

Operations Forum

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Water Environment Federation

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A TEST OF THE BEST

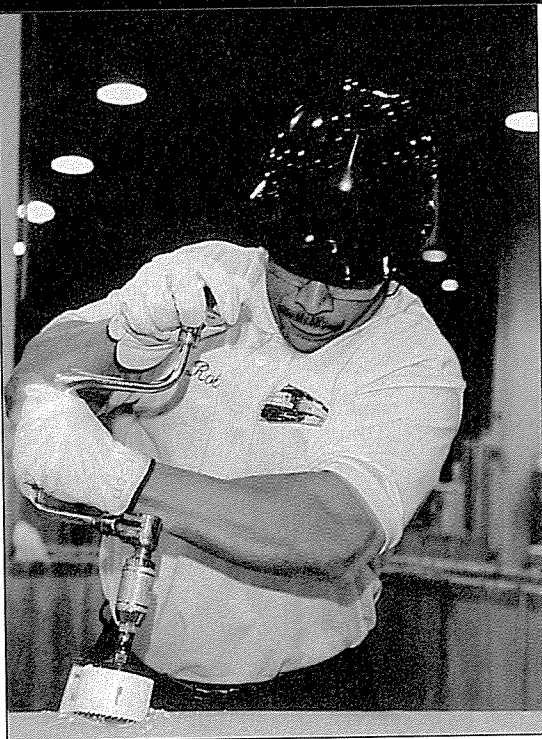


- ▶ Small Package Plants
- ▶ Trickle Filters
- ▶ Working in Cold Weather

THE 10TH ANNUAL OPERATIONS CHALLENGE

A TEST OF THE BEST

Robert Mason of the Alexandria (Va.) D-Train drills a hole into pipe as part of the Collection Systems Event.

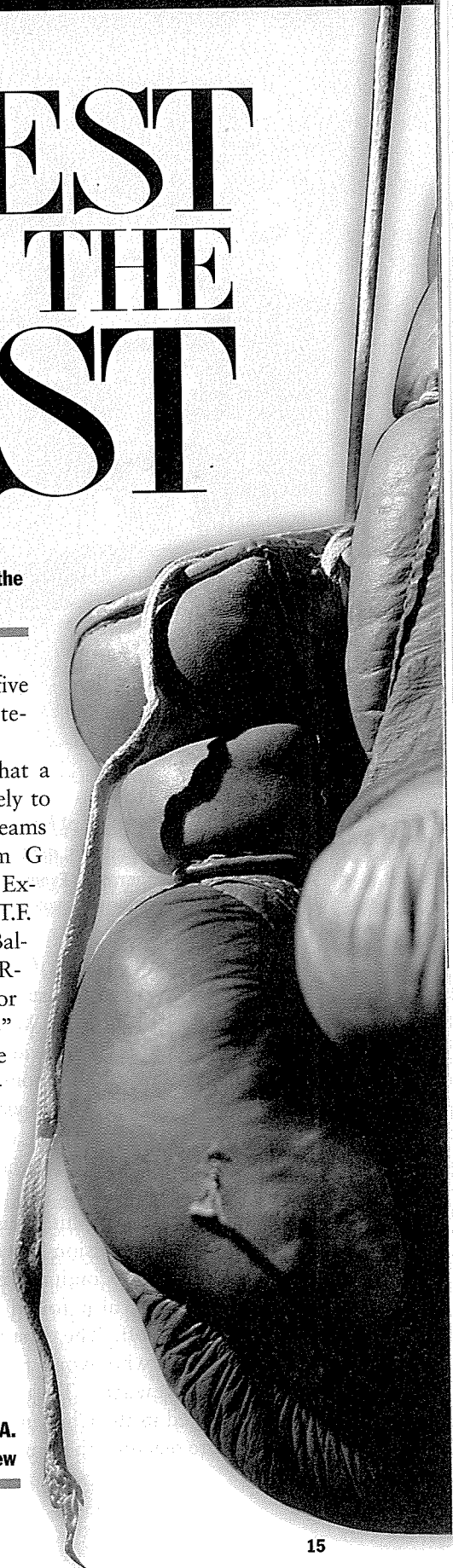


Operators in the United States and Canada trained year round to compete in a test of the best operators at the Operations Challenge during WEFTEC'97 in Chicago, Ill., Oct. 20-21. This year, the "wastewater Olympics" celebrated a decade of promoting operator excellence, but for competitors, the Challenge was pretty much the same as any other year — tough, yet fun.

Three-time overall winners the L.A. Wrecking Crew surprised no one in grabbing the top place again in the overall ranking for Division 1. The team, whose members work for the Joint Water Pollution Plant, placed first in Division 1 in 1993 through 1995, and this year they ranked

among the top five teams for all five events — process control, maintenance, lab, collections, and safety.

This year's Challenge showed that a team that excels in one event is likely to do well in others — Division 1 teams Team GRU, Connoisseurs, Team G Force, and Harrisburg Precision Express and Division 2 teams H.R.W.T.F. Wild Cards, Bad Conducks, Mass Balance, Royal Flush, and TRA CR-WSers all placed in the top three for more than one event. "Division 1" teams have ranked in the top five overall winning positions of the previous year, or placed in the top three of any event. "Division 2" teams comprise all other previously competing teams or any new competitors.

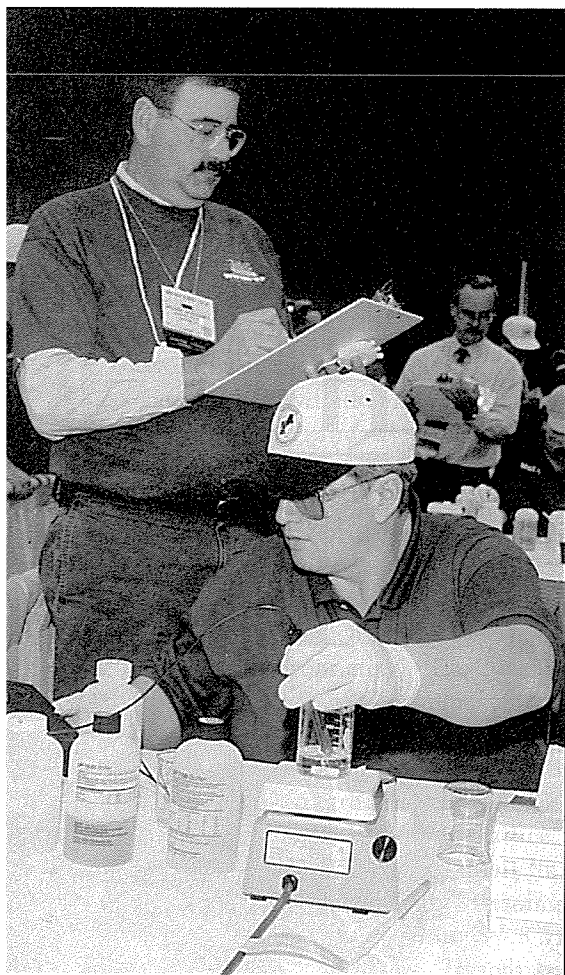


Division 1 winners the L.A. Wrecking Crew



Oscar and Associates Inc.

Operations Challenge 1997 Top 5 Winners, by Event



Allen Yelle, a team member of Mass Balance from Massachusetts, measures pH as part of the Laboratory Event.

Wrecking Crew Member Clarence Scherich chalks up his team's success to "a lot of work — and luck. We get a few breaks," he said with a wide grin at the Challenge awards ceremony.

"This team is a crew of individuals who work as one person," added Coach Dan Cangro. "But they're friends above anything else."

Teamwork is an absolute must at the Challenge, but Division 2 overall champions, the Bad Conducks from Oregon City, Ore., also found that persistence pays off. The first-time overall winners, who work for the Tri-City Wastewater Treatment Plant, competed in the Challenge for 4 years before reaching their moment of glory.

Process Control

Division 1

Team (Member Association)	Seconds	Points
Connoisseurs (Ark.)	1293.81	100.00
L.A. Wrecking Crew (Calif.)	1443.00	91.96
Team G.R.U. (Fla.)	1562.44	85.52
Rocky Mountain Prime Pumpers (Rocky Mtn.)	1564.00	85.43
Scarabs (Mich.)	1738.94	76.00

Division 2

Team (Member Association)	Seconds	Points
Long Island Sharks (N.Y.)	1412.43	100.00
Vermont Sewer Marines (New England)	1558.90	95.97
H.R.W.T.F. Wild Cards (Va.)	1646.29	93.57
Bad Conducks (Pacific NW)	2025.00	83.16
Central States Shovelers (Central States)	2175.00	79.03

Maintenance

Division 1

Team (Member Association)	Seconds	Points
Team HRSD G-Force (Va.)	451.39	100.00
L.A. Wrecking Crew (Calif.)	465.85	98.67
Connoisseurs (Ark.)	476.06	97.74
Highlanders (Ontario)	528.55	92.92
Cream of the Slop (Ontario)	547.53	91.17

Division 2

Team (Member Association)	Seconds	Points
Bad Conducks (Pacific NW)	633.43	100.00
H.R.W.T.F. Wild Cards (Va.)	650.13	98.70
Royal Flush (Ontario)	718.10	93.42
Mass Balance (New England)	740.91	91.65
TRA CRWSers (Texas)	836.81	84.20

Collection Systems

Division 1

Team (Member Association)	Seconds	Points
Connoisseurs (Ark.)	463.00	100.00
Harrisburg Precision Express (Pa.)	519.00	94.92
Team HRSD G-Force (Va.)	562.00	91.02
L.A. Wrecking Crew (Calif.)	624.00	85.40
Commode Commandos (Rocky Mtn.)	684.00	79.96

Division 2

Team (Member Association)	Seconds	Points
Main Drain (Ohio)	542.00	100.00
TRA CRWSers (Texas)	690.00	89.31
Mass Balance (New England)	707.00	88.08
Team Spartanburg (S.C.)	713.00	87.64
Austin Blues (Texas)	742.00	85.55

Laboratory

Division 1

Team (Member Association)	Seconds	Points
L.A. Wrecking Crew (Calif.)	407.15	100.00
Highlanders (Ontario)	528.15	87.62
Harrisburg Precision Express (Pa.)	529.80	87.45
Team HRSD G-Force (Va.)	543.28	86.07
Commode Commandos (Rocky Mtn.)	554.16	84.96

Division 2

Team (Member Association)	Seconds	Points
TRA CRWSers (Texas)	577.91	100.00
Royal Flush (Ontario)	633.59	94.71
Bad Conducks (Pacific NW)	640.93	94.01
Main Drain (Ohio)	650.49	93.10
New Jersey Pioneers (N.J.)	670.75	91.18

Safety

Division 1

Team (Member Association)	Seconds	Points
L.A. Wrecking Crew (Calif.)	318.50	100.00
Team G.R.U. (Fla.)	331.75	96.21
Connoisseurs (Ark.)	351.65	90.51
Highlanders (Ontario)	367.67	85.93
Team HRSD G-Force (Va.)	370.60	85.09

Division 2

Team (Member Association)	Seconds	Points
Royal Flush (Ontario)	407.12	100.00
TRA CRWSers (Texas)	431.94	97.82
Bad Conducks (Pacific NW)	464.19	94.98
Austin Blues (Texas)	506.25	91.28
H.R.W.T.F. Wild Cards (Va.)	550.47	87.39

Top 10 Overall

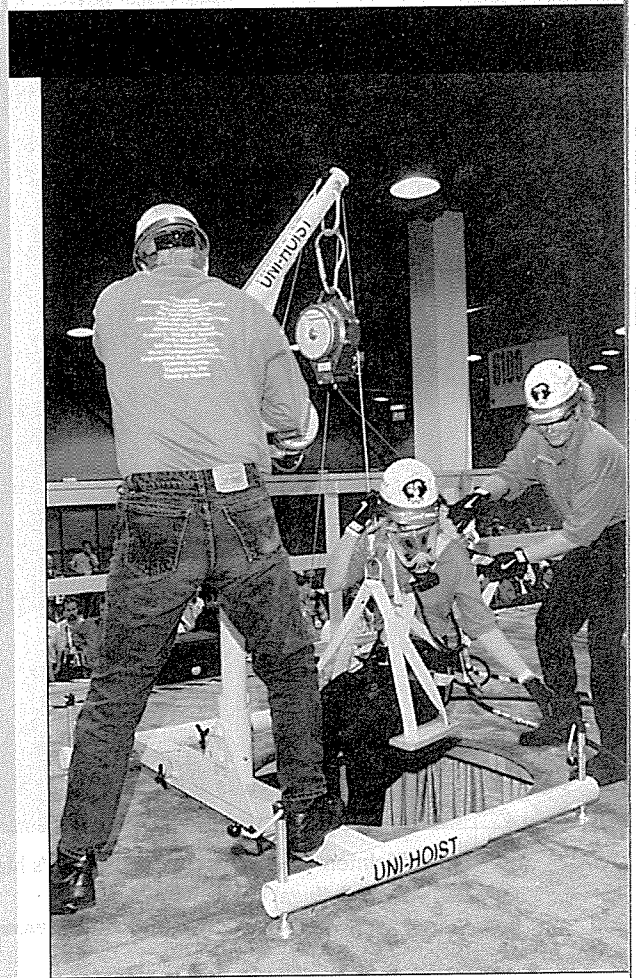
Division 1 Team (Member Association)	Points
L.A. Wrecking Crew (Calif.)	476.03
Connoisseurs (Ark.)	471.99
Team HRSD G-Force* (Va.)	430.28
Team G.R.U. (Fla.)	389.23
Commode Commandos (Rocky Mtn.)	378.92
Tampa Eliminators (Fla.)	373.19
Rocky Mountain Prime Pumpers (Rocky Mtn.)	369.56
Harrisburg Precision Express (Pa.)	363.19
Highlanders (Ontario)	355.93
Cream of the Slop** (Ontario)	345.63

Division 2 Team (Member Association)

Team (Member Association)	Points
Bad Conducks (Pacific NW)	446.64
H.R.W.T.F. Wild Cards (Va.)	433.27
Mass Balance (New England)	425.84
TRA CRWSers (Texas)	423.55
Main Drain (Ohio)	422.83
Royal Flush (Ontario)	420.49
New Jersey Pioneers (N.J.)	413.09
Austin Blues (Texas)	405.76
Vermont Sewer Marines (New England)	403.66
Team Spartanburg (S.C.)	381.53

* Defending champions

** '96 Division 2 champions



Quick and safe: The H.R.W.T.F. Wild Cards lower a team member into a confined space in the Safety Event.

"We kept with it — that's our secret," said Bad Conduck Member Mark Prottegeier. "Tell other teams, 'Don't give up!'"

Process Control

Like last year's event, the Challenge began with a timed exam, which tested each individual's knowledge of process control scenarios. The 25-question, multiple-choice exam covered process control techniques and three troubleshooting problems in 10 topic areas, including management fundamentals, wastewater characteristics and sampling, and anaerobic digestion. The exam, similar to a state certification quiz, is held on the first day of the competition.

THE 10TH ANNUAL OPERATIONS CHALLENGE



Oscar & Associates Inc.

In the Maintenance Event, teams like Ohio's Main Drain, pictured here, replaced the belt of a centrifugal pump.

A clear plastic brain, a testament to their mental dexterity, was awarded to first-place winners the Arkansas Connoisseurs (Division 1) and the Long Island (N.Y.) Sharks (Division 2).

Maintenance

One event is changed each year to keep competitors on their toes. This year it was the Maintenance Event, which tests team maintenance skills, dexterity, and knowledge of a pump system. Each team was required to remove, install, and rebuild various parts of a 3-in. (76-mm), self-priming, belt-driven centrifugal pump with a 7.5-hp (5.5-kW) electric motor.

Last year's Division 2 Champions, the Cream of the Slop from Ottawa, Ontario, Canada, found the event provided many tense moments, sending minds racing "from the time they said 'go,'" said team member Mark Johnston.

But most teams were happy to meet the challenge. "We had a great time," said Danny Garrett of Mississippi's OMI Harrison County Renegades. "The supplier [Gorman-Rupp] did a good job with the event."

This year's top winners, Virginia's Team HRSD G-Force (Division 1) and the Bad Conducks (Division 2), each were awarded a gauge and impeller mounted onto a pedestal.

Collection Systems

Teams were required to install a flowmeter insert into an 8-in. (203-mm) polyvinyl chloride pipe with water flowing through it and connect the insert to a bubbler flowmeter. Teams also were required to install any accessories used with the flowmeter, such as printer paper; set the bubble rate; and connect the flowmeter to a sampler. The flow-measuring portion of the event was not part of the timed event this year.

Teams also were required to calculate run, slopes, detention time, volumes, and conversions for a problem question before installing the flowmeter.

This event and the process control event were among the more difficult ones, according to team members of the H.R.W.T.F. Wild Cards from Virginia.

"We feel we did pretty well," said Paul Johnson, "But there are some things we could have done better."

Johnson, who said he thought it was "redundant" to include the problem question when teams are required to solve similar questions in the Process Control event, didn't seem too disappointed that the event will be changed next year.

According to Event Coordinator Bradley Fix, no flowmeters will be present at the event in 1998. "But fire up your clay pipe cutters!" he announced at the awards ceremony.

First-place winners the Connoisseurs (Division 1) and Ohio's Main Drain (Division 2) received awards in the shape of gold pipe joints.

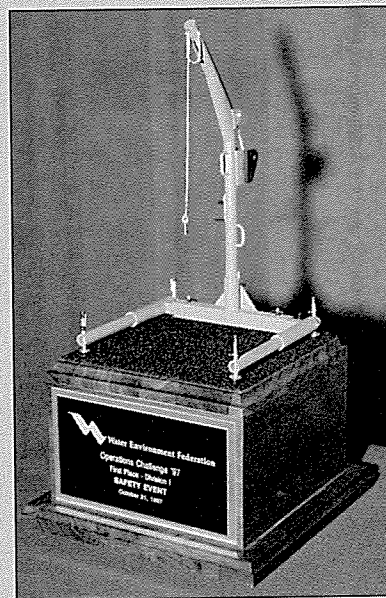
Laboratory

Teams were required to perform four of 10 lab procedures, including measuring biochemical oxygen demand, chlorine residual, pH, dissolved oxygen, and fecal coliform; performing a titration; determining the proper weight of an unknown using an analytical balance; preparing a standard solution; using a spectrophotometer; and making other lab calculations.

Top winners were the L.A. Wrecking Crew (Division 1) and Texas' TRA CRWSers (Division 2), which received awards consisting of flasks mounted onto pedestals.

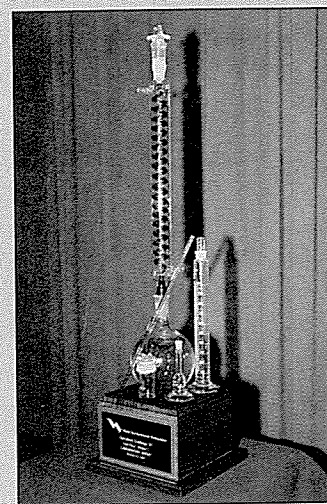
The Water Environment Federation wishes to thank the following companies for their donations to Operations Challenge 1997

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Employees of the following organizations also contributed to the success of Operations Challenge 1997

Plum Island Wastewater Treatment Plant (Charleston, S.C.)
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 Robinson Manufacturing (Oxford, Maine)
 Sanitary Sewer Board of the City of Fairmont (Fairmont, W.V.)
 Gainesville Regional Utilities (Gainesville, Fla.)
 OMI Inc. (Richmond, Va.)
 Goble Sampson (Tualatin, Ore.)
 West Virginia Environmental Training Center (Ripley, W.V.)



Safety

Teams first used a gas detector to test a confined space entrance for oxygen, hydrogen sulfide, and explosive gases and filled out a confined space entry permit. Teams then helped two members, each wearing a full-body harness and airline breathing apparatus, enter a confined space through a manhole using a Uni Hoist nonentry rescue system. The two team members then fixed an air release valve, surfaced, and as with all other events, helped their team disassemble equipment and put pieces back where they were found.

Numerous safety issues are involved, including lockout/tagout. According to Judge David Sago, gaffs are deducted from a team's time, although the teams don't know what the penalties are. "The challenge for us is to treat each team fairly," he said.

When a piece of equipment malfunctions, Event Coordinator Doug Prentiss examines the equipment and determines whether the malfunction is due to faulty equipment or faulty team procedures, in which case "they're just losing time," Sago said.

The top place winners, the L.A. Wrecking Crew and Ontario's Royal Flush, each received an award that was a scale model of the Uni Hoist system.

The safety event seemed to be everyone's favorite event. Besides being fun for the competitors, "the safety event is fun for the spectators," said John Hough of the Sacramento (Calif.) Wastewater Warriors.

The greatest appeal of the safety event is that it has "no grey areas," as Wild Card Member Bernie Moore put it. "You either get it or you don't."