

**FROM THE PRESIDENT
 MICHAEL J. CAGNEY**



Dear Friends,

What makes a champion? We all have an answer to that question, but certainly one element stands out in a champion – talent.

Without talent you can have courage, honesty, conviction, and compassion, but you will not make it to the top of your game.

At EREF we believe that talent is an essential requirement for the successful achievement of our mission to develop environmental solutions for the future.

Each of us at EREF, particularly members of the board of directors, have a talent in some respect, but collectively we don't have what it takes to achieve our mission.

That's why we seek the talent that can be found in universities and consulting firms to augment our abilities.

So what's the point? It is this combination of truly remarkable talents that leads to excellence and when the best are brought together they can provide advanced solutions to a surprising variety of problems.

That's EREF – talent to advance science in the treatment of municipal solid waste.

So where do you fit in?

This year when you make your year-end charitable commitments, write a check to EREF – support the talent that will continue the champion tradition and good science.

Many thanks!

**SPONSORSHIPS
 AVAILABLE! CALL
 TODAY 703-299-5139**

- EREF Golf Tournaments—
Lunch, Reception, Beverage Cart, Hole and Overall Event Sponsors
- 2004 Waste Equipment Auction—
Reception, Raffle, Exhibit Space and High School Outreach

NEW ORLEANS SERVES UP A HOT WASTE EQUIPMENT AUCTION

The foundation held one of its best solid waste equipment auctions ever on June 4 at WasteExpo in New Orleans. The event grossed \$713,590, the second highest on record.

The auction, supported by Waste Equipment Technology Association (WASTEC) member companies since 1995, has raised nearly \$5 million for operating expenses and research and education.

See Page 2



(Left to right) Enjoying a new addition to their fleet, Randall Perkins and Bill Johnson (AshBritt, Inc.) pose with Rob Strange (McNeilus Companies) and Steve Ginter (Mack Trucks)

EREF HOLDS FIRST GOLF FUNDRAISER

More than 70 golfers joined EREF on July 14 at Grande Oaks Golf Club in Ft. Lauderdale, Fla. for its first scramble tournament to benefit municipal solid waste research and education. The event was hosted by Republic Services, Inc.

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Winning first place and individual Atlantis (Paradise Island, Bahamas) gift certificates was the team of (left to right) Bill Hulligan, Don Moorehead, Ron Proctor and Tom Hughes

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AUCTION CONTINUED

Several WASTECC member companies were first-time auction donors taking advantage of broad exposure for their quality products and services while supporting a charity that provides valuable research and education for their business community and the public good.

The inventory of donated equipment consisted of a front loader refuse truck (the frictionless braking system was also donated), two rear loader refuse trucks, two truck mounted roll-off hoists with tarping systems (one with donated chassis), a wide variety of commercial containers, three truck-mountable lift systems, a vertical baler, two portable stump cutters, and a rear vision camera system. The tires and wheels on all five trucks were also donated, and EREF auctioned off its first service donation - a one-month rental on the winning bidder's choice of either a roll-off truck or a front or rear loader refuse truck.

Specialty items included a day of off-shore fishing aboard the tournament rigged "Waste Knot," leather jackets and vests, a remote controlled Bobcat® mini track loader, and autographed sports photos and athletic gear donated by professional sports clubs and their affiliated charities.

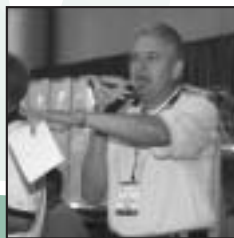
Since 1999, Ritchie Bros. Auctioneers has graciously donated their professional services. Auctioneer and regional manager Gary Seybold and his partners kept the crowd energized, and we certainly look forward to having them with us in Dallas next year.

Thank you auction donors—and bidders—for your continued support and generosity!

Details about EREF's next solid waste equipment absolute auction and charity raffle are posted on EREF's website (www.erefdn.org) under "Special Events."



WASTECC Donor: Vermeer Manufacturing



Gary Seybold (Ritchie Bros. Auctioneers) donated his services again this year



WASTECC Donor: Plastopan Industries



Prior to the auction, Richard Kemner (RDK) announced the winner of his company's final raffle of the day



WASTECC Donor: Heil Environmental
Other Donors: ALCOA Wheel & Forged Products, Goodyear



WASTECC Donor: Bayne Premium Lift Systems



Ed Furnari (right) shows Gordon Shaw (Marathon Equipment Co.) how to use the vintage Snoopy fishing pole he received in preparation for his day of off-shore fishing



O'Brian Manufacturing staff pose in front of the DuraCover XL tarping system that was donated for the auction



WASTECC Donor: Wastequip, Inc.



WASTECC Donors: Marathon Equipment Company, O'Brian Mfg. Company. Other Donors: ALCOA Wheel & Forged Products, Goodyear



WASTECC Donor: Leach/Wittke
Other Donors: ALCOA Wheel & Forged Products, Goodyear



Ed Repa (EREF) displays a Brook Fordyce (Baltimore Orioles) autographed baseball



WASTECC Donor: Galbreath, Inc.



WASTECC Donor: Perkins Manufacturing Company



WASTECC Donors: McNeilus Truck Manufacturing Co., Telma, Inc.
Other Donors: ALCOA Wheel & Forged Products, Goodyear

Photos Courtesy of
Tony Benner Photography
and EREF

A CLASSIC WIN!

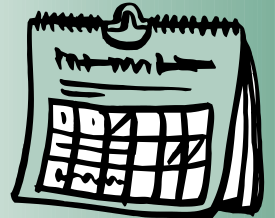


Bill receives the title to his corvette from Michael Cagney, EREF president.

Congratulations to Bill Mize (Crewson Industries, Smyrna, Ga.) the winner of a vintage 1969 Chevrolet Corvette Stingray. Next year's charity raffle will be held at WasteExpo in Dallas (May 2004)—prize details will be available early next year.

START PLANNING TODAY for your WASTE member equipment or service donation or sponsorship next year and partner with EREF in the development of environmental solutions for the future.

The sooner you commit, the more exposure you'll receive! (Contact Anne Brauer at abrauer@erefdn.org.)



WASTE Donor: American Container & Recycling



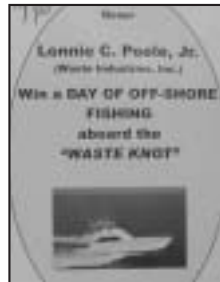
Rita Ugianskis (WasteExpo Show Director) promised not to look while drawing the winning ticket for the vintage '69 Stingray



WASTE Donor: Safety Vision



WASTE Donor: RDk Truck Sales and Rental



Specialty Items Donor: Lonnie C. Poole, Jr.



WASTE Donors: Mack Trucks, McClain/E-Z Pack, O'Brian Mfg. Company. Other Donors: ALCOA Wheel & Forged Products, Goodyear



WASTE Donor: Harmony Enterprises

Thank You For Your Continued Generosity And Support Of Our Auction Fundraiser!

WASTE Member Equipment and Service Donors

American Container & Recycling
 Bayne Premium Lift Systems
 Cascade Engineering Container Group
 Galbreath, Inc.
 Harmony Enterprises, Inc.
 Heil Environmental Industries, Inc.
 Leach/Wittke
 Mack Trucks, Inc.
 Marathon Equipment Company
 McClain/E-Z Pack
 McNeilus Companies
 O'Brian Manufacturing Company
 Perkins Manufacturing Company
 Plastopan Industries
 RDk Truck Sales and Rental
 Safety Vision, LP
 Telma, Inc.
 Vermeer Manufacturing Company
 Wastequip, Inc.

Other Auction and Related Donations and Support

Ritchie Bros. Auctioneers
 Primedia/Intertec
 ALCOA Wheel & Forged Products
 Goodyear
 Lonnie C. Poole, Jr. (Waste Industries)
 Freeman Decorating, Inc.
 Auction Committee Members
 Bobcat/Ingersoll-Rand (WASTE Member)
 Baltimore Ravens Foundation for Families
 Baltimore Orioles
 Cincinnati Reds Baseball Club
 Cleveland Browns Football Club
 Dave Blaney and Jasper Motorsports
 Gene and Jerry Jones Family/Dallas Cowboys Charities
 Michael Waltrip and Dale Earnhardt, Inc.
 JK Moving & Storage
 Volunteers:
 Bill Sells and Phil Headley (EIA)
 Jim Beck (SCS Engineers)

EREF WasteExpo events continued on Page 11

ITEMS OF NOTE

EREF board members Fred Leach and Robert P. Stearns were inducted into the Environmental Industry Associations' (EIA) 2003 Hall of Fame during WasteExpo in New Orleans, La.



Fred Leach (right) receives his award from Mickey Flood (EIA Trustee Chairman)



Bob Stearns (left) receives his award from Bruce Parker (EIA President)

Additionally, Gordon Shaw (President, Marathon Equipment Company) received the WASTEC Member of the Year Award at WasteExpo. Marathon has been an equipment donor to EREF's auction for nine years.

Photos courtesy of Tony Benner Photography

WASTE COMPANIES SUPPORT MIDDLE SCHOOL EDUCATION



Thanks to the following companies for helping cover U.S. middle school distribution costs for our program *Bury, Burn Or Return: Winning The War Against Waste*:

- Enviroco, Inc. (Baker, WV)
- Groot Industries (Elk Grove Village, Ill.)
- Mack Trucks, Inc. (Allentown, Pa.)
- McNeilus Companies (Dodge Center, Minn.)
- Pioneer Crossing Landfill Charitable Contribution Program (Birdsboro, Pa.)
- RDK Truck Sales and Rental (Tampa, Fla.)
- Rhode Island Resource Recovery Corporation (Johnston, RI)

Companies still interested in helping cover the cost of distribution that occurred in their states and that would like to be recognized for their support should contact Anne Brauer at 703.299.5139. Contributions are tax-deductible to the extent allowed by law.

BOARD NEWS



FROM THE CHAIRMAN

DEBORAH C. HOCKMAN, PH.D.

It's an annual quandary: What holiday gifts will I present this year? Will they be "just right"?

Here at EREF we're easy to please — the best gift we could ever hope for would be the gift of your support.

This coming year we most certainly need your help boosting our endowments to provide much needed funding for important municipal solid waste research and scholarships for environmental scientists. We've established many types of gifting programs and we hope you will take advantage of at least one before year's end:

The Eagle Club. Designate EREF as your charity of choice and become a member of our sustaining gifts program. We are looking for commitments of at least \$1,000 per year for a minimum of five years, and we encourage matching support from your employer, co-workers, or employees of other companies by means of challenge programs, such as manufacturer to manufacturer, hauler to hauler, or simply challenge an employer to an employee match at year end.

Internet Shopping. Wellspent.org and iGive.com are two online superstores that provide a variety of quality products with a percentage of purchase price being donated to EREF. Online order processing is secure and EREF will receive notice of your contribution after a purchase is made.

Honorariums and Memorials. Each EREF newsletter provides you with the means to express your good will toward colleagues, clients, family members and friends in exchange for a tax-deductible donation in any amount.

Annual Waste Equipment Auction and Raffle. For nine years we've enjoyed repeated support from several WASTEC member companies and others interested in taking part in these enjoyable fundraisers. Equipment, sponsorships and other donations are always needed to ensure our events produce much needed funding to help cover operating expenses, as well as research and education projects. Be sure to plan today for your participation in our 2004 auction and raffle.

We've done our best to provide you with a variety of ways to get involved in a foundation directly benefiting you and your community. All you need to do is make a commitment to EREF and choose the programs that best represent your interests...

Because as a waste service professional, supporting EREF is a GOOD BUSINESS DECISION.

Because supporting the right charity DOES make a difference.

Because your support IS the perfect gift.

Support EREF this holiday season by shopping at iGive.com or Wellspent.org!

iGive.com offers online access to more than 400 name brand stores, such as Lands' End, Bass Pro Shops, Office Depot, Barnes & Noble, Swiss Army Central, and Peico. You'll get the variety you deserve with the satisfaction of making a year-end donation to a charity whose solid waste research and education benefits you and your community. iGive.com often offers free shipping and discounts, as well.

- Log on to iGive.com and click on "Join Now".
- Under "Find a cause to support" type "EREF" and select.
- Complete your membership information then shop 'til you drop.

Can't find what you want at iGive.com?
Give Wellspent.org a try.

Wellspent.org offers well-known brands like Coleman, DeLonghi, Bosch, and IBM.

- Log on to Wellspent.org and type "EREF" in the white "Find A Cause" box in the upper right.
- Click "Go", then click the "Support This Cause" button to the right of EREF's name and follow the directions to select your items for purchase.
- Finish with "Proceed To Checkout" to complete the transaction.

EREF will receive notification of your contribution after your order is processed.

EREF ACHIEVES ITS CAPITAL CAMPAIGN GOAL

In June 1999, we officially kicked off our second capital campaign aptly named "Building the Legacy" with an objective of \$8,000,000 to be raised over a five-year period.

In June 2003, we closed the campaign having raised \$8,367,014! We are deeply grateful to Don Moorehead and Dean Buntrock for their leadership



and generous participation. As always, we are extremely grateful to the solid waste service industry for its generous support and belief in the important work that we do.

We are pleased to list the people and companies who were a part of "Building the Legacy":

ALCOA Wheel and Forged Products	Independent Environmental Services, Inc.	Plastopan Industries
Allied Waste Industries, Inc.	International Baler, Inc.	Lonnie C. Poole, Jr.
Allison Transmission	Intertec Exhibitions	RDK Truck Sales and Rental
American Container & Recycling	Joyce Engineering, Inc.	Debbie Reinhart, P.E., Ph.D.
Ameri-Kan	JV Manufacturing Company	Republic Services, Inc.
Joseph Anstett	K-PAC	Rhode Island Resource Recovery Corporation
Bayne Premium Lift Systems	Jeffrey Kendall	Ritchie Brothers Auctioneers
Bes-Pac, Inc.	William Ketter	Rumpke Consolidated Companies, Inc.
Anne M. Brauer	Michael and Karen Knaub	Safety Vision
Dean L. and Rosemarie Buntrock Foundation	Timothy Laurion	Don A. Sanders
Michael J. Cagney	Leach Company	SITA
Cascade Container Co.	Mack Trucks	SP Industries, Inc.
Greg Chrin	Marathon Equipment Company	Robert P. Stearns, P.E., DEE
Daimler/Chrysler Corporation	McClain/E-Z Pack	Donald Tefft
Bob Davis	Ronald J. McCracken	Telma, Inc.
DeWald Northwest/The CRW Group	McNeilus Truck and Manufacturing Co.	William Terry
John Deere Construction Equipment Co.	Steve Menoff	U.S. Department of Energy
Galbreath, Inc.	Donald F. Moorehead, Jr.	Vermeer Manufacturing
General Motors Corporation	Devin Moose, P.E.	Greg Vogt
General Waste	Muncie Power Products	Volvo Trucks North America
Brian Geraghty	O'Brian Manufacturing Company	James Walsh
General Purpose Steel	Par-Kan Company	Waste Connections, Inc.
Goodyear Tire	Parts Inc.	WasteCo Manufacturing
Groot Industries, Inc.	Perkins Manufacturing Company	Waste Industries, Inc.
Harmony Enterprises	Philadelphia Tramrail, Inc.	Waste Management, Inc.
Harris Waste Management Group, Inc.	Pioneer Crossing Landfill Charitable Contribution Program	Wastequip, Inc.
Heil Environmental, Inc.	Plastic Omnium Zarn	Weaver, Boos & Gordon, Inc.

HONORARIUMS AND MEMORIALS

MEMORIAL GIFTS:

Teresa Brauer
(Anne Brauer's Mother-In-Law)

Anne M. and Gerhard Brauer

Cecil DeWyse
A kind and thoughtful neighbor and friend

Bernice R. Bellor
Anne M. Brauer

HONORARIUMS:

Congratulations Brad! (Brad McCracken) Class of 2003, Christ Church Episcopal School

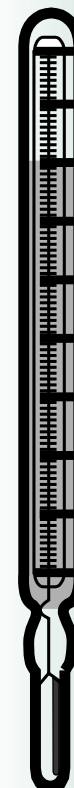
Ron and Susan McCracken

Congratulations Carolyn and John Fedalen on the birth of your son - Richard Joseph!

Anne M. Brauer

Congratulations EREF on the success of your first golf tournament

Skip Berg, Labrie Equipment, Ltd.



\$8,367,014!

-\$8,000,000

The Campaign may be over, but we still need your help!

Please continue sending your support by means of outright donations, honorariums and memorials, and waste equipment donations for our annual auction.

Other gifting options are listed at www.erefndn.org/type.html or call 703-299-5139.

Thank you.

YALE UNIVERSITY STUDENT RECEIVES FIESSINGER SCHOLARSHIP



On August 27, the Board of Directors awarded its 2003 Francois Fiessinger Scholarship to Michael Sander, a Ph.D. student enrolled in the Environmental Engineering

Program (Chemical Engineering) at Yale University, New Haven, Conn.

Mr. Sander's research focuses on soils, specifically the mechanisms of sorption hysteresis of hydrophobic organic compounds in natural and engineered sorbents and the applicability of hysteresis to contaminant sequestration (i.e., hysteresis describes the macroscopic phenomenon of greater apparent contaminant affinity for the sorbent in the reverse (desorption) direction than in the forward (absorption) direction). He will be developing a mechanistic explanation of hysteresis in natural organic matter and will explore ways in which hysteresis in natural organic matter can be employed to advantage in site remediation.

He received his B.S. in Geocology in 1997 and Masters in Geocology in 2000 from the University of Bayreuth (Germany), and a Masters in Chemical Engineering (Environmental Engineering) in 2002 from Yale University (United States).

Companies or individuals interested in contributing to our scholarship fund should contact EREF at 703-299-5139.

Contributions for scholarships can also be made using our honorarium or memorial program. Call us today for details!

FRANCOIS FIESSINGER SCHOLARSHIPS

Scholarships are awarded by EREF to recognize excellence in Ph.D. or post-doctoral environmental research and education. Awards are given in memory of Francois Fiessinger, Ph.D., P.E., a graduate of Rutgers University who was a founding director of EREF. Dr. Fiessinger passed away at age 53 on March 11, 1997.

SCHOLAR REPORTS



MS. MIRA STONE OLSON
University of Virginia,
Charlottesville, Va. USA
(2002 Fiessinger Scholar)

Ms. Olson is nearing completion of her Ph.D. experiments and soon hopes to move on to analyzing all of her data and writing everything up. She is studying how chemotaxis affects the transport of bacteria through porous media. Chemotaxis refers to the ability of bacteria to sense chemical concentration gradients and swim toward regions of optimal contaminant concentration. Many soil-inhabiting bacterial species capable of transforming pollutants into nontoxic products exhibit chemotaxis toward ground-water contaminants. She has run several sets of experiments analyzing bacterial transport through packed columns. She has also been studying the effect of an imposed chemical gradient on bacterial transport, and has found that bacteria migrate preferentially to regions containing low concentrations of trichloroethylene (TCE). Ms. Olson hopes to determine if this ability can help bacteria to target less permeable regions in the subsurface where contaminants tend to accumulate.

Ms. Olson traveled to Scotland for six weeks this summer to work with researchers at the University of Edinburgh and the Contaminated Land Assessment and Remediation Research Centre. She worked on a project studying the contribution of aggregates and macrophytes (aquatic plants) on contaminant removal rates in constructed wetlands, and evaluated the effect of varying contaminant loading rates and concentrations on the treatment performance of the wetlands. Her collaborators are constructing twelve experimental wetlands systems, with varying design and operational parameters, to be evaluated for optimal performance. She hopes to learn from their knowledge of wetlands design and operation so that she may eventually begin her own study of the effect of plant and bacterial diversity on the contaminant removal rates from aquatic wetlands, perhaps investigating the contribution of chemotactic bacteria. Ms. Olson's recent graduate work has been largely bench-scale, so she was excited for this opportunity to expand from laboratory studies to broader field applications.



MR. ALEXANDER ORLOV
Cambridge University
United Kingdom
(2001 Fiessinger Scholar)

Mr. Orlov's project deals with the development of novel photocatalysts for groundwater cleanup. Several materials he has tested so far showed significant promise. The researcher was able to improve the activity of one of the most active commercial catalysts by a factor of two. These catalysts were active for both 4-chlorophenol, and MTBE degradation (some of the most common pollutants found in groundwater). Encouraging results have also sparked an interest

Continued on Page 7

Continued from Page 6

by British Petroleum (BP), which offered one of their gasoline-contaminated sites as a field test site. The field trials are scheduled for the beginning of the next year.

Based on current results, a paper was submitted for publication, two papers are in preparation, two symposium papers are forthcoming, and presentations at four International Conferences are already scheduled. Also, several student awards to attend conferences are possible, such as: Society of Environmental Toxicology and Chemistry (SETAC - UK) student travel award, SETAC - North America student travel award, Cambridge University Trinity Hall travel grant, Holcim Company (Switzerland) student scholarship to attend Prague International Symposium, and Cambridge Philosophical Society travel grant.

Because the catalysts developed were active under UV radiation, the goal is to move the activity towards visible light spectrum. The future plans include development, and testing of visible light active catalysts in field trials. Based on a holistic approach to hazardous waste treatment, a gas phase photocatalytic reactor for treatment of volatile organic contaminants is being developed.



MR. RICHARD STATOM
Colorado School of Mines
Golden, Co. USA

(2001 Fiessinger Scholar)

Mr. Statom's current research is centered on the changes that occur in municipal solid waste (MSW) landfill leachate over time. In the first phase of the research, leachate chemistry data from a lined landfill cell in Florida was investigated and the changes that occurred over 12 years were analyzed. The results of this phase of the research have been accepted for publication (with minor revisions) in the peer-reviewed journal *Environmental Geology*.

The temporal analysis showed that the leachate exhibited an overall declining trend in major ion chemistry over time. Decreasing or stable trends were noted for all parameters examined except for calcium, total inorganic carbon, iron, and manganese. Iron and manganese concentrations increased only after closure, which suggests that closure activities may have contributed to the increased levels of these parameters.

Concentrations of other metals in the leachate were generally below detection levels.

Although overall trends could be discerned from the data, there were wide variations in concentrations between individual sampling events that were probably connected to the amount of rainfall at the landfill. Some of these short-term variations could look like increasing trends to state and federal regulators if not viewed in the context of the overall data set. For landfill operators, this suggests that it is important to be aware of the overall long-term trends in leachate chemistry, not just the last few sampling events.

The next phase of Mr. Statom's research is ongoing and involves modeling the chloride concentrations (a major component of leachate) in the subject landfill cell. Using a computer model to recreate the overall declining trend of chlorides, which was documented in a report given at the 2002 Annual meeting of the Geological Society of America in Denver, Colorado, has been successful. A modified version of the computer model will be used to recreate the individual concentrations instead of the overall trends. If successful, the model has the potential to be used to predict future chloride concentrations in the leachate. A model that can successfully predict the concentration of a major component of leachate has considerable potential as a tool for landfill operators.

These two lines of investigation are part of his overall goal to provide landfill operators and researchers with long-term data on the changes in MSW landfill leachate quality over time and potential tools (such as a computer models) for better understanding and predicting these changes.

EREF CALENDAR

October 27, 2003

Desert Open Golf Tournament
hosted by Allied Waste
Industries
Tournament Players Club
Scottsdale, Ariz.

December 10-11, 2003

Annual Meeting of
the Board
Alexandria, VA.

2004 Meetings of the Board

Dates and Venues - TBD

2004 Golf Tournaments

Dates and Venues - TBD

May 19, 2004

10th Annual Refuse Equipment
Auction and Charity Raffle
WasteExpo, Dallas, Tex.

**Take advantage of a
year-end charitable tax
deduction without even
writing a
check!**



Donate your unwanted vehicles (cars, trucks, commercial vehicles, motor homes) to EREF. Our program administrator takes care of pickup and processing. **You** receive a charitable tax deduction* based on the fair market value of your donation. Call for a donation form (703-299-5139) or download it at www.erefndn.org/vehicle_donation.pdf

*Donations tax deductible to the full extent of the law

PROJECT UPDATES

ERGONOMICS

- A Spanish language translation of EREF's OSHA-funded ergonomics training session held last year is now available as a PowerPoint® slide show or in pdf format. Visit our site at www.erefndn.org/seminars.htm or contact Anne Brauer at abrauer@erefndn.org for a copy on CD-ROM.
- Ergonomics checklists that can be used as part of solid waste companies' overall safety programs and training are now under review by OSHA. The checklists, when completed, will be provided free of charge in both English and Spanish.

LANDFILL RESEARCH

The first Technical Advisory Panel (TAP) meeting for the Evaluation of Post Closure Care (EPCC) Project was held in EREF's offices on Wednesday, June 25. The agenda include detailed presentations on leachate and gas modules and a partial presentation of the groundwater modules, as well as a discussion on the overall project status.



Michael Cagney talks about EREF's initiatives at the TAP meeting

EREF DOCUMENTARY AIRS NATIONWIDE ON PBS

The foundation's documentary on municipal solid waste was well received throughout the U.S. Public Broadcasting community having aired from more than 115 stations in 35 states from April through September 2003. Dealing with the human and science sides of solid waste-related issues, the program initially aired in honor of Earth Day 2003 (April 24) presenting viable technologies for the management of municipal solid waste and encouraging both the solid waste service industry and the general public to actively participate in environmental initiatives.

The program was also offered in VHS and DVD format, with accompanying lesson plan, to U.S. middle schools, with more than 3,200 teachers requesting the program for use in their environmental science classes.

QUARTERLY RESEARCH BULLETINS

In July the foundation released its first Bulletin highlighting essential research affecting the solid waste industry.

The summer 2003 issue discussed bioreactor landfilling and the potential significant benefits. EREF's bioreactor landfill projects not only fulfill the need to understand the basic chemical, biological and physical processes in order to define where and under what conditions a bioreactor landfill will work effectively, they also provide valuable educational experiences to participating graduate students who will become the waste management professionals of the future.

The fall 2003 issue, published in October, profiles a foundation project focusing on the use of biologically active landfill caps.

Copies of bulletins can be obtained from the "Newsroom" on EREF's website - www.erefndn.org - or contact Anne Brauer at abrauer@erefndn.org. Companies interested helping fund projects or in providing project materials or in-kind services should contact Michael Cagney, president, at 703.299.5139.

REPORTS AND PUBLICATIONS AVAILABLE

- An Assessment of Price Volatility in Recyclables Markets and market Mechanisms to Stabilize Prices (2001)
- Collecting and Testing Municipal Solid Waste Landfill Gas As Generated and After Combustion (2000)
- Electronic Nose Technology Applied To Landfill Odors (2003)
- Life-Cycle Inventory Case Studies of Municipal Solid Waste Management (1999)
- Literature Review and Research Needs for Landfill Bioreactors (2000)
- Size of the United States Solid Waste Industry (2001)

Go to www.erefndn.org/reportsleader.html for free report downloads and publication order info.

Detachable Container Association (DCA) 50th Anniversary Gala

Your attendance is needed at DCA's anniversary celebration on February 10-14, 2004, Boca Raton Resort and Club, Boca Raton, Fla.

- Golf Tournaments • Fishing Tournaments • Ladies Lunch
- Optional 7-Day Cruise to the Mexican Caribbean
- Other Social Activities

Contact Gerri Wyer at 434-244-3522 or gwyer@aol.com today!

YOUR INPUT IS IMPORTANT TO US...AND TO THE FUTURE OF THE SOLID WASTE SERVICE INDUSTRY.

The Environmental Research and Education Foundation (EREF) is a growing source of funding for research into technological innovation in solid waste services, better workplace safety and practices, middle school education, and scholarships to help foster tomorrow's leaders in environmental science.

In an effort to better serve you, EREF is conducting a short survey to determine what type of solid waste research and education you feel would be most beneficial to you as a solid waste or recycling professional, educator, or concerned citizen, and what you feel is important to the solid waste service industry as a whole.

The results of this survey will help us better understand your needs and further research on topics that are of most interest to you. Thank you.

1. Please indicate the category that best describes your primary business.

- | | |
|--|---|
| <input type="checkbox"/> Chemical Disposal | <input type="checkbox"/> Manufacturer (vehicles) |
| <input type="checkbox"/> Consulting/Engineering | <input type="checkbox"/> Manufacturer - Equipment (other than vehicles) |
| <input type="checkbox"/> Emissions/Odor Control | <input type="checkbox"/> Medical Waste |
| <input type="checkbox"/> Hazardous Waste Disposal | <input type="checkbox"/> Recycling |
| <input type="checkbox"/> Hazardous Waste Treatment | <input type="checkbox"/> Transfer Station |
| <input type="checkbox"/> Health/Safety | <input type="checkbox"/> Waste Collection/Hauling |
| <input type="checkbox"/> Insurance | <input type="checkbox"/> Waste to Energy |
| <input type="checkbox"/> Landfill | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Legal Services | |

2. What do you feel are the greatest challenges you and/or your employees/colleagues face relating to solid waste services and recycling? (Provide 2)

3. What specific expertise or information do you feel is lacking regarding solid waste or recycling education and services?

4. Do you have any concerns regarding the solid waste service industry and its practices in general? Please provide details.

5. What area(s) of solid waste service and recycling are important to you and that you would like further researched? Indicate: "1" = Most Important, "2" = Next In Importance, etc. Please indicate at least three.

- | | |
|---|---|
| <input type="checkbox"/> Customer Education | <input type="checkbox"/> Medical Waste |
| <input type="checkbox"/> Driver Education and Training | <input type="checkbox"/> New Trends in Waste Services |
| <input type="checkbox"/> Emissions/Odor Control | <input type="checkbox"/> Recycling |
| <input type="checkbox"/> Employee Health and Safety | <input type="checkbox"/> Remanufacturing |
| <input type="checkbox"/> Hazardous Waste | <input type="checkbox"/> Sorting |
| <input type="checkbox"/> Grade School Educational Programs | <input type="checkbox"/> Sustainability or Resources |
| <input type="checkbox"/> High School and College Educational Programs | <input type="checkbox"/> Vehicle and Equipment Use and Safety |
| <input type="checkbox"/> Incineration | <input type="checkbox"/> Waste Composition |
| <input type="checkbox"/> Industrial Ecology Programs | <input type="checkbox"/> Waste Emissions |
| <input type="checkbox"/> Innovations in Collection | <input type="checkbox"/> Waste Generation |
| <input type="checkbox"/> Innovations in Equipment | <input type="checkbox"/> Waste Minimization |
| <input type="checkbox"/> Innovations in Transport | <input type="checkbox"/> Waste/Energy Recovery (such as composting, landfill gas to energy) |
| <input type="checkbox"/> Landfills and Landfilling | <input type="checkbox"/> Other _____ |

6. How would you prefer the research results be made available?

- CD-Rom or Other Computer Medium
- Printed Form (book, pamphlets, etc.)
- Education Session with Handouts (WasteExpo, Chapter Mtgs., etc.)
- Video Tape (VHS, BETA)
- Foundation's Website (www.erefnd.org)
- Other _____

7. Would you be willing to place the Foundation's website as a link on your site to encourage your staff to keep up-to-date with our research and education initiatives?

- Yes No

Thank you for your time. The results of this survey are intended solely for use by the Foundation to assist us in our research planning. *Company views or contact information provided will not be shared with non-EREF staff.*

City and state of business location:

If desired, provide your name and company (or attach your business card)

If you would like to learn more about the foundation, please visit our website at www.erefnd.org or provide contact information below to be added to our mailing list:

Contact Name: _____

Address Info: _____

Phone #: _____ Fax #: _____

E-mail: _____

Please check if you would like to receive information about:

- How your company can establish an EREF Named Gift Research Fund
- How your company can establish an EREF Scholarship Fund
- Equipment Donations (auctioned off during WasteExpo; proceeds benefit solid waste research and education; EREF provides marketing)
- Contributing to the Foundation (monetary or other donations, company challenges, becoming a sustaining member (Eagle Club))
- Sponsorships (to help promote middle school outreach; fundraising events)
- Other _____

Please fax this form to 703.299.5145 as soon as possible or send a copy via postal mail to:

Anne M. Brauer, Director of Development
EREF
120 S. Fayette Street
Alexandria, Virginia 22314

EREF wishes to thank all participating golfers and recognizes the following companies and individuals for their sponsorships and support of our first golf event:

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Ron McCracken, RJM Waste Equipment

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EREF staff

VOLUNTEER:

Patricia Johnson

HIGHLIGHTS FROM THE CADDYSHACK OPEN

EVERYBODY DID “ALL RIGHT!”

EREF’s first scramble format tournament premiered at Grande Oaks Golf Club, Ft. Lauderdale, Fla. Grande Oaks (known earlier as Bush Woods Golf Course) was the setting for the 1980 comedy “Caddyshack” starring Bill Murray, Rodney Dangerfield and Chevy Chase.

During the awards reception, the foundation held a raffle for a \$500 gift certificate to the Grande Oaks Pro Shop (winner Scott Reimer) and Caddyshack memorabilia - movie posters (winner Kevin Walbridge), an uncut movie DVD and Kenny Loggins CD (winner Mark Clindaniel) and a 14” Gopher that



Michael Cagney (left) and poster winner Kevin Walbridge



Michael Cagney (left) and Caddyshack memorabilia winner Mark Clindaniel



Jerry Wickett (left) accepts his dancing rodent from Michael Cagney

danced to Loggins’ hit song “I’m Alright!” (winner Jerry Wickett).

Hole-in-one prizes offered on four holes—but not won—were a 2003 Chevrolet Corvette Coupe, choice of Callaway Irons or Big Bertha II Driver, choice of item from Sony electronics package or Roundtrip Airline Tickets for Two.

The board of directors of EREF is very grateful for the generous concern of **Jim O’Connor, Chairman and Chief Executive Officer of Republic Services, Inc.** without whose assistance this tournament would not have been possible.



Scott Reimer was anxious to spend his \$500 gift certificate

TOURNAMENT RESULTS:



The team (from left) of Bill Hulligan, Don Moorehead, Tom Hughes and Ron Proctor won with a score of 63 (8 strokes under course par).



Taking second place and receiving individual engraved Krystof Boston-footed crystal bowls was the team (from left) of Tom Saheed, Don Campisano, Brent Wilder, and Bill Gaff. Their total score was 64.



Closest to the Pin on Hole #5 and winner of \$250 was Joe Raby



Anne Brauer (EREF) presents Mark Weber with \$250 for his Longest Drive on Hole #8



Beverage cart sponsor representatives Skip Berg and Rita Ugianski



Continued from Page 3

CREEPING CRUSTACEANS!



(Left to right) Art instructor Leslie Wagner (De La Salle High School); Caitlin Romagosa, 3rd Place; Justin Batiste, 1st Place; Steve Baker (Elgin Sweeper, prize sponsor)



(Left to right) Art instructor Sally Barbier (J.F. Kennedy High School) accepts 2nd Place prize for her student, Kenneth Green; Bob Stearns (EREF Vice Chair); Michael Cagney (EREF President)



Visitors to EREF's booth cast their votes for best crawfish sculpture

Photos of all crawfish sculptures can be viewed on our "Special Events" page at www.erefdn.org/events.html.

New Orleans high school art students showed their resourcefulness and creativity by making crawfish sculptures out of recyclable and used materials for display in EREF's exhibit space at WasteExpo.

Show exhibitors and visitors inspected ten finalist sculptures, choosing three to receive top prizes. The winners were:

JUSTIN BATISTE

10th Grade, De La Salle High School - 1st Place - \$150



Justin Batiste's sculpture was made from used soda cans, fiberboard, dowels, wire, bottle top, cards, poker chips, and dice

Justin Batiste's First Place Crawfish

KENNETH GREEN

9th Grade, J.F. Kennedy Sr. High School - 2nd Place - \$100



Kenneth Green's sculpture was made from used Mardi Gras beads, chicken wire, wire, plywood, and Mardi Gras doubloons

Kenneth Green's 2nd Place Crawfish

CAITLIN ROMAGOSA

12th Grade, De La Salle High School - 3rd Place - \$50



Caitlin Romagosa created her sculpture using old wire, milk bottles, tin cans, coat hangers, buttons, newspaper, cloth, bottles, soda cans, straws, popcycle sticks, wood, potato chip cans, duct/clear tape, and thread

Caitlin Romagosa's 3rd Place Crawfish

All participating students received Certificates of Achievement from EREF regardless of whether or not their sculptures made it to the final judging.

EREF IS GRATEFUL TO THE FOLLOWING COMPANIES FOR THEIR SUPPORT OF THIS HIGH SCHOOL OUTREACH INITIATIVE:



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RICHARD'S DISPOSAL, INC.

FLY DYE BY WAHMPEE

Interested in contributing to next year's high school contest prize fund?

Please contact Anne Brauer at 703-299-5139x10 or abrauer@erefdn.org.

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