. For example, team member George Talley broke his ribs during an equipment



The New York WEA's Brown Tide replace a rotating assembly in the ITT-Flygt maintenance event.

failure at a practice early in the season, he said, and team member Andy Rudd's wife had a baby, which halted team practices for a month. Further, the city of Richmond was flooded in the summer by Tropical Storm Gaston, and Virginia was inundated with the remains of the season's many hurricanes, all of which greatly limited practice time.

Final Overall Standings

Division I

	Member Association	Points
1. Fluid Dynamics	Virginia	438.86
2. HRSD Bio-Force	Virginia	434.18
3. TRA CREWSers	Texas	431.12
4. Cape Shore Workers	New Jersey	394.98
5. Commode Commandos	Rocky Mountain	379.26
6. LA Wrecking Crew	California	359.84
7. Totally Chaotic	Nevada	279.04
8. SRCSD Interceptors	California	273.25
9. Highlanders	Ontario	259.05
10. Dillo Express	Texas	224.58
11. Centrifugal Force	Chesapeake	194.91

Division II

1. Seacoast Sewer Snakes	New England	487.00
2. Virginia Beach Collectors	Virginia	440.65
3. River Rangers	Pacific Northwest	420.46
4. Flush in the Pan	Ontario	417.54
5. Jamaica Bay Hackleheads	New York	406.21
6. s.C.R.A.P.P.E.R.S.	Ohio	403.09
7. Lauderdale Knights	Florida	401.79
8. Toxic Force	Pacific Northwest	382.92
9. Pump Fiction	New England	381.60
10. Canadian Cross Connection	British Columbia	378.37
11. LRWU Connection	Arkansas	360.64
12. Caustic Solution	New England	358.65
13. Midland Microbes	Michigan	358.45
14. Orange Crush	Florida	353.67
15. Single Digits	South Carolina	350.78
16. Outhouse Commandos	Ohio	346.61
17. Brown Tide	New York	342.54
18. Capital Flow	Chesapeake	325.62
19. Maui Bad Boys	Hawaii	317.71
20. Fort Wayne Freedom	Indiana	316.26
21. Pumpers	Central States	298.95
22. Shovelers	Central States	296.37
23. Effluent Blues	Missouri	256.61

"One of our inspirations is having some obstacles thrown in our way," Justis asserted. "We seem to perform best under adversity. Our support team did a great job of allowing us the time that they could, and we maximized our use of it."

Fluid Dynamics may have come out ahead, but the battle was indeed closely contested. In fact, just seven points separated the top three teams in Division I. TRA CREWSers won the most individual events — scoring first place in lab, maintenance, and process control, and second place in safety — but a bad break caused the team to finish eighth in the collections event, ultimately proving fatal to its chances of winning Division I.

According to Dale Burrow, captain of the CREWSers, he was at the dry table cutting the replacement pipe when he unknowingly bent the saw blade, which resulted in crooked cuts that prevented the piece from fitting at the wet table. Ultimately, the team had to make two extra cuts to finish the job, using up valuable time.



Fibergrate Composite Structures (Dallas) donated the platforms used in this year's safety event.

Coming off a bad collections event, with the lab event still ahead of them, the team could have folded but instead recovered for a strong finish. "I'm proud of the way we came back," Burrow said. "After we just knew we had blown collections, we pulled our boots up and went over to the laboratory event and made a very good run." In fact, the team won the lab event, beating Fluid Dynamics by more than seven points.

Individual Event Standings (Top Five)

Collections Event

Division I	Member Association	Time	Points
HRSD Bio-Force	Virginia	94.00	100.00
Cape Shore Workers	New Jersey	115.00	88.53
Fluid Dynamics	Virginia	126.00	82.53
Commode Commandos	Rocky Mountain	136.50	76.80
Highlanders	Ontario	156.00	66.15

Division II

Virginia Beach Collectors	Virginia	114.88	100.00
Seacoast Sewer Snakes	New England	127.91	99.10
Flush in the Pan	Ontario	139.00	98.33
Pump Fiction	New England	144.00	97.99
Jamaica Bay Hackleheads	New York	153.10	97.36

Laboratory Event

Division I	Member Association	Time	Points
TRA CREWSers	Texas	1523.33	100.00
Fluid Dynamics	Virginia	1741.10	92.95
Commode Commandos	Rocky Mountain	1884.11	88.32
HRSD Bio-Force	Virginia	1998.51	84.61
LA Wrecking Crew	California	2030.91	83.56

Division II

Seacoast Sewer Snakes	New England	1877.51	100.00
Caustic Solution	New England	2235.44	86.39
Flush in the Pan	Ontario	2412.02	79.67
Lauderdale Knights	Florida	2548.18	74.49
Pump Fiction	New England	2565.97	73.82

This year's near-victory marks the fifth time in the last 6 years that TRA CREWSers has finished in the top three of Division I. However, they have yet to win the overall competition.

"We're kind of feeling like the Buffalo Bills in the '90s," Burrow said. "We can make it to the show but we can't win the big one."

Many competitors expressed sympathy and admiration for the Texas team.

"They [the CREWSers] just outclassed everybody," said Nick Saffi, captain of the New Jersey WEA Cape Shore Workers.

"I feel for them," said Wesley Warren, captain of HRSD Bio-Force. "I know what it's like to do real well and then have one event hurt you," he added, referring to past experience with HRSD. "I hope they're not discouraged by it and they keep coming back, because they will get a win, they just have to keep at it."

The CREWSers acknowledged their disappointment but said they will be back to try again. When asked about next year, Burrow said the team is "going to work just as hard as we ever did, probably harder, and see if we can't overcome this."

HRSD Bio-Force, who last won the championship in 2002, was disappointed to finish second but pleased with their performance and glad that the Virginia WEA overall had such a strong showing.

"It was a little disappointing that we didn't win, but I'm glad that the trophy stayed in Virginia."



Keith Williams of the Chesapeake WEA's Capital Flow fills a volumetric flask in the laboratory event.

Warren said. "[Fluid Dynamics] pulled together and had a good day. I think they deserved it, and I'm very happy for them."

Among the biggest head-turners were the Cape

ITT-Flygt Maintenance Event

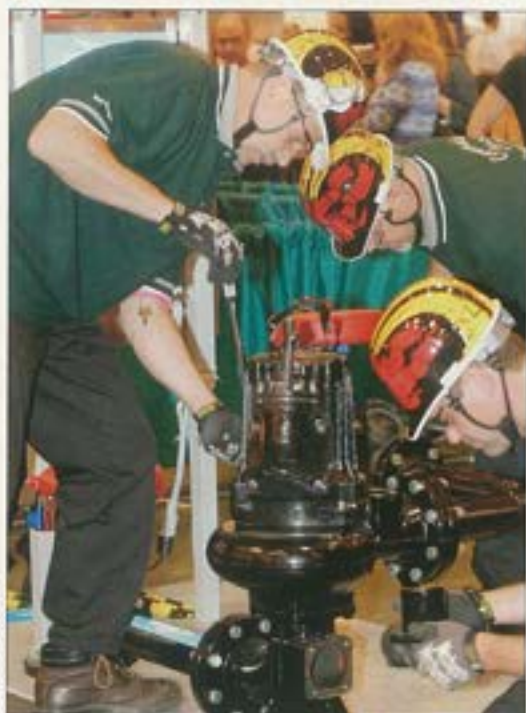
Division I	Member Association	Time	Points
TRA CREWSers	Texas	440.75	100.00
Fluid Dynamics	Virginia	472.47	95.86
HRSD Bio-Force	Virginia	530.19	88.33
Cape Shore Workers	New Jersey	561.06	84.30
LA Wrecking Crew	California	636.13	74.51

Division II	Member Association	Time	Points
Seacoast Sewer Snakes	New England	545.53	100.00
Pump Fiction	New England	636.32	95.30
Jamaica Bay Hackheads	New York	703.47	91.83
Virginia Beach Collectors	Virginia	715.75	91.20
Brown Tide	New York	821.53	85.73

Process Control Event

Division I	Member Association	Time	Points
TRA CREWSers	Texas	1305.00	100.00
HRSD Bio-Force	Virginia	2044.00	74.30
Commode Commandos	Rocky Mountain	2109.00	72.04
LA Wrecking Crew	California	2161.00	70.24
Fluid Dynamics	Virginia	2239.00	67.52

Division II	Member Association	Time	Points
Seacoast Sewer Snakes	New England	1393.00	100.00
Caustic Solution	New England	1630.00	94.34
LRWU Connection	Arkansas	1798.00	90.32
River Rangers	Pacific Northwest	1873.00	88.53
Midland Microbes	Michigan	1874.00	88.50



John van den Boogaard, Fred Beatty, and Dan Lenning of the Canadian Cross Connection in the ITT-Flygt maintenance event.

Shore Workers from New Jersey. The Division II winners last year, Cape Shore entered Division I ready to compete for the top prize, Salvi said. While they came up short, they finished a solid fourth place overall, an especially strong showing for a first-year Division I team, and took second place in the collections event and third in the safety event.

The team was relaxed and composed throughout the day, Salvi said, and overall he was satisfied with their effort. "We pretty much executed the way we practiced," he said. "The only problem we ran into was we came up short in the lab and in the process [events]."

The team had the most trouble with the process control test, Salvi noted. "We didn't practice the process very much," he said. "Everyone was study-

ing at home, but we never actually sat down and did tests. And when I was talking to all the leading teams, they said they practice their process the same way they practice the pump [maintenance] event. They do it." Thus, Salvi said, his team has already started working to improve on its process event for next year.

Noting the Cape Shore Workers' rapid rise, Cagle praised the New Jersey group for its strong showing. "They are a great team, and I think they'll be around for awhile and will continue to be a force to be reckoned with," he said.

New England Team Wins Division II

First, the New England Patriots won the Super Bowl. Then the Boston Red Sox won the World Series. If this is a Golden Age for New England, then it seems to have touched the Operations Challenge as well.

In Division II, the New England WEA's Seacoast Sewer Snakes took the top prize, beating yet another strong Virginia team, the Virginia Beach Collectors, by more than 40 points to claim victory. The Pacific Northwest WEA's River Rangers finished third. Per the Operations Challenge rules, the top three teams from Division II are automatically eligible to move up to Division I next year.

"We feel really good about winning," said Sean Greig, captain of the Seacoast Sewer Snakes and chief operator at the Town of New Market (N.H.) Wastewater Facility. "We were steady, which I think is the most important thing. We worked very hard to make sure that we were good at all the events, because one event can just take you right out of it."

What made victory especially sweet for the Sewer Snakes, Greig noted, was the fact that the team members come from four facilities, and so had to spend a lot of time traveling for practice. Also, one team member has diabetes and two are rookies, he noted, which added to the challenges.

But the team showed great skill in finishing first in the lab, process, and maintenance events, as well as a strong second and fourth place in the collections

Safety Event

Division I	Member Association	Time	Points
Fluid Dynamics	Virginia	299.62	100.00
TRA CReWSers	Texas	335.22	96.26
Cape Shore Workers	New Jersey	365.03	93.12
Commode Commandos	Rocky Mountain	388.84	90.62
HRSD Bio-Force	Virginia	423.81	86.94
Division II			
Virginia Beach Collectors	Virginia	373.06	100.00
Orange Crush	Florida	511.06	89.37
Caustic Solution	New England	519.75	88.70
Seacoast Sewer Snakes	New England	530.16	87.90
Jamaica Bay Hackleheads	New York	541.00	87.07

and safety events, respectively. Greig expressed the most satisfaction with his team's performance on the maintenance event, noting that the team member working the panel, Michael Carle, had never done it before. "As everybody knows, the panel for the pump is very difficult," Greig said. "Because he did so well on the panel, it put us in first."

The Virginia Beach Collectors also put on a noteworthy performance, having benefited in part from their proximity to the top two Division I teams.

According to team captain Elijah Smith, a utility mechanic supervisor at the City of Virginia Beach, the team felt "pretty good" about their effort and owed a debt of gratitude to their Virginia WEA comrades.

"HRSD and Franklin both helped us out a lot with practicing and trying to help steer us in the right direction," Smith said. The team was especially

impressive considering that its members "are all collection system guys," Cagle said. "They trained with us and HRSD, and I think it helped everybody elevate their performance."

Warren also lauded the Collectors. "They've been competing on our state level since the mid-'90s," he said. "They've been coming back every year and competing but coming up short. This year they were able to get up to nationals, and to win two events and second overall is just fantastic. We're all very proud of them."

The River Rangers, meanwhile, grabbed the third place trophy by way of a consistently solid performance, finishing between fourth and ninth place in each event to register a high overall score.

Greg Fuhs is editor of Operations Forum at the Water Environment Federation (Alexandria, Va.).

Acknowledgements

The Water Environment Federation thanks the following companies for their contributions to Operations Challenge 2004:

Platinum Level

USA BlueBook

Gold Level

WTW

Silver Level

AllMax Professional Solutions
Godwin Pumps of America
Headworks, Inc.
Insituform Technologies, Inc.
Marsh-McBirney Inc.
RootX Root Control Corporation
Smith & Loveless Inc.

Equipment Donors

Brasco
CH2M Hill
Controlotron Corporation
Diamond Plastics
Eaglebrook Inc.
Fibergrate Composite Structures
Gorman-Rupp Co.
ITT-Flygt
NPC Inc.
Oil-Safe
Pima County Wastewater Treatment
Safe Approach
Sanitaire/Royce Technologies
Simulaid
USA BlueBook
WTW

The trophies for each event were contributed by the following individuals:



Collections

Joy Varaghese
Trinity River Authority
Dallas, Texas



ITT-Flygt Maintenance Event

Bob Domkowski
ITT-Flygt
Trumbull, Conn.



Process Control

Bill Shuck
Los Angeles County Sanitation Districts
Carson, Calif.



Safety

James Tallent
Littleton/Englewood Wastewater
Treatment Plant
Englewood, Colo.



Laboratory

Andrew Warmus
Village of Algonquin, Ill.