

ecoletter

WINTER 2010 ISSUE



CHESAPEAKE



*A Publication of the
Water and Waste Operators Association of
Maryland, Delaware, and the District of Columbia, and the
Chesapeake Water Environment Association*





“YOUR **MANUFACTURERS**
REPRESENTATIVE SINCE 1946”

Corporate Headquarters

New Equipment - George Salovich
Field Service - David Kachman
Parts - Caroll Phillips or
Karianne Lesko

100 Wormans Mill Court
Frederick, Maryland 21701
Phone: (301) 846-0200
Fax: (301) 846-0808

○ **Kappe Laboratories**

Contact - Dr. David Kappe, PhD. or
Julia Patel

100 Wormans Mill Court
Frederick, Maryland 21701
Phone: (301) 846-0210
Fax: (301) 846-0808

○ **Charlottesville**

New Equipment - George Long

PO Box 7986
Charlottesville, VA 22906
Phone: (434) 985-7090
Fax: (434) 985-4767

○ **Cumberland**

New Equipment - Daniel Thompson

1065 Longwood Avenue
Cumberland, MD 21502
Phone: (301) 724-1627
Fax: (301) 724-0249

○ **Kulpsville**

New Equipment - Dave Green or
Brian Hyde
Field Service - Cameron McCaw

1715 Sumneytown Pike, Suite 201
PO Box 327
Kulpsville, PA 19443
Phone: (215) 361-5700
Fax: (215) 361-5107

○ **Monroeville**

New Equipment - Paul Alfery
Chad Fenstermaker, or
Brian Fenstermaker
Field Service - Ron Ferguson

4268 Northern Pike
Monroeville, PA 15146-1790
Phone: (412) 373-9309
Fax: (412) 373-9343

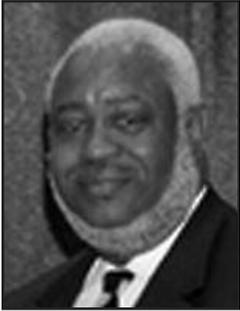
○ **Smyrna**

New Equipment - Jeff Mancini

36 Elwood Drive
Smyrna, DE 19977
Phone: (302) 659-4016
Fax: (302) 659-4023

www.kappe-inc.com

PRESIDENT'S MESSAGE



CWEA President

—Hiram Tanner

Here's hoping that you and yours had a great holiday season filled with many joyous and happy experiences. Of course I am sure it did not take long for you to return to work and find that your services were

needed as much during this season as ever before. Did FOG have a major impact on your system this holiday season? Hopefully, public messages such as WSSC's "Can the Grease" reach the targeted audience.

Perhaps one of the most complex issues facing our industry is the dichotomy of dealing with fats, oil and grease (FOG). Is it a blessing or a curse? Clearly from the collection systems viewpoint it is a curse. FOG is the root of all evil as it blocks the free flow of waste water from homes, restaurants, our friends and neighbors. Yet, our co-workers at the treatment plants relish its natural ability to increase gas production. And if they could obtain yellow grease, this would be even better. Yellow grease is a great source for fuel that could be used to generate electricity and reduce operating costs. Yes, FOG is truly a remarkable waste product that finds its way into our hearts and minds whether as a foe or friend.

I am proud to be a member of CWEA, particularly knowing that we lead the way in fostering discussion on this most timely topic last spring during the luncheon seminar "Cutting through the FOG" at the Richlin Ballroom in Edgewood, Maryland. More than 100 wastewater professionals from both public and private sectors came out to participate in this roundtable discussion. Picking up on a great idea, the WEF Collection Systems Committee is following our lead and is in the early stages of planning a workshop or seminar to discuss this topic. Stay tuned, one day the industry will conquer FOG by putting its best qualities to use.

Before closing, I want to recognize our neighbors to the west of the District of Columbia, Fairfax County, Virginia for the recent settlement with a local food manufacturer that did not control their FOG. The County alleged that this establishment did not properly take care of its waste product and that it had destroyed or damaged a significant portion of the infrastructure including the sewer pipes, pumps and the like. While the corporation did not admit to any wrongdoing and I am not implying that they did, here's hoping the publicity that followed the settlement helps set a precedent



WWOA President

—Duane McCoy

Hello members,

I had a chance to get out and attend some training classes with other members as they learned about water sampling, process monitoring and BNR & ENR.

Attending these classes and others like them not only provide a way for water and wastewater professionals to gain viable knowledge, but also aid in showing our members and employers what steps we are taking to help our members be successful with their certification and career goals. I'm looking forward to attending this year's Short Course and Tri-conference, because a lot of dedicated committee members are working hard to provide top notch educational opportunities.

The Central & Southern sections had large turn outs at recent meetings that stretched across county and sectional lines. Attendees were also able to vote on selecting the officers who will lead them forward in the coming year. Our goal as an organization continues to be working towards being a bridge between you and your employer in helping you to be all you can be; and to incorporate your fresh ideals and valuable knowledge to challenge our trustees and directors to make us serve you better.

Because of the disaster that has hit Haiti and the subsequent need that it has brought about, we of the Executive Board of the WWOA have sent a \$1,000.00 donation to the Red Cross for Haitian Relief. This donation to the Red Cross will help to bring clean water and sanitation facilities to the people of Haiti in their time of need. The need for clean water and sanitation will be an ongoing need for Haiti and our work in the Water and Wastewater field will be of use and encouragement for them.

In closing, remember water and wastewater professional are terrible thing to waste and to please visit us at our new web site: <http://wwoa-cwea.org> that has been updated with a lot of information such as our scholarship program, current events and meetings and your elected officials.

that establishes FOG's destructive nature.

As you go forward this year to educate the public of the dangers of FOG, you now have one more tool in your bag to catch their attention.

ecoletter

Co-Editors

Floyd B. Johnson, P.E.
Box 175A-1
Paw Paw, WV 25434
202-379-6085
crittonrun@hotmail.com

Cynthia A. Lane, P.E.
Regulatory Engineer
American Water Works Association
1300 Eye Street NW, Suite 701W
Washington, DC 20005
W / 202-628-8303
clane@awwa.org

Advertising Managers

Bob Andryszak, P.E.
Rummel, Klepper & Kahl, LLP
81 Mosher Street
Baltimore, MD 21217
W / 410-728-2900
F / 410-728-2992
randryszak@rkkengineers.com

Bob Wimmer, P.E.
Black and Veatch
2533 Paso Fino Drive
Finksburg, MD 21048
W / 410-871-284
F / 301-921-2862
wimmerb@bv.com

Staff

Pearl Laufer
Laufer and Associates
6252 Kind Rain Court
Columbia, MD 21045
H / 410-997-0694
C / 443-812-9658
lauferandassociates@hotmail.com

Charles C. Reichert
City of Balt Dept of Public Works
Utility Engineering Section
305 Abel Wolman Munic. Bldg.
Baltimore, MD 21202
W / 410-396-5315
F / 410-545-3649
Charles.Reichert@baltimorecity.gov

Samuel R. Schlegel
White Marsh Environmental
Systems, INC.
1100 South Little Creek Rd.
Dover, DE 19901
W / 302-734-7500 ext. 1110
F / 302-734-9297
sschlegel@tuiwater.com

Peter J. H. Thomson, P.E.
Black & Veatch
18310 Montgomery Village Ave.
Gaithersburg, MD 20879
W / 301-921-8239
F / 301-921-2868
thomsonpj@bv.com

Chip Wood, P.E.
Water & Sewage Systems
16 Bittersweet Dr.
Hagerstown, MD 21740
W / 301-733-0849
F / 301-733-4438
chipwoodenhead@myactv.net

CALENDAR OF EVENTS Spring 2010

April 7–8 at MITAGS
Asset Management Seminar
Presented by Steve Albee of EPA
Hosted by Collection Systems Committee

May 6 at Johns Hopkins University
CWEA-CSAWWA Spring Meeting

May 18 at MITAGS
Water Reuse Seminar

www.wwoa-cwea.org

TO ALL MEMBERS:

When completing membership renewals, make sure all information is correct and current. We use WMBA (WEF Membership By Access) for membership information. If there is an e-mail address, please include it.

CHANGE OF ADDRESS

Please forward your change of address and membership number to the appropriate organization:

WWOA Secretary	CWEA Secretary
Janet Owens	Carlos Espinosa
DCWASA	KCI
202-787-4197	410-316-7858
Janet_Owens@dcwasa.com	cespinosa@kci.com



Printed on Recycled Paper

TABLE OF CONTENTS

President's Message	3	CWEA 2010 Call For Service Awards Nominations.....	21
Editor's Corner	5	WWOA 2010 Call For Service Awards Nominations	23
2010 Tri-Association Conference Announcement	8	Good Neighbor Approach Nets DCWASA a Success	28
2010 CWEA and CSAWWA Events	9	Plant Profile: Fahrney-Keedy WWTP	32
Formation of FOG Management Work Group	12	Poking Around The Pocomoke	34
And The Question Is??	15	Biosolids Beauty Contest Reprint.....	39
CWEA "It Takes 2" Seminar is a Great Success	16	Maybe It Is Time	41
Retiree Hank Hulse	18	WWOA Executive Board and Chairs for FY '09-'10	42
WEF's 2010 Residuals and Biosolids Conference.....	19	CWEA Officers, Chairs, Vice Chairs for FY '09-'10	43

EDITOR'S CORNER

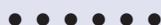
The following information comes from the 2010 World Almanac and Book of Facts:

One of our competitors has taken a well deserved hit. Bottled water sales dropped 6.7% from 2008 to 2009. Hopefully people are finally wising up to this oversized industry. Before we start celebrating too much, realize the \$3.82 billion in bottled water sales in 2009 has a long way to shrink before this wasteful business is brought under control. Don't get us wrong, we like drinking water a whole lot and drink plenty of tap or well water from reusable containers.

The next number drop should not be surprising to any of us. The total weight of fish caught in the Chesapeake Bay went down 31,862,000 pounds from 2005 to 2008. In 2008, 477,091,000 pounds of fish were taken from the Bay.

In 2008 the U.S. consumed 99.30 quadrillion Btu of energy, yet only produced 73.71 quadrillion Btu. Worldwide, the U.S. produced 15% of the total energy and consumed over 20%. Ten percent of the U.S. energy production is renewable with hydroelectric and biomass making up most of the production. Nuclear energy makes up 12% of all U.S. production.

Coal is the most common source of producing electric and in 2008 over 1.17 billion tons were mined in the U.S.—the most ever. How the coal is mined has changed with surface mining making up 75% of the total. The amount of coal from underground mines is now lower than 1950 levels.



A bioreactor using a carbon source to remove nitrogen—sure we know all about that- so what? How about an underground bioreactor using wood chips to remove nitrogen runoff from farm fields? That's what Iowa State researchers have developed to handle nitrogen coming off of crop land. So far results have shown 60-80% removal with study continuing on the actual biochemistry involved. It is thought that fungi break down cellulose in the wood chips for the bacteria population to use. Perhaps in the coming years we will see this technology in the Bay watershed.



Worldwide use has increased 20% in the last ten years. U.S. production is less than half consumption. Price swings of 300% have taken place recently. Crude oil? Try ammonia. While we regard ammonia as a pollutant, it is a basic building block of most fertilizers used in agriculture and thus a hot commodity. And that's how our business should regard biosolids. If only we didn't have such a long way to go.

A recent high profile lawsuit by the Waterkeeper Alliance against Perdue for creating high coliforms in a tributary of the Pocomoke River unfortunately shows how far we have to go. The cause of the coliforms appears not to be chicken waste but leaching from biosolids- Class A biosolids. While it seems the situation stemmed from improper storage and use of the biosolids, it is not welcome news that one of our finest products has a finger pointed at it. As it would be unthinkable for a farmer to leave bags of fertilizer out in the rain or loose, the same obviously does not hold for biosolids. That has to change and we need to bring it about. Regulation is all fine and dandy but education and better economic savvy is much better.



As the Marcellus Shale deposit in the Bay watershed continues to be tapped for natural gas, water quality concerns grow louder. To address those concerns the Susquehanna River Basin Commission will install \$750,000 worth of stream monitors (paid for by a gas driller) in northern Pennsylvania and southern New York. This network of 30 monitors will transmit real time data on temperature, pH, dissolved oxygen, conductivity and turbidity. Also since several million gallons of polluted water must be recovered and treated for each gas well, our WWTPs could be seeing requests for taking this special waste and some of them will be sorely tempted to take in the waste to generate revenue.



A late December overflow from a Baltimore County WWPS received coverage in the Annapolis Capital newspaper. While the report was bad, it did

Continued on page 18

Envirep, Inc.
Camp Hill, PA 17011
Phone: 717-761-7884
Fax: 717-737-5817
Website: www.Envirep.com
Email: Sales@Envirep.com



TLC Environmental
Lancaster, PA
Phone: 717-299-3596
Fax: 717-299-8956
Email: TLCEnvironmental@aol.com

WATER AND WASTEWATER EQUIPMENT SALES

AERZEN: Rotary Positive Displacement Blowers and Enclosures

AIR PRODUCTS: Pure Oxygen Dissolution and Generation Equipment for Supplemental Aeration Applications

ANDRITZ: Belt Filter Presses, Thickeners, Centrifuges, Sludge Dryers, Screening Equipment, and Sand Filters

ANOXKALDNES: MBBR and IFAS Systems for Wastewater BNR and Plant Upgrade Applications

AQUA-AEROBIC SYSTEMS: Sequencing Batch Reactor (SBR) Systems, AquaPASS™ Phased Activated Sludge Systems, Floating Aerators and Mixers, AquaABF® Filters, AquaDisk® and AquaDiamond® Cloth Media Filters, AquaMB Process® Multiple Barrier Membrane Systems and Aqua-Aerobic® MBR Membrane Biological Reactor Systems

AQUIONICS: In-Line UV Systems

ASHBROOK SIMON-HARTLEY: Wilfley Weber™ Fine and Coarse Bubble Diffused Aeration Systems

CUSTOM CONVEYOR CORPORATION: Belt & Screw Conveyors

D.R. CORDELL: Dumpster-Veyor™

EASTERN GLASS LINED SYSTEMS: Bolted Glass Fused and Stainless Steel Tanks

ELEVEYOR: Vertical Conveyor Systems

ENVIRONETICS: Floating Baffles and Curtains

FLO-PAK: Water Booster Stations

G.E.T. INDUSTRIES: Comminutors

GORMAN-RUPP: Sewage Pumps, Sludge Pumps, Wastewater Pumping Stations, and Water Booster Stations

G-R RAMPARTS: Air Operated Diaphragm Pumps

JAEGER ENVIRONMENTAL: Plastic Submerged and Trickling Filter Media, and Dura-Sac Screening Systems

KRUGER: BIOSTYR™ Biological Aerated Filters, ACTIFLO™ Ballasted Floc Systems, Oxidation Ditch and Pure Oxygen Activated Sludge Systems, NEOSEP™ MBR Systems, Class A Sludge Systems, and BIOCON™ Dryers

LANDIA: Submersible Mixers, Recycle Pumps and Chopper Pumps

LIQUID TECH TANK: Bolted Stainless Steel Tanks

OMNI-SITE: Wireless Telephone Dialers

PURAFIL: Odor Control Systems and Clean Room and Emergency Gas Scrubbers

SHAW ENVIRONMENTAL: Biofilter Systems for Odor Control and VOC Removal

SHELTER WORKS: Fiberglass Enclosures

THERMAL PROCESS SYSTEMS: ATAD Sludge Systems and Odor Control

WATER INCORPORATED: Package and Field Erect Wastewater Treatment Plants

PHILADELPHIA OFFICE

Phoenixville, PA
Phone: (610) 933-3744
Fax: (610) 933-8629

MARYLAND OFFICES

Sykesville, MD
Phone: (410) 552-6995
Fax: (410) 552-6985

Fallston, MD
Phone (410) 877-1582
Fax: (410) 877-1583

Isco has the Solutions to your Wastewater Monitoring Problems!



Portable Wastewater Samplers

Isco offers a full line of rugged, field-portable samplers for monitoring in sewer systems and at treatment plant effluent discharge

Compact composite samplers fit in small manholes

Advanced 6700 Series samplers have interchangeable modules for measuring flow and pH

Stormwater systems measure rainfall and monitor runoff from industrial and agricultural sites



Transportable Refrigerated Samplers

Isco's new Glacier™ Sampler combines the small size, light weight, and mobility of a portable with an exclusive new active temperature control system. Its revolutionary design gives you the best of all worlds: easy transport, quick setup, and accurate sample preservation – without reliance on ice or utility power!

Glacier delivers 48+ hours of refrigeration from a 12 volt deep cycle battery. Glacier can wait for days or weeks to collect event-triggered samples, and preserve them until a convenient pickup time. The dual-power version runs on either 12 VDC or AC line voltage for added versatility.



Open Channel Flow Meters

Isco's new 2100 Series Flow Meters offer flexible, modular design, variable rate data storage, and easy configuration for a variety of networked flow monitoring applications, including I & I studies, cMOM data collection, and river monitoring. Modules snap together to provide the capabilities needed to meet specific site requirements.

9 month memory & 15 month battery life

Variable data storage rate (will trigger on flow event)

Uses standard alkaline batteries

Great for I&I, CSO and SSO studies

For sales, service, consulting, or leasing information, call



Hartco Environmental

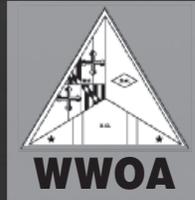
P.O. Box 678

Kennett Square, PA 19348-3354

Phone: (610) 444-4980

Fax: (610) 444-4983

e-mail: hartco@prodigy.net



Water is Life



Plan to attend the:

**2010
WWOA, CSAWWA and CWEA
Tri-Association Conference**

August 31–September 3, 2010

at the

**Roland E. Powell Convention Center
Ocean City, MD**

- Exhibitor reservation process to begin in mid to late February 2010
- Exhibitor reservations will be accepted on-line only
- Go to www.wwoa-cwea.org to access the On-Line Exhibit Booth Reservation System

The Water & Waste Operators Association, Chesapeake Section of American Water Works and Chesapeake Water Environment Association will hold the Tri-Association Conference and Exhibition at the Roland E. Powell Convention Center in Ocean City, Maryland from August 31 to September 3, 2010. The Conference Committee is currently planning the Conference program and schedule, as well as negotiating blocks of hotel rooms, at conference rates, with several hotels. Please check back on the web site (www.wwoa-cwea.org) frequently for Conference updates regarding hotel accommodations, program, registration, golf, and sponsorship opportunities.

CHESAPEAKE



CWEA & CSAWWA

jointly present the:

CSAWWA



2010 Annual Water Reuse Seminar

Date: May 18, 2010 from 8:00 am–3:30 pm

Location: Conference Center at the Maritime Institute
692 Maritime Boulevard, Linthicum, MD

The Joint CWEA and CSAWWA Water Reuse Committee is sponsoring their annual seminar at the Conference Center at the Maritime Institute. This program will consist of presentations by national and state regulators, as well as local utilities, addressing:

- Water reuse regulations in Maryland and New Jersey
- Microconstituents in wastewater
- Use of reclaimed water for groundwater recharge
- Reuse experiences of local water utilities

A continental breakfast and buffet lunch will be provided.

More information can be found at www.wwoa-cwea.org.

Save The Date! Save The Date! Save The Date!

2010 Chesapeake Spring Meeting

CSAWWA and CWEA are co-sponsoring the 2010 Chesapeake Spring Meeting to be held on Thursday, May 6th from 8:30am to 2:00pm at the Johns Hopkins University Campus in Baltimore. The theme of the Spring Meeting is “Managing a Utility in a Difficult Economy.” The meeting will consist of technical presentations in the morning followed by a roundtable discussion after lunch. Utility leaders from Delaware, Maryland and Washington DC will share measures they have taken to adjust to a down economy. It will be a great learning opportunity! Other Spring Meeting features include vendor exhibits, a gift card raffle, the annual Water Taste Test, and an optional tour following the meeting. A continental breakfast and buffet lunch will be provided. *Mark your calendars!*

More information can be found at www.wwoa-cwea.org.



Trace Laboratories, Inc.

Full Service Environmental

Analytical Services

General Chemistry • Organics Analysis • Metals Analysis • Microbiological Analysis • Toxicity Characteristic Leaching Procedure (TCLP) • Air Monitoring • RCRA Hazardous Waste Characterization

Sampling

Emergency Services • Field Sampling • Pick-up • Delivery

Field Services

Landfill Remediation • NPDES Permit Monitoring • Groundwater/Stormwater Monitoring • Drinking Water Analysis • Air Quality Monitoring • Wastewater Discharge Monitoring • Soils



Trace Laboratories, Inc.
5 North Park Drive
Hunt Valley, MD 21030
410-584-9099
E mail: tracelabs@tracelabs.com
www.tracelabs.com



«« Celebrating 50 Years »»

Engineering • Service • Parts

Contact us for information on any of the following manufacturer's products



AMES, Inc.
Manufacturers' Representative
Since 1957

A.M.E.S., Inc.
8918 Herrmann Drive
Columbia, MD 21045
(P) (410) 995-6971 (Balto)
(P) (301) 621-8899 (DC)
(F) (410) 381-5760



Fairbanks Morse Pentair Water

Strong. Dependable. Reliable.

These are attributes of great pumps - like the ones you'll get from Fairbanks Morse.



Featuring a full line of pumps for the municipal marketplace, including:

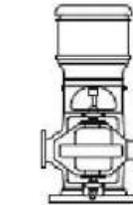
- Centrifugal Non-Clog
- Vertical Turbine
- VTSH® (Vertical Turbine Solids-Handling)
- Dry-Pit Submersible
- Split Case Pumps
- Propeller Pumps



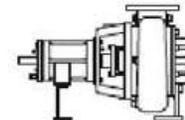
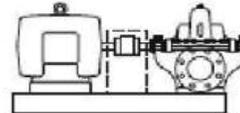
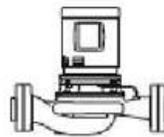
As a public works pump manufacturer for over 100 years, we can move fluids in water and wastewater treatment plants and pump stations - from source to end user.

www.fmpump.com 913/371-5000

**From pumps to systems,
we have it all.**



- End suction
- Split-case
- Inline
- Condensate
- Centrifugal
- Boiler Feed
- Systems



ap AURORA®
Pentair Water

When you want the best!

800 Airport Road
North Aurora, IL 60542

(630) 859-7000

www.aurorapump.com

TSURUMI PUMP

C SERIES CUTTER PUMP



Tsurumi Sewage & Wastewater Pump, C series

Built for Work.

Your local representative:

AMES, Inc.
8918 Herrmann Drive
Columbia, MD 21045
Phone: 410-995-6971
Fax: 410-381-5760



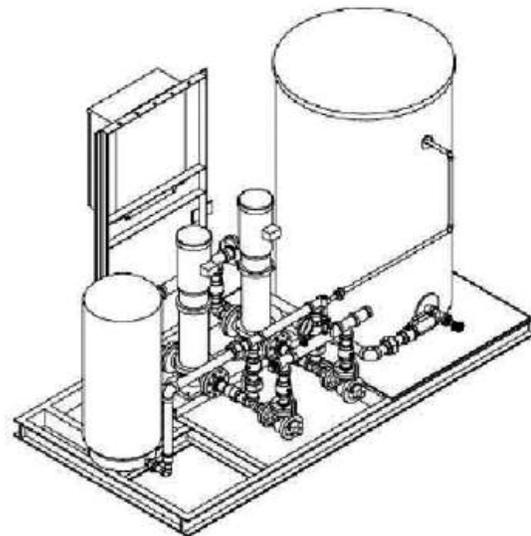
TIGERFLOW.
Engineered Systems to the World

(P) (800) 783-6756
www.tigerflow.com

Tigerflow, Inc.

Packaged Pumping Systems

- Seal Water Pump Station
- Booster Pump Stations
- House Enclosures
- Variable Speed Pumping Systems



Contact AMES, Inc. for information.

WEF Collections Systems Committee: Announcing Formation of FOG Management Work Group

In 2008, the Collections Systems Committee of the Chesapeake chapter of the Water Environmental Association, CWEA, (Yes California, there is another CWEA!), organized a pair of seminars focusing on Fats, Oils and Grease, FOG. The first seminar took the form of a round table luncheon in early spring. This discussion began with several professionals, each specializing in different areas of concern within the FOG arena, giving a 10 minute overview of their areas focus. During this introduction to FOG, attendees were asked to write down questions they had on small comment cards provided at the tables. These questions were to be asked after all of the speakers had finished their presentations and lunch had been served.

I will confess that we, those of us that were responsible for organizing the luncheon, were concerned enough about the lack of questions being asked that we had a prepared list of questions to be asked in the event that we needed to fill in time. Our concerns, however, proved to be completely unfounded and what followed was one of the most robust discussions on a single topic that I have been fortunate enough to participate in. Each of the questions was directed to an individual at the table and inevitably led to a dialog involving many of the people in the audience. Indeed, with time running out, (we had the conference room for a specific time period.), I had to announce that we would be only be allowing one more question and that we would collect the left over question cards and would have responses prepared and sent to the attendees at a later date.

The next seminar took place in November of 2008 and was set as a full day seminar, exhibitors and all. We were once again faced with a concern that in hindsight ended up being unnecessary, even comical. "Would we be able to get enough qualified speakers to fill an entire full day seminar on the topic of FOG?" It was our intention to use the questions fielded at the spring luncheon to help determine the topics of the presentations at this seminar. This led to a bit of a challenge as, once we collected the left-

over comment cards after our luncheon, we realized that we had only gotten to a fraction of the proposed questions. These questions, both addressed and unasked, hit on every FOG related topic in the spectrum. Grease trap questions were the most abundant, from design, to maintenance, to, Food Service Establishment (FSE) procedural training, all the way through permit enforcement and dealing with unscrupulous haulers. Other topics were related to public awareness and education, wastewater treatment concerns, chemical additives, the production of biodiesel and other issues.

As you may have guessed, we were not only able to easily fill the day-long agenda with very popular FOG topics, we ended up with a list of some of the most respected professionals in our industry literally lining up to participate. The result of the efforts put forth by the CWEA Collection Systems Committee was a seminar with 130 attendees, 13 exhibitors and 7 FOG presentations starting with a sort of "State of The Union" on FOG and ending with the use of GIS applications for FOG management programs. In between were topics on Grease Trap Design, Data Management, Bioremediation, and 2 presentations from local wastewater management agencies, Washington DC Water and Sewer Authority, (DCWASA), and the Washington Suburban Sanitary Commission, (WSSC), detailing efforts performed by these agencies to address specific collection system maintenance related FOG issues. If I were to go into the details of each presentation, this article would be far too long for any respected editor to accept, however, an article entitled, "*Fats Oils and Grease (F.O.G.) In Wastewater Collection Systems*" by Chip Wood, P.E., is available in the Winter, 2009 CWEA *Ecoletter*, on line at the following web link; <http://www.wwoa-cwea.org/eco-letter/eco-letter.html> which augments the information in this article nicely.

Each year, the CWEA CSC puts on a similar pair of seminars focusing on a particular topic. For example, in 2007 the seminars' topic was Private Property Issues and in 2006 the topic was Asset Management.

Usually, once the full day seminar in the fall is completed the CWEA CSC discusses which topic would be most appropriate for the coming year and, other than some minor follow up at committee meetings and but for a few emails with questions from the seminars' presenters or attendees, the committee will focus its efforts on the new topic. This, however, was not the case when it came to FOG. Instead of a trickle of emails and a few discussions at ensuing committee meetings, we found that not only did the interest in discussing FOG management not dwindle, it in fact increased over the next few months. It was finally decided that the Chesapeake CSC would maintain a permanent FOG Sub-work group. There were several people that showed considerable interest in participating in this effort and it wasn't very long before there were people involved from other WEA chapters from around the country.

Finally, in the spring of 2009 a monthly conference call was set up for the purpose of giving this group organization. (I must point out that by now, this group was no longer considered a Chesapeake CSC sub-group but more along the lines of a national group.) After these conference calls were set up, an outreach effort began and we quickly found that there was a very large pool of interest and expertise around the country eager to help us move forward and the new group grew in both size and scope. In particular, we were given the support by a group that has put on a series of very successful and educational FOG workshops around the country over the past several years. By mid summer, 2009, the group began some serious work in building the foundations of a comprehensive collection of FOG-related information. One of the first things we realized that there was no standardized terminology currently in use and that this framework was one of the necessary foundations of any successful effort we might put forward. Another issue that was also identified early on is that there are several very distinct components to successful FOG Management Programs. This new group will likely need to create separate sub groups based on each member's area of interest, with each sub-group working together to ensure each component fit together. Fortunately, the expertise and fields of interest of the members that make up this group are varied and represent most of the building blocks relating to FOG, with more people joining each month.

In October of 2009, the WEF Collections Systems Committee held its annual conference at WEFTEC in Orlando, Florida. During this meeting the

WEF Collections Systems Committee—FOG Management Work Group was officially recognized as the newest work group. Though it is a new group, we are working on several areas of focus such as the terminology framework mentioned above as well as developing a document detailing all of the research that has either been accomplished, is ongoing or has been proposed regarding the different facets of FOG. The work group is already moving forward with a plan for a series of workshops. With the experience of the members previously mentioned who have proven to be so adept and putting on these workshops, this promises to be a very educational experience for everyone with interest, regardless of area of concern or expertise. Issues regarding collections systems maintenance S.O.P.s, grease trap design and maintenance, F.O.G. ordinances as well as public education, bioremediation and biodeisel are going to be addressed through this work group.

This article has been written with the intent of announcing the new WEF—FOG Management Work Group and to attract the interest of potential new members that can help us achieve our Mission Statement: *"To facilitate a national forum on best practices and to promote practical guidelines for FOG Management."* In order to put the establishment, and I believe the importance, of this new work group into perspective, I decided that giving the history of how and why it came about would be the best vehicle for the purpose. In doing so, I have also come to understand just how important the work of our member chapters is. This national FOG effort began with the work of a handful of professionals, all volunteers, working in one local membership association. For all of you volunteering your time to keep local Collection Systems Committees rolling forward, you can look to the work that I believe will be accomplished by this work group, as well as the achievements already produced by other committees as some justification for your efforts. For those of you considering joining a local chapter, please consider the value of the accomplishments that can be attained, and have been, when considering the cost of your personal and professional time. If you are interested in learning more about or participating with the WEF—FOG Management Work Group, or any other WEF Collection Systems Committee Groups, please contact Christine Radke at cradke@wef.org.



STH, INC.
SHAFER, TROXELL & HOWE

MANUFACTURERS' REPRESENTATIVE
Since 1973

97-C Monocacy Blvd., Frederick, MD 21701
800-233-7718 & 301-682-3390
Fax 301-682-3391
www.sthinc.com

Municipal Water & Wastewater Products

- Fybroc**—Fiberglass Pumps, Vertical & Horiz. To 5000 GPM for Corrosive Solutions
- F.E. Myers**—Grinder Pumps, Sump & Effluent Pumps, Submersible Non-Clog Sewage Pumps, Package Stations, Storm Water Pumps
- Peerless**—Vertical Turbine, Horizontal, Propeller, End Suction & Inline Pumps
- Yeomans**—Non-Clog Sewage Pumps, Submersible & Dry Pit Submersible Pumps, Vertical & Horizontal Pumps, Pneumatic Ejectors, Storm Water Pumps
- Cromaglass**—Packaged Wastewater Treatment Systems
- SyncroFlo**—Pre-Pkgd Water Booster Systems, Eng. Assistance, Constant Speed, VFD Drives & Controls, Fiberglass & Metal Enclosures
- Grundfos**—Vertical In-Line Boosters, Stainless Steel Construction
- LaBour**—Alloy Horizontal, Self Priming, Magnetic Drive Seal-less
- AK Industries & Topp Industries**—Pre-Fabricated Fiberglass Lift Stations, Inside Valving, Outside Valve Boxes
- Thermaco**—“Big Dipper” Automatic Grease/Oil Removal System

Sales - Parts & Service
Factory Trained Technicians

METCALF & EDDY | AECOM

Wastewater Engineering

Treatment

Disposal

Reuse



SERVING OUR CLIENTS
FOR 100 YEARS

14504 Greenview Drive, Suite 400 • Laurel, MD 20708
T 301.317.9600 • F 301.317.9431
www.m-e.aecom.com
Offices Worldwide
Regional Offices Located in:
Laurel • Philadelphia • Virginia • Washington, D.C.



STEP INTO OUR OFFICE AGAIN ...

ADS. A Nova Technologies

... For even more new products and services.

- **Low-Cost Alarming and Notification Systems**
 - Battery-Operated, Versatile 8-Alarm Monitor
 - Overflow Alarming and Reporting
 - Remote Wet and Dry-Weather Rain Gauging
- **New Flow Monitoring Technologies**
 - Advanced Digital Noise Filtering
 - Gated Cross Correlation
 - Ten-Path Chordal Transit-Time Flowmeter
- **New Pitometer Group Water Services**
 - Water Audits
 - Operations Preventive Maintenance
- **GPS, Utility Location, and Mapping**
- **SSES, Closed-Circuit TV, and Line Cleaning**
- **Line Stopping, Pipe Tapping, and Valve Insertion**



Unmatched Performance. Proven Results.

www.adsenv.com
(410)472-1590



And The Question Is??

—By Marilyn Baron

Ever wonder whose idea it was to line the inside of a seemingly good manhole? Why not the one three blocks over that looks in much worse shape? Who decides what to do on what structure and “what were they thinking?”

Typically rehab projects are conceived from necessity, born from understanding the need and developed through a clear, result oriented process. With manholes, as with pipe, assessment inspections are done for routine maintenance, capacity development, as a third party mandate or as part of an existing project.

Understanding the intent of a project and its goal can help put an owner and their contractor on the same track and mindset toward reaching that goal, assisting each other to make a successful project rather than furthering distrust and inflexibility.

To answer the question above: a developer wants to put in a 70 unit housing complex that is expected to contribute 35,000 gpd to the wastewater system along

Harrison Ave. The Harrison Ave. pump station is one identified as having high flows during peak high groundwater and shortly after a rain event. Of the 6 manholes going to the pump station from the proposed project sight, 5 of them show signs of significant I/I. The owner is familiar with groundwater migration and believes the 6th manhole should be sealed as part of the project. He’s right. The deteriorating manhole on the adjacent street doesn’t go to the Harrison Ave. pump station and is therefore out of the project area. These manholes were chosen because there is a funding source, 35,000 gpd worth of user fees.

Knowing increased capacity is the issue for this project might enable the contractor to find additional ways to help the owner such as correcting deficiencies in inverts that slow down the flow and installing inflow protectors. Remember, you (Engineer, Consultant) are the experts, there to help the owner reach their goal.

Note: Marilyn Baron has over 35 years of experience in the Manhole Rehabilitation Industry.

KAPPE LABORATORIES/KAPPE ASSOCIATIES, INC.

EST. 1963



- **Water & Wastewater Analyses**
- **Bench Studies**
- **Field Investigations**
- **R&D Projects**
- **Scientific Consulting Services**
- **Sampling (Md. Certified Samplers)**

Serving Government, Industry, and the Individual

Certified by Maryland, Pennsylvania, and Virginia

100 Wormans Mill Court, Frederick, MD 21701 ● tel: (301)846-0210 ● fax: (301)846-0808
e-m: kappe@erols.com ● www.kappe-inc.com

Operations and Engineering” Seminar

“It Takes 2 —

is a Great Success

—By: Kraig Moodie, ADS Environmental Services, CWEA CSC Chairperson

The Chesapeake Water Environment Association’s Collection Systems Committee (CWEA-CSC) hosted a full day seminar last November at the Maritime Institute of Technology and Graduate Studies (MITAGS) in Linthicum, Maryland. The seminar, entitled “It Takes 2—Engineering and Operations,” emphasized the need for coordination between the operations and engineering aspects of wastewater project teams. The topic was of great interest to utility managers, engineers, and public officials throughout the region. It was attended by over one hundred registered attendees and fourteen exhibitors in attendance.

The event was held in similar fashion to previous CWEA—CSC events in both an educational and entertaining style with specific references being made to the Soprano’s, Kenny Rogers Roaster’s and a dysfunctional municipality. The morning and afternoon technical presentations were separated by committee sponsored raffles and MITAGS famous cafeteria style lunch.

Thanks again to each of the speakers and the sponsors for making the seminar such a success. The speakers represented a good cross section of the industry focusing on all aspects of wastewater operations and engineering. Each speaker related personal challenges that arose from insufficient coordination of operations and engineering as well as the benefits of appropriate integration. In total there were eight technical presentations, which were titled:

- “Invert the Organization Chart for Important Design Information”—George Martin, Greenwood, SC
- “Combined Teamwork Achieves Successful Inspection of the Dam

Neck Force Main in Virginia Beach”—Chris Carroll, Pure Technologies

- “Engineers and Operators Working Together: a 60 Minutes Style Expose”—Hiram Tanner, District of Columbia Water & Sewer Authority
- “Taking the Next Step—Integrating GIS Into Collection System Maintenance and Capital Improvement Projects”—Paul Sayan, P.E. Black & Veatch
- “Cooperation, You Got a Problem?”—Rob Vilee, Plainfield, NJ Area Regional Authority (PARSA)
- “It’s a War Out There... Triage Approach to Sewer Maintenance”—Rob Roff, New Castle County, DE
- “Separation, a Sewer Philosophy or Organization Dysfunction?”—Richard Thomasson, Malcolm Pirnie
- “Sewer Empathy: Enhancing the Engineering/Maintenance Relationship”—Phil Hannan, Black & Veatch

The CSC is looking forward to our Asset Management event held in conjunction with Steve Allbee—USEPA Project Director, Gap Analysis on April 7th and 8th. This will kick off the 2010 calendar and be the first of two events this year focusing on Asset Management in the wastewater industry.

If you are interested in becoming a member of the CSC to help with this and other future events, please contact Kraig Moodie at kmoodie@idexcorp.com. Additional information on the April seminar will be provided soon, but mark your calendars today!

CWEA Collection Systems Committee

Thank you to everyone who helped make the

Fall 2009 "It Takes 2" Seminar a great success!



Retiree Hank Hulse



—By Kraig Moodie, CWEA Collection Systems Committee Chairperson

We extend our congratulations and best wishes to Hank Hulse of ADS Environmental Services, on his retirement from the Wastewater industry after 40 years of dedicated service. In recognition of his contributions and support to the CWEA and the wastewater industry as a whole, Hank was presented with the Golden Manhole Award in early December.

Hank began his lengthy career in the Wastewater industry in 1969, when he joined the Scranton Sewer Authority in Scranton, PA as the Laboratory Manager. Over the course of his career, Hank has been involved in each aspect of the wastewater industry including Plant Superintendent (Lackakawanna River Basin Sewer Authority), Operations Specialist (Buchart-Horn), Vice President and General Manager (Insituform East, Inc), and General Manager of the Baltimore Compost Facility (Metcalf & Eddy). It was this position that led to Hank's 15 minutes of fame, as he was the man responsible for the infamous "Poo Poo Choo Choo" incident in Baltimore that—in addition to many TV and radio comments—was the basis of two songs. . . You'll have to ask Hank about them in Ocean City, on the golf course, or at the next Water for People event, where he has been directly involved with events donating more than \$20,000.00. Hank spent his last 18 years in the industry in various management positions with Buchart-Horn, Severn Trent, and finally with ADS Environmental Services as Business Development Manager where he "officially" retired on December 31, 2009.

Congratulations on your retirement, Hank!

Editor's Corner

Continued from page 5

state other information for us to think about. It described the overflow as "diluted sewage from heavy rains and snowmelt." It was good to see the public got a better picture of the real situation and not just sewage. It also reported that the 22 MG overflowed was the 18th largest overflow in Maryland since 2005. That puts it into perspective- both good and bad. Finally it stated that four county executives had signed an agreement to assist each other with water and wastewater emergencies. It was good to see our industry joining the electric and gas industries in aiding each other in emergencies. It not only helps each emergency but helps the industry as a whole.

• • • • •

With the start of 2010, EPA head Lisa Jackson took over the chair of the Chesapeake Bay Executive Committee and promised to lead bold action on the Bay. She has come out swinging, but the blows won't

be landed for a while. Tighter regulations on stormwater runoff from development will not come out until November 2012 and increasing the number of farms that will be regulated will wait until late 2013.

• • • • •

If you aren't familiar with Howard Ernst, you might want to check out his second book, *Fight for the Bay*. Fight is a befitting word to describe his approach to improving the health of the Bay. He says that the voluntary partnerships between regulators, operators and environmental groups have been a failure. He even takes on the Chesapeake Bay Foundation as being ineffective. In his view, force and enforcement is the only way for restoration to make meaningful progress. He goes on to say that everyone has a right to clean water, that nobody has a right to diminish it, and it doesn't matter what the cost for your property rights end when waters are polluted. You have to wonder what Jefferson, Franklin and Madison would have said if faced with this condition.

Residuals and Biosolids 2010

Leveraging Biosolids in the Energy-Climate Era

Conference: May 23 – 26 | Exhibition: May 24 – 25

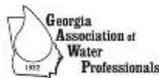
Savannah International Trade and Convention Center | Savannah, Georgia

Register by **April 21** to receive the **Super Saver Rate!**

Only at WEF's Residuals and Biosolids Conference Will You:

- Obtain the valuable information you need on pressing issues such as: bioenergy, energy efficiency, public health, and sustainability
- Learn from the most prestigious and experienced speakers who bring decades of institutional knowledge to the table
- Be trained as a new voice in the field of residuals and biosolids by attending a workshop that offers hands-on applications and real world experiences
- Receive exposure to the highest level of comprehensive technical content available, covering basic fundamentals to cutting-edge innovations
- Integrate with a tight-knit, specialized community by making meaningful connections with experts in the field

Join other Residuals and Biosolids enthusiasts by staying at the Westin Savannah Harbor or the Holiday Inn Express! **Book your room by April 21, 2010**, and receive the discounted conference rate of \$199 and \$104 respectively, on a first-come, first-served basis.



This conference is held by the Water Environment Federation in cooperation with the Georgia Association of Water Professionals and the International Water Association.

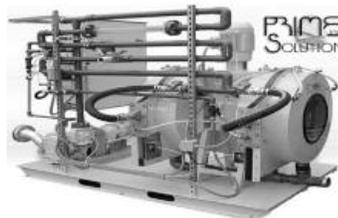
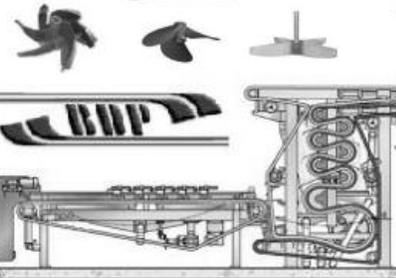
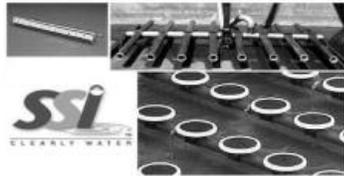


Up to 0.3 Continuing Education Units, 14.5 Professional Development Hours, and 3 Contact Hours can be earned at this event.

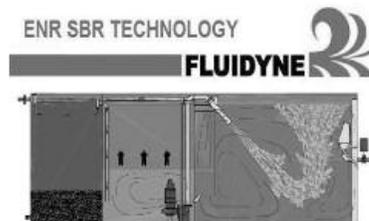
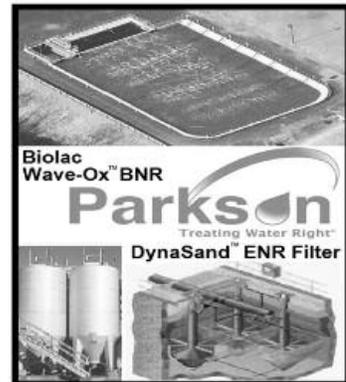
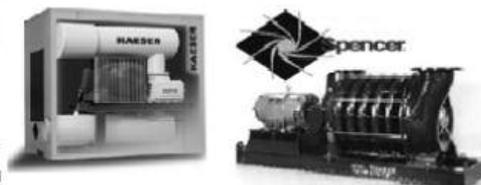
www.wef.org/ResidualsBiosolids

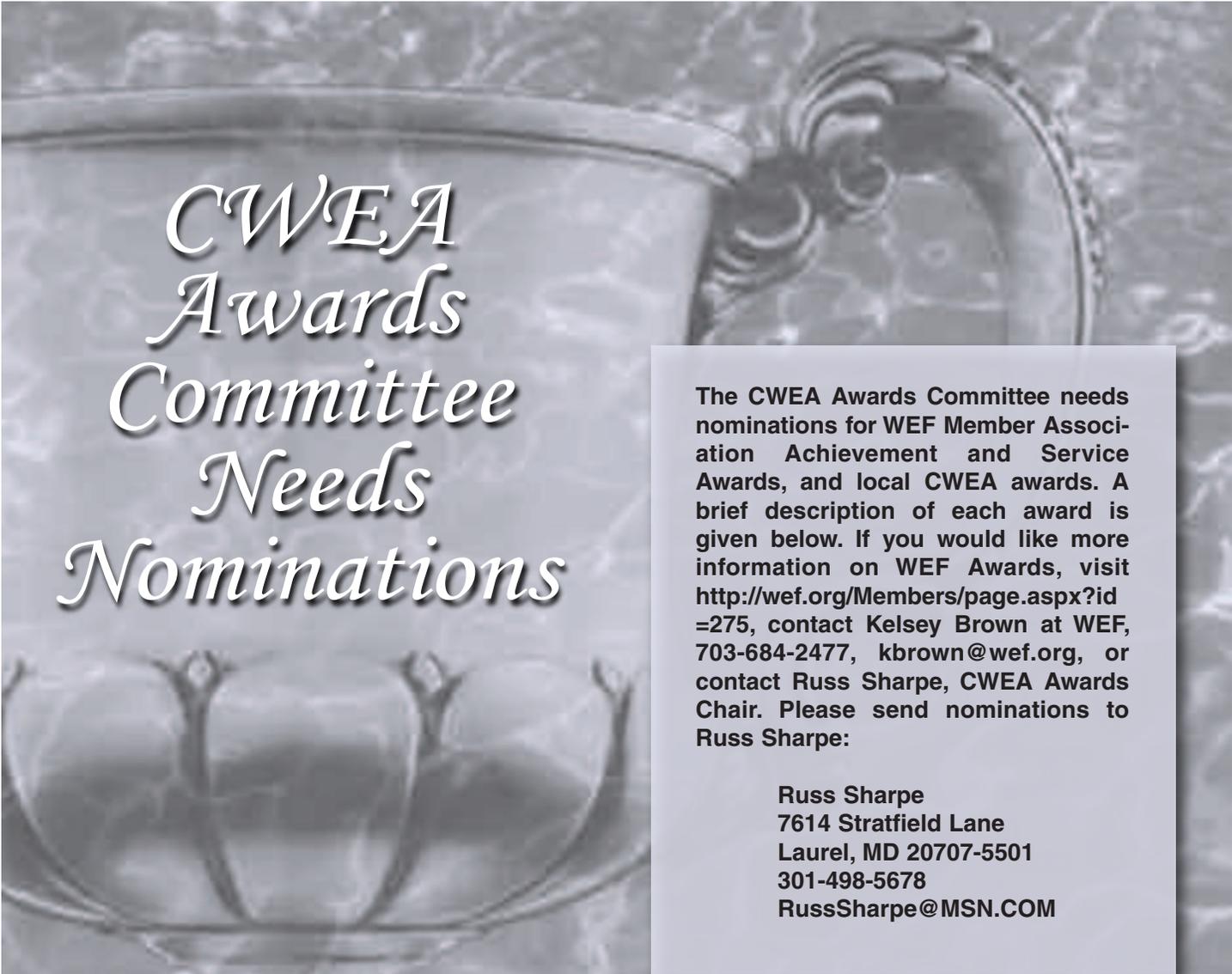


Manufacturers' Representative of Environmental Technologies



Aeration Systems
Analytical Instrumentation
Biological BNR/ENR Processes
Blowers & Compressors
Chemical Feed Systems
UV Disinfection Systems
Clarifiers
Belt and Screw Conveyors
Pumps
Covers & Enclosures
Filtration Systems
Flocculation & Mixing
Industrial Wastewater
Membrane Filtration
Odor Control
Screening Systems
Grit Removal Systems
Sludge Dewatering
Sludge Drying & Processing





CWEA Awards Committee Needs Nominations

The CWEA Awards Committee needs nominations for WEF Member Association Achievement and Service Awards, and local CWEA awards. A brief description of each award is given below. If you would like more information on WEF Awards, visit <http://wef.org/Members/page.aspx?id=275>, contact Kelsey Brown at WEF, 703-684-2477, kbrown@wef.org, or contact Russ Sharpe, CWEA Awards Chair. Please send nominations to Russ Sharpe:

Russ Sharpe
7614 Stratfield Lane
Laurel, MD 20707-5501
301-498-5678
RussSharpe@MSN.COM

WEF Member Association Achievement and Service Awards *(Deadline is April 2, 2010)*

Hatfield Award—Given to a wastewater treatment operator for outstanding performance and professionalism

Bedell Award—Acknowledges extraordinary personal service to the member association

Laboratory Analyst Award—Recognizes an individual for outstanding performance, professionalism, and contribution to the water quality analysis profession

Burke Award—Recognizes an active and effective safety program in a municipal or industrial wastewater facility

Local CWEA Awards *(Deadline is June 1, 2010)*

Glass Award—To a designer for an outstanding, innovative, cost effective design of wastewater treatment facilities

Wolman Award—To a prominent leader in the public or private sector whose leadership and longtime commitment has effected significant, positive changes in water-quality protection or in the understanding of water-quality issues by the general public

WWES Associates

Consulting Engineers

1132 S. Little Creek Rd.
P.O. Box 902
Dover, DE 19903-0902
Phone: (302) 736-5245
Fax: (302) 736-5265
E-mail: wwes@dmv.com

BRIAN C. CARBAUGH, P.E.

- Water Supply
- Wastewater Management
- Environmental Systems
- Investigations/Planning
- Design/Permitting
- Operations/Management

listen. think. deliver.®

CDM

www.cdm.com

7611 Little River Turnpike
Suite 600 West
Annandale, Virginia 22003
tel: 703 642-5500

825 Diligence Drive
Suite 205
Newport News, Virginia 23606
tel: 757 873-8850

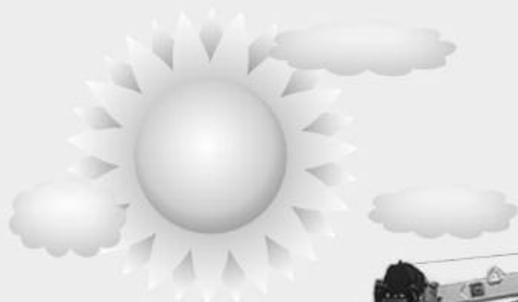
consulting • engineering • construction • operations

Taste The Quality !

TIDEWATER UTILITIES INC.

“Southern Delaware’s Premier
Water Company Since 1964”

1-800-523-7224



Process Equipment, Pumps, Engineered Systems, Equipment Repair

Everyone's ready to serve before the sale, but only Geiger delivers with 24 hour emergency service, locally stocked OEM parts and a team of certified repair technicians for after.

GEIGER

Visit us online at www.geigerinc.com or call us at (410) 682-2660

Duane McCoy, President
Rose Cline Lowe, President-Elect
Russ Sharpe, Vice President
Michael Emery, Treasurer



Melvin Keys, DC Trustee
Kristy McAndrew, MD Trustee
Samuel Allen, DE Trustee
Janet Owens, Secretary

THE WATER AND WASTE OPERATORS ASSOCIATION OF MARYLAND, DELAWARE & THE DISTRICT OF COLUMBIA 2010 SERVICE AWARDS

Dear WWOA Member:

The CWEA, CSAWWA and WWOA Tri-Association conference will take place August 31 through September 3, 2010 at the Roland E. Powell Convention Center, 4001 Coast Highway, Ocean City, MD 21842.

At the conference, WWOA distributes Distinguished Service Awards to outstanding individuals in the Water, Wastewater, and Solid Waste fields. Awardees are presented with a beautiful plaque and a coveted WWOA watch.

Safety, permit compliance, and cost control are the priorities in our business. Often, the communities we serve and our employers do not fully recognize the extraordinary contributions we make on their behalf. Recognition from one's peers is among the greatest compliments a person can receive.

If you know of a WWOA member who has made significant improvements in facility safety, permit non-compliance issues, reduced O & M costs, or has gone above and beyond the call of duty to educate co-workers then WWOA has an award waiting for them.

This is where you come in.

Please take a moment to look over the award descriptions and submit a short biography (oral biographies can not be accepted) on a deserving associate. Nominations are accepted from co-workers, supervisors, and vendors. You do not have to be a WWOA member to submit a nomination; however, you must be a WWOA member to be eligible for an award.

Nominations must be received by June 30, 2010 for consideration.

Respectfully,

Danny Coats,
Awards Committee Chairperson

Please submit completed nomination forms to:

Danny Coats
WWOA Awards Chairperson
c/o DCWASA
5000 Overlook Avenue, SW
Washington, D.C. 20032

Telephone: 202-787-4046 • Email: Dcoats@dcwasa.com

***Professionals Dedicated to Improving the Environment
Through the Advancement of Knowledge***

Check us out at – www.wwoa-cwea.org



NOMINATION CATEGORY:
PLEASE CHECK ONE PER NOMINATION FORM

- DISTINGUISHED SERVICE IN WATER DISTRIBUTION**
- DISTINGUISHED SERVICE IN WATER TREATMENT**
- DISTINGUISHED SERVICE IN WASTEWATER COLLECTION SYSTEMS**
- W. MCLEAN BINGLEY AWARD FOR WASTEWATER TREATMENT**
- DISTINGUISHED SERVICE IN RESIDUALS MANAGEMENT**
- DISTINGUISHED SERVICE IN LABORATORIES**
- DISTINGUISHED SERVICE IN INDUSTRIAL WASTE MANAGEMENT**
- STANLEY KAPPE TRAINING AWARD**
- WWOA AWARD FOR OUTSTANDING PERSONAL SERVICE TO THE ASSOCIATION**
- WWOA LIFE MEMBERSHIP AWARD**
- WWOA EMPLOYER RECOGNITION AWARD**

PLEASE PRINT

Nominator's Name (that would be you) _____

Address _____

City, State, Zip _____

Telephone (work) _____ (other) _____

Email Address _____

Nominee's Name _____

Address _____

City, State, Zip _____

Telephone (work) _____ (other) _____

Email Address _____

Current WWOA Member? (Yes or No) _____ Member at time of activity? (Yes or No) _____

Professionals Dedicated to Improving the Environment Through the Advancement of Knowledge

Check us out at - www.wwoa-cwea.org



CALL FOR AWARD NOMINATIONS!!!

2010 WWOA Award Description and Criteria

DISTINGUISHED SERVICE IN WATER DISTRIBUTION

Worked "above and beyond" to ensure safe delivery of drinking water to the public through a distribution network and demonstrated technical excellence and problem-solving creativeness.

DISTINGUISHED SERVICE IN WATER TREATMENT

Demonstrated technical excellence, administrative, or managerial merit, or exemplary work ethic and dedicated approach to the administration, operation and/or maintenance of a water treatment facility.

DISTINGUISHED SERVICE IN WASTEWATER COLLECTION SYSTEMS

Demonstrated exemplary performance, initiative, technical excellence, and problem-solving creativeness in the operation and/or maintenance of conveyance systems and appurtenances that deliver sanitary sewage to wastewater treatment facilities.

W. McLEAN BINGLEY AWARD FOR WASTEWATER TREATMENT

Impacted, significantly, the administration, operation, and/or maintenance of a wastewater treatment facility and displayed exemplary commitment to the fundamental principles governing the treatment of wastewater and protection of the water environment.

DISTINGUISHED SERVICE IN RESIDUALS MANAGEMENT

Contributed significantly to the administration, operation and/or maintenance of a sludge management system, including (but not limited to) incineration, composting or sludge disposal operations.

MARLENE PATILLO LABORATORY AWARD

Contributed significantly to the administration or operation of a water, wastewater, or solids handling laboratory, or demonstrated technical excellence and problem-solving creativeness worthy of peer recognition.

DISTINGUISHED SERVICE IN INDUSTRIAL WASTE MANAGEMENT

Impacted, significantly, the administration, operation and/or maintenance of an industrial wastewater facility AND displayed a commitment to the principles governing the treatment of wastes.

STANLEY KAPPE TRAINING AWARD

Contributed immeasurable time, energies and resources, above and beyond their normal job duties, to provide educational and vocational training to environmental systems professionals.

WWOA AWARD FOR OUTSTANDING PERSONAL SERVICE TO THE ASSOCIATION

Contributed extraordinary personal service of a continuous nature to the Association, which enhanced the management, principles, operation, or professional and community standings of the Association.

WWOA LIFE MEMBERSHIP AWARD

This individual has been able to provide continuous membership of 25 years or more to the Water and Waste Operators Association. Documentation of this membership could include past membership cards, membership verification through membership Chairperson or canceled checks to the Association.

WWOA EMPLOYER RECOGNITION AWARD

This award is a small token of appreciation from WWOA for your employer. It is provided should you have been fortunate enough to be able to provide services to WWOA on one of the numerous committees or as a board member.

FOR ALL YOUR COLLECTION SYSTEM NEEDS

TV INSPECTION

FLOW MONITORING

SMOKE TESTING

BUILDING INSPECTION

WATER QUALITY SAMPLING

DYE STUDIES

MANHOLE INSPECTION

3700 Koppers Street, Suite 119
Baltimore, MD 21227
410.368.4051
www.savinengineers.com



IMPROVING QUALITY OF LIFE



GREELEY AND HANSEN

Designing for better urban environments

water supply and treatment
water storage, pumping and distribution
water reclamation and reuse
water and wastewater residuals management
wastewater collection, treatment and disposal
utility management consulting
watershed management
program management

www.greeley-hansen.com

Landover, MD ■ 301-552-4027

Richmond, VA ■ 804-355-9993

Springfield, VA ■ 703-922-4516

Norfolk, VA ■ 757-455-2212

Wilmington, DE ■ 302-428-9530

real vision
Inspiring
reality

- Water Treatment
- Regulatory Compliance
- Systems Improvements
- Master Planning

Visualize the future.
Then call PBS&J.

Offices throughout the US

pbsj.com • 800-697-7275



“Doing It For The River”

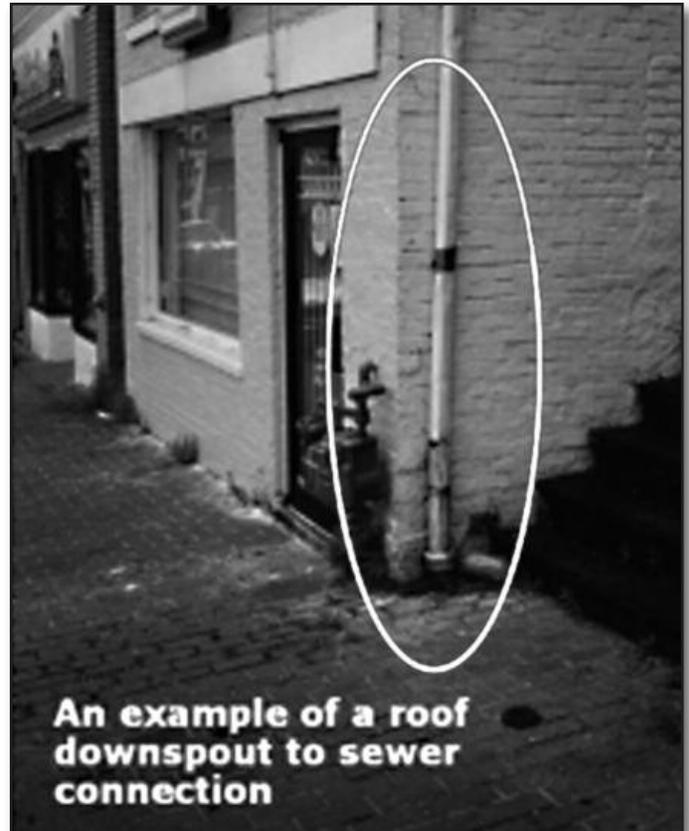
Good Neighbor Approach Nets DCWASA A Success

—By Paul Hlavinka, PMP, EIT

As public concern for the health of our nation’s rivers and waterways continues to have strong vocal support, our opportunity to solve problems ultimately rests on the involvement of these same often unwilling communities in a solution. When the EPA issued DC Water and Sewer Authority (DCWASA) a consent decree to separate the drainage basin and reduce combined sewer overflow (CSO) in the Fort Stanton drainage basin the solution was clear. DCWASA needed to separate the storm and sanitary sewers, and convert the existing combined sewer into a sanitary sewer. What was less clear was how to get the community buy-in and implement the project within the EPA guidelines.

A quick analysis of the watershed for ‘Outfall 006’ reveals a fairly small area of 13.5 acres. Most of the area drains to public streets. Due to the housing density however, a large portion (nearly 4.65 acres) of the drainage area was made up of private building roofing. These building downspouts connected directly to individual sewer laterals. Based on the max flow in the sanitary sewer, it was determined that 40% of the roof area needed to be removed from the sanitary sewer to meet the flow requirements and satisfy the consent decree.

DCWASA serves some 500,000 residential, commercial and governmental customers in the District of Columbia, and also collects and treats wastewater for 1.6 million customers in Montgomery and Prince George’s counties in Maryland and Fairfax and Loudoun counties in Virginia. The number of customers impacted by this project was fairly small in comparison to this broad customer base. Thus, when Jodye Russell, Planning Section Supervisor of DCWASA, was given the responsibility to carry out this project she understood that she would have limited resources. To be successful she would need to be creative in planning and executing this project. She had teamed with the engineering support of Mike Thorstenson of Greeley Hansen to evaluate the options for the project. The initial survey of the neighborhood confirmed that a simple downspouts to splash blocks approach was not permissible without extensive property re-grading. They also began to understand that the community wasn’t overly excited about participation in the initiative. One Ward 8 resident told the team to “Keep your toes off my property.”



A review of what other communities had done determined that private separation without incentives would not be successful. The initial thought was to take options such as cash payout, water bill credits, gift certificates or other financial incentives to the individual property owners and use this as leverage to participate in the project. This at first blush appeared to have merit. Councilman Marion Barry had told developers “When you come to my community, don’t come empty handed.” However, based on the initial community response, the required incentives were believed to be significant. After careful consideration by DCWASA, it was determined that this wouldn’t be successful. A new approach tailored to the community needed to be identified.

To communicate the message to the community, a series of public meetings were planned. To engage with the residents, a good turnout was vital. Brochures were distributed and door hangers with meeting announcements were distributed. Follow-up phone calls were made to encourage attendance. They went as far as offering transportation to the meeting, providing din-

ners and setting up a child activity table during the actual meeting. However this was not enough to convince folks to open their properties to the project.

It was recommended that a more intense 'Up Close and Personal' campaign was required to get residents to sign up. This would take an incredible effort. The idea was to set up Clean River Action Teams, made up of volunteers from DCWASA, who would make appointments to visit resident's homes in the community. The teams were to be made up of one male and one female. In order to be successful, enough volunteers to take on this project would be required. The response from DCWASA staff was very positive, and they were able to get about a dozen volunteers to help with this canvassing effort.

The teams were brought up to speed to fully understand the project and the impact on homeowners. Toolkits were provided to volunteers so that they would have the materials essential to explain concepts and details to the residents. They were taught how to use the toolkits and involved in the planning to make these visits. The team adopted a catchy phrase "Doing it for the River," and were provided shirts as a uniform when they would visit with the community.

Mailings were sent to the property owners or tenants to schedule home visits. The appointments were offered during the daytime, evenings and weekends. When the appointments were made, the Clean River Action Team members would arrive when scheduled and meet the members of the household. They would then make use of their toolkits. One of the items in the

toolkit that proved real effective was a tabletop flip-book that could be presented during the visit. Great effort was put into making sure the presentation materials and message would appeal to all members of the household. The toolkit also included survey forms for the team to use. At the end of the visit, there was a nice gift provided to the hosts. These gifts were made up of a simple but effective chocolate "Hug and a Kiss." As a final touch, the team sent a thank you card to express their appreciation of opening the home.

After the teams had canvassed the homes, they only had 25% of the required agreements. This wasn't real heartening. At that time, they could have requested a mandate for separation. However, they decided to continue with their approach of being good neighbors. They approached Councilman Marion Barry for his support and he provided a letter requesting support. The team again went door to door with this letter and another 25% of the community signed up. Note that telemarketing wasn't working with this neighborhood, and the close connection with the community was required for a positive response. Finally, a traditional cover letter approach was sent out to the remaining community members with self addressed envelopes, and the last stragglers required were successfully acquired.

Appointment Reminder for your use

Day of the Week _____

Date _____

Time of Day AM or PM

I Did It! from the Clean River
Anacostia River

More than \$6 million in new water and sewer work is coming soon to your neighborhood.

We need to meet with you at your property to make these improvements happen!

Make your appointment today by calling 202-244-1200 to pick a time that's good for you, or you can e-mail us at CleanRiver@dcwasa.com.

WASA's Clean River Action team looks forward to meeting you!

Thank you for meeting with WASA's Clean River Action Team.

If you have any follow-up questions or want to reconsider your decision, we welcome your support. Please call us at 202-244-1200, or e-mail us at CleanRiver@dcwasa.com

Thank you!

DCWASA

"Doing it for the River" is a significant case study. This project's unique approach provides several lessons to be considered when working with the public. Success requires optimism that the project will achieve the goals even with a skeptical community and limited budget. Involving volunteer team members from the organization can provide positive results. In the end, the good neighbor approach used can pay off and provide the required support of the community to meet the goals of the utility. After all, in the final analysis, all stake holders are "Doing it for the River."

Paul Hlavinka is a graduate student at UMD and AWWA Chesapeake Section (CSAWWA) Government Affairs Committee member.



**BEST WASTEWATER NITROGEN
REMOVAL TECHNOLOGY**

**TOTAL NITROGEN < 5 mg/l
Averaging 3 +/- mg/l**

**APPROVED IN STATES OF MARYLAND,
DELAWARE & VIRGINIA**

For More Information Contact:
Lombardo Associates, Inc.
617-964-2924
Pio@LombardoAssociates.com
www.LombardoAssociates.com

BUILDING A WORLD OF DIFFERENCE®



In our world, it's all about water: the best and most advanced ways to move it, control it, clean it, conserve it. If you're looking for resourceful water solutions, peer into our world. We know water.

weknowwater@bv.com www.bv.com



BLACK & VEATCH
Building a world of difference.

The Answer to ALL Your Blower Needs!

- Complete Blower Packages
- Noise Attenuating Enclosures
- Custom Design & Fabrication
- Blower Parts & Accessories

Excelsior Blower Systems, Inc. is the Gardner Denver Authorized Distributor and Warranty Center for Sutorbilt, Duroflow, Cycloblower, Triflow and Heliflow models. As one of the nations largest blower package

manufacturers, we have the proven experience of thousands of installations throughout the country. Responsive design, sizing and specification capabilities are available to all engineers.

- Blower Service & Repair
 - SutorBilt
 - Duroflow
 - Hoffman
 - Gardner Denver
 - Aerzen
 - Roots
 - Lamson
 - MD-Pneumatics
 - Spencer
 - Others
- Our factory trained technicians are available for:
 - Removal and installation
 - Onsite repairs
 - Pick-up and delivery
 - Preventive maintenance contracts




Excelsior Blower Systems, Inc.
www.excelsiorblower.com

Contact Brett Jorgensen: Office: 410-654-1056 ■ Cell: 410-935-6638 ■ Fax: 410-654-1057 ■ brett@excelsiorblower.com



Problems In Your Sewers? Too much I/I causing surcharging?
Broken pipe pieces blocking flow? Roots clogging the connection?
Too much grease stopping flow?

But you can't do anything because the problems come from private lateral lines?

Visit the Private Property Virtual Library (PPVL) to see what other utilities
with successful private property programs are doing:

www.wef.org/PrivateProperty

Read program summaries. Download examples. Get peer contact information.



Developed by the WEF Collection System Committee

On The Ground to Meet Your Utility Needs

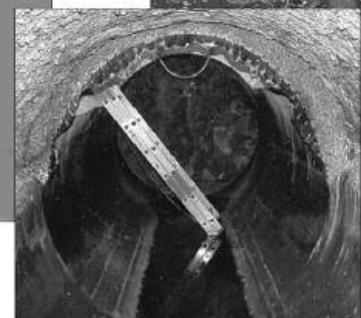
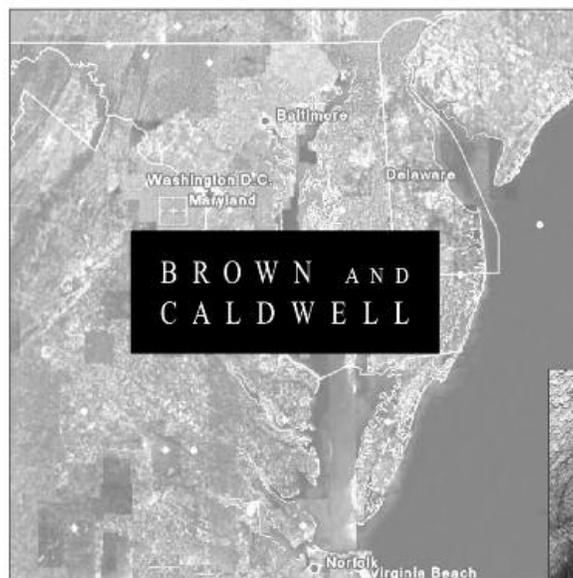
Beltsville, MD

Alexandria, VA

Virginia Beach, VA

Specializing in:

- Enhanced Nutrient Removal Design
- Biosolids Management and Treatment
- Electrical Process and Automation Services
- Asset Management
- Pipeline Rehabilitation
- Sewer System Evaluation Surveys
- Wastewater Treatment Plant Upgrades
- Energy Recovery
- Water and Sewer Modeling



www.browncaldwell.com
Telephone: 301.273.2170

Plant Profile: Fahrney-Keedy WWTP

—By Chip Wood, P.E. Ecoletter Staff

Fahrney-Keedy Home and Village is a home for the elderly and is situated at the base of the western side of South Mountain in Washington County. Having no public sewer system in the area, the home has established its own wastewater treatment plant. Maryland Environmental Service is contracted to operate and maintain the plant.

If you would happen to drive or walk past the plant, you would not know that you were in proximity to a wastewater treatment plant unless you were previously informed that the plant was there. The plant works are artfully housed in a building made to look like a residential ranch house.

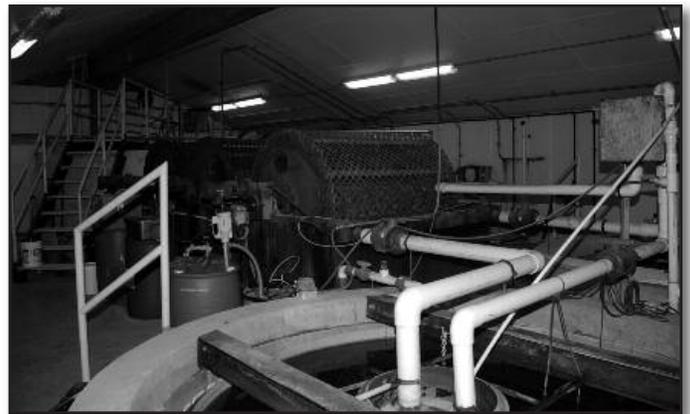


Single Story Ranch House Building Which Houses the WWTP

The current plant employs a process known as the “Geoform Attached Growth Biological Reactor Systems.” Average daily flow is about 25,000 gallons-per-day (gpd) with a plant design capacity of 50,000 gpd. NPDES Permit limitations include, BOD of 30 mg/l on a monthly basis and maximum of 45 mg/l on a weekly basis; SS limit numbers are same as BOD. Ammonia limits from May thru October are 1.5 mg/l on a monthly basis and 6.1 mg/l as a daily maximum. Ammonia limits from November thru April are 2.8 mg/l monthly and 6.1 mg/l as a daily maximum. Fecal Coliform limit is 200 MPN; and DO has a minimum of 5.0 mg/l. pH limits range from 6.5 to 8.0 The source of influent flow is solely from the Fahrney-Keedy home complex. In 1999, the Geoform process was put into operation, but over the years MES has had to perform rather extensive modifications to get the process working well.



Grates Over Two Aeration Tanks



View of Plant Interior—One Secondary Clarifier is in Foreground, three Geo Reactor cylinders are in middle, Bridge Over Former Primary Clarifier is in Background

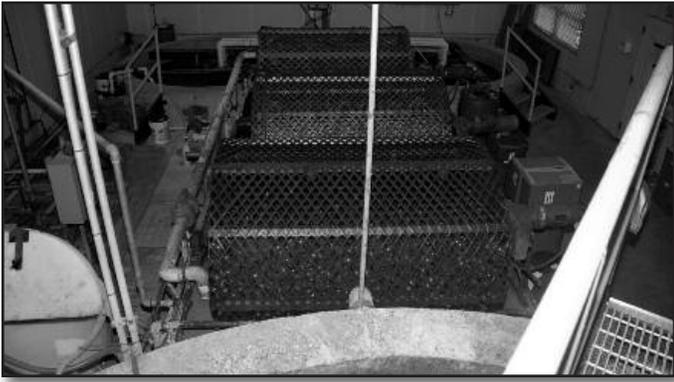
Originally, the plant design called for the raw influent flow to go to two aerated equalization tanks, after which grinder pumps pumped the equalized effluent to the one primary clarifier. No grit removal or comminution processes were provided. Effluent from the primary clarifier becomes influent flow to the Geoform or Geo-Reactor (GR) unit. The GR unit consists of a row three cylindrical-shaped drums situated in a steel tank which is made into three separate zones using two baffle walls. One wall is situated between the first and second drum and the second wall is between the second and third drum. Each of the three drums occupies the space in one zone. Thus three distinct treatment zones are established. The bottom half of all the three drums is immersed in the liquid to be treated. The upper half of the three drums is exposed to the ambient air. Effluent flow from the primary clarifier is channeled into the GR unit wherein the flow then goes thru the three GR zones as a series process.

Each cylindrical-shaped drum has screened walls and has an electric motor that continuously rotates the drum on its axis which is mounted in a horizontal plane. Each drum is filled with “media cups” to about two-thirds of the diameter of the cylinder. Media cups are made of thin plastic and are very similar in size and appearance



to the birdies used in badminton games. Each cup provides about 70 square inches of surface area for media growth. As the liquid flows into a zone, the liquid goes thru the screened walls of the rotating cylinder

Media Cups—Each cup provides about 70 square inches of surface area.



View From Bridge over Former Primary Clarifier. Three GR unit reactors are shown with two secondary clarifiers in Background.

and comes in contact with the media which is attached to the outer surfaces of the media cups. As the cylinder rotates, the media cups are in a continual tumbling motion. Also, as the cylinder rotates, most of the media cups are submerged, but some are exposed to the ambient air. After the treated liquid moves away from the media, the liquid flows out of the cylinder and goes on to the next zone. The effluent from the third zone or cylinder is split to become the influent to the two secondary clarifiers. Thus, unlike a conventional activated sludge process which employs "suspended growth" in one aeration tank to make a "complete-mix" process, the GR unit employs "attached growth" in a three-step, series process.



Side View of Former Primary Clarifier Now Used as a Reactor Clarifier

Very soon after the GR unit went into operation, the plant operators realized that they had to introduce coagulant to the third zone of the GR unit. The coagulant was needed to aggregate the particles that come from the media growth sloughing off. Without the coagulant addition, the media particles are too small to settle out in the secondary clarifier, so the NPDES BOD and suspended solids permit limits would be exceeded.



Liquid Coagulant Addition Equipment

Clarified secondary effluent goes on to an ultra-violet disinfection unit and then to post-aeration and then

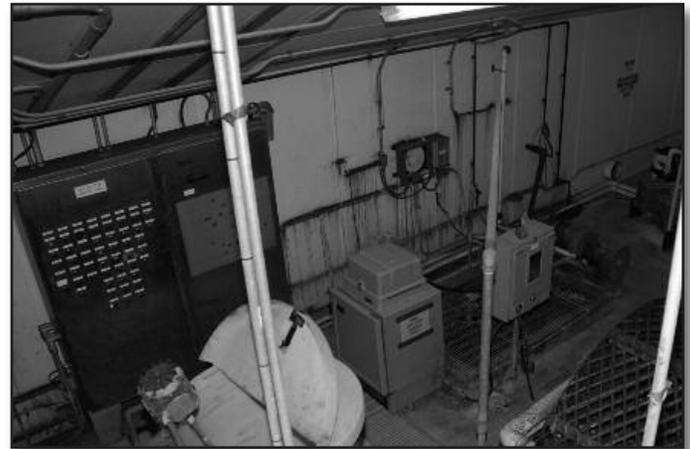


Two Blowers for Activated Sludge Process

to final discharge into a stream tributary of Little Beaver Creek. The plant has no final filtering process.

At sometime later after the GR unit went into operation, the limit for NPDES ammonia nitrogen was decreased. Although the GR unit could meet BOD limitations satisfactorily, the GR unit could not meet the new nitrogen limits. This necessitated MES to make a major modification to the process. The two raw influent aerated equalization tanks were modified to operate as two conventional activated sludge tanks. Settled sludge from the one primary and two secondary clarifiers is sent as return sludge to the two aeration tanks to form a recirculation loop. With this arrangement, the majority of the BOD and ammonia removal takes place in the aeration tanks, thus relegating the GR unit to function merely as a polishing treatment.

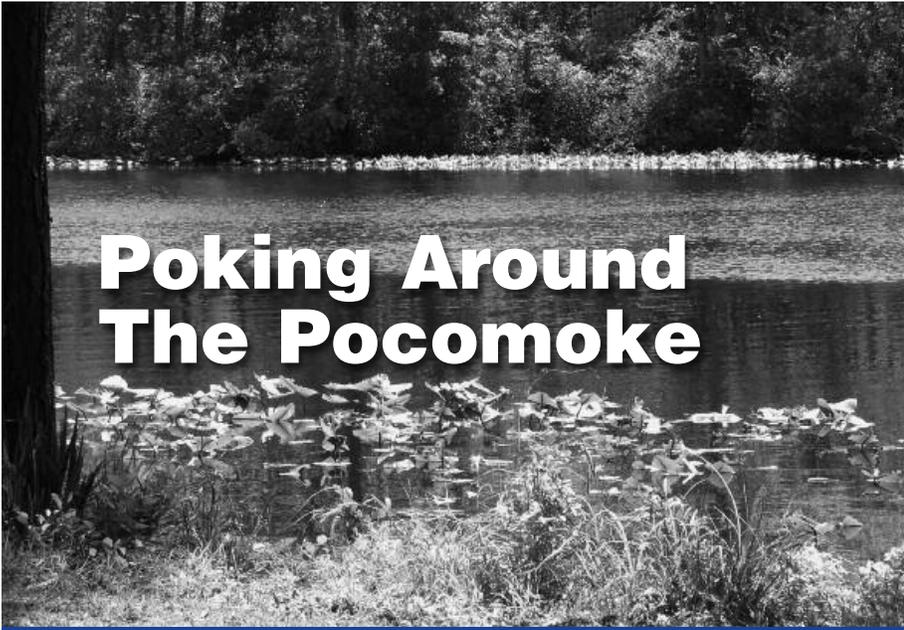
Settled sludge from the three clarifiers is either sent to the aeration tank for activated sludge recirculation or wasted to an aerated sludge holding tank. Periodically, the aeration in the holding tank is turned off, the sludge is settled, the liquid on top is decanted and the remaining sludge is hauled away.



Plant Main Control Panel

Alarm sensors at the plant relay alarm signals to an auto-dialer that calls up the plant operators. Plans for the future include replacing the GR unit process with a sequencing batch reactor process.

The author would like to thank plant operator, Bob Barnhart for his assistance in preparing this information.



Poking Around The Pocomoke



—By *Floyd B. Johnson, Ecoletter Co-Editor*

There are many waters to discover and enjoy on the Delmarva, and the Pocomoke River is certainly one, particularly for anyone who appreciates nature at a slower pace. The river itself sets that pace as it deliberately finds its south bound way to the Bay as if to say “Take your time, take me in and you’ll be rewarded.”

More than anything, water defines and shapes Delmarva, yet to write of a peninsula river is to conduct a curious descriptive exercise. When one thinks of a river, a long, narrow body of water originating in high places and flowing to the sea (or an even larger river) comes to mind. Discard that kind of thinking with Delmarva rivers, where geography imposes otherwise. The highest point in all of Delmarva is 102-foot-high Still Pond Neck along the Chesapeake Bay just south of the Sassafras River and no point on the entire 5,454 square mile landmass is more than 35 miles from the Bay or Atlantic. The liberal use of the word “river” is another matter. Tiny bodies of water such as the Tred Avon, Manokin, Blackwater and Bohemia achieve river status where elsewhere the best they could hope for would be “creek,” with the prize for overstatement going to the Annemessex, which comes in nine mile long, “Big” and four mile long, “Little” designations.

As Delmarva rivers go, the largest water body is the Choptank. It drains 795 square miles of land, and carries the most fresh water. An interesting feature of the Choptank and other Delmarva rivers is how much the watershed size increases if open water is included. Including water, the Choptank watershed is 1004 square miles. Deciding where a river stops and the Bay begins is a matter of judgment and a reason to reject length as a ranking criterion. Based on flow, the title of runner up goes to the Nanticoke with the second runner up going to the Pocomoke. However, a closer look

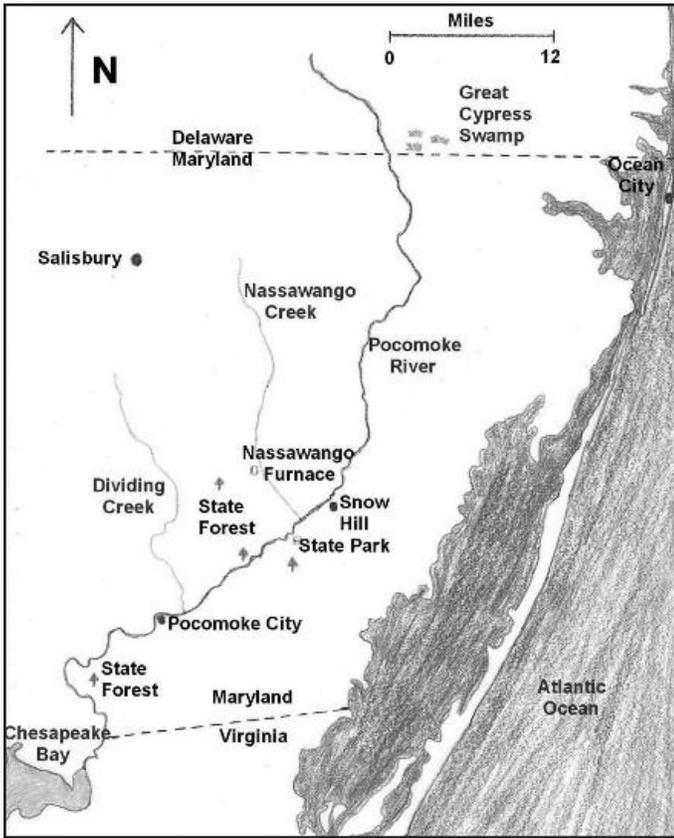
at the latter river will show that regarding it as a runner up to anything is misguided.



The Pocomoke at Porters Crossing.

Pocomoke, “black water” in Eastern Algonquian, is the easternmost and southernmost of the major Delmarva rivers and the only one that touches all three peninsula states. If the saying that there’s no civilized life west of the Chesapeake Bay is taken as fact, then a corollary of sorts should be added that something similar could be said of the area east of the Pocomoke. The short 12 miles between Ocean City and the river are in reality a sharp contrast between two worlds. Above all, location makes the Pocomoke a unique river. Running parallel to the Atlantic Ocean for much of its approximate 70-mile length, a moderating coastal climate is cast upon it.

In the 336 square miles of land that the Pocomoke drains, human activity is considerable. Over one third of the watershed is used for agriculture, with poultry operations prevalent, and approximately 49,000 people are residents. The Pocomoke is blessed with streamside



Ditched stream called the Pocomoke near Lowes Crossroads.



The real start of the river at the confluence with the Cowhouse Branch.

buffers that are an important component in achieving and maintaining good water quality; but the runoff and residue from the agricultural activities and developments during storms (the Willards stream gage in the upper watershed with an average flow of 34 million gallons per day has seen flows approaching 2 billion gallons per day) can overwhelm the filtering ability of wetlands, swamps and trees and adversely affect river water quality. Unfortunately, this is a common story throughout the Chesapeake Bay region.

Great Cypress Swamp is cited as the source of the Pocomoke. That might have been the case before Europeans settled in the region, but it is a misnomer now. The current source is near Lowes Crossroads in southern Delaware farmland, and not what is left of the

Great Cypress Swamp. This farmland was created years ago by ditch draining, a common practice of interior Delmarva wetlands. Elsewhere, birthing areas of streams and rivers are usually remote and untouched, but on Delmarva evidence of the human hand's long term touch is all too common.

The northernmost extensive Bald Cypress swamps in the U.S. are found here. Bald Cypress, a source of



USGS gauging station (right side of guardrail) at Willards, Md.



Bald Cypress islands.

Continued on page 36

Pocomoke

Continued from page 35

the dark coloring of the water and one of the longest living trees, can live a millennium. Because of extensive logging, most of the mature Bald Cypress trees in the Pocomoke watershed are around 130 years old. Even near the river's headwaters, between Millsboro and Laurel and up above the Transpeninsular Line, this tree inhabits forest areas.

The Transpeninsular Line not only serves a political boundary between Delaware and Maryland but also dissects the peninsula into equal parts north and south, and acts like a belt on the Delmarva's thick middle-section. The eastern marker of the Line is near 146th Street in Ocean City and the western political point is the original Mason Dixon monument where the Delaware border turns north. The official completion of the Line extends further west another 30 miles until meeting the Chesapeake just south of the mouth of the Little Choptank River.

A small bird also certifies the Pocomoke's status as a northernmost outpost of the south. Swainson's Warbler (*Limnothlypis Swainsonii* Audubon) a rare, forest breeding, southern songbird has been spotted in the watershed. Despite singing a loud song, this bird was not heard this far north until 1942. Many of the sightings were in either the Hickory Point or Great Cypress Swamps. While Swainson's Warblers continue to live further south, sadly there have been no further sightings in the Pocomoke area since the late 90's.

While the Pocomoke isn't the biggest Delmarva river, it garnered a more important distinction in 1971 when it became the first river to be designated "Scenic" by the State of Maryland. There are only two towns, Pocomoke City and Snow Hill, on the river and much of the land along the river between those towns is in public hands either as Pocomoke River State Park, State Forest or Wildlife Management Area. Over 75% of all of the river's banks are protected by swamp or forest. When traveling on the Pocomoke's waters, it can be easy to forget where you are or how close by the built-up world is. However, that world is certainly part of the river's watershed.

Twenty-seven years after being designated Scenic by Maryland, the Pocomoke received a most unwelcome recognition by the American Rivers organization. As the result of the infamous Pfiesteria outbreak, American Rivers called the Pocomoke the third most endangered river in the United States. The bad news is that despite considerable study and research, no one really understands what caused the naturally occurring microorganism to switch to a toxic cycle that played havoc on aquatic species and humans (The *Ecoletter* devoted much of the Fall 1997 issue to Pfiesteria). The

good news is that there have been no more Pfiesteria outbreaks in Pocomoke or the Chesapeake Bay since 1997, and measures to improve wastewater treatment and agriculture activities are in place to reduce the risk of toxic Pfiesteria reappearing.

Nine years prior to the Pfiesteria scare, another event shook people up for an entirely different reason. On August 17, 1988, an 85-foot section of the Market Street Bridge over the river in Pocomoke City collapsed. The cause of the failure was deterioration of timber piles supporting the bridge, likely from a combination of the abrasive effects of tidal forces and insect infestation of the wood. Fortunately there were no injuries, and the nearby Rt. 13 Bridge handled traffic until repairs were completed.



Market Street Bridge with Rt.13 bridge behind.

The tide runs out just above Snow Hill, a former ocean going port, making half the river length at sea level. A prominent feature of the Pocomoke is its depth, which averages approximately 15 feet and can be as deep as 45 feet. No other river in the United States of comparative width is as deep. It's as if Mother Nature built a canal, the result being that the only dredging of any scale was done not in the river but in the shoals and sands of Pocomoke Sound.

Nassawango Creek, which flows into the Pocomoke downstream of Snow Hill, is the river's largest tributary. Unusual among streams, the highest population in the watershed is in the headwaters area, near Salisbury's eastern suburbs. But south of Mt. Hermon Road and continuing the rest of the way to the Pocomoke, the creek is protected by almost unbroken streamside buffers. An interesting characteristic of the Nassawango basin is some of the largest bog iron formations in all of Delmarva. The Furnace Town Foundation and Nature Conservancy have restored the 1830 Nassawango Iron Furnace, making it the oldest surviving American furnace that used the Hot Blast method to produce pig iron. Powered by a waterwheel, a bellows blasted air into the furnace, which increased iron making efficiency. Operating a waterwheel in this



Eastern Painted Turtle, a common aquatic sight.

swampy, slow flow, coastal plain area required determined work. An upstream dam was needed to elevate the water to feed a long headrace to the wheel. After rotating the wheel and also powering grist and saw mills, water was returned to the stream by a second long channel called a tailrace. While iron is no longer mined and processed in the Pocomoke watershed, bog iron is still being naturally produced as evidenced by perpetually turbid waters caused by the leaching of the high iron concentration groundwater into streams.

Dividing Creek, which comes in just upstream of Pocomoke City, is the only other tributary of any magnitude. A common name for streams (there's one in New Jersey and close by in Northern Neck Virginia), Maryland's Dividing Creek forms the boundary between Somerset and Worcester counties nearly its entire length. Only far upstream at Meadow Bridge Road does the

creek cease to separate the counties. At Worcester's gain and Somerset's loss, the completion of the county line follows the road and not the creek. Like Nassawango, the Dividing Creek watershed is composed of ample streamside buffers, low population densities and wonderful float-a-boat waters.

A good place to start exploring what the river has to offer is the newly opened Delmarva Discovery Center in Pocomoke City. Even if you don't find much time to travel or fish its waters, or visit places in the watershed, you can take in a dose of satisfaction knowing the Pocomoke will always be there and that despite over three centuries of intensive use and abuse, it is a testament to the resilience of natural eco-systems and can still offer plenty of splendor.

Roll on, Pocomoke. Roll on.



School kids at the Delmarva Discovery Center.

INFORMATION SOURCES

American Rivers

Delaware State Achieves

Furnace Town Foundation

Heckscher, Christopher M. and McCann, James M., Status of Swainson's Warbler on the Delmarva Peninsula, Northeastern Naturalist, 2006

Maryland Department of Natural Resources

National Transportation Safety Board report on bridge failure

Peakbagger.com

United States Geological Survey topographical maps

Ranked #3 Design Firm By *Engineering-News Record*

Proud Sponsor of CWEA

URS

(410) 468-0875
www.urscorp.com

Ted DeBoda
Baltimore Branch Manager
1800 Washington Blvd.
Suite 410
Baltimore, MD 21230

Water/Wastewater • Environmental • Construction Management

Providing solutions to your toughest
environmental challenges.



Engineers
Planners
Scientists
Construction Managers

www.kci.com
Employee Owned Since 1999

Contact Senior VP Tom Sprehe at (410)316-7800.

A new, supplemental Carbon
Source without the flammability
concerns of Methanol.

GLYCERIN,
a Biodiesel by-product,
is a clean, non-flammable,
easy-to-handle source of carbon.

Proven in numerous WWTPs and
comparable to Methanol on a
BOD/COD basis.

For Pricing and Details Contact:

Marty Goldberg

MAGIC 4 MAINTENANCE

807 Parkview Ave, Rockford, IL 61107
815-519-1491 • martyg61107@yahoo.com

MUNICIPAL



ENVIRONMENTAL MAINTENANCE SERVICES

- SANITARY & STORM
SEWER CLEANING
- LAGOON, PIT & POND
CLEANING
- DIGESTER & TANK
CLEANING
- HYDRAULIC DREDGING
- VACUUM REMOVAL
of WASTES & DEBRIS
- SLUDGE REMOVAL
- WATER BLAST
CLEANING
(up to 20,000 psi)
- SLUDGE DEWATERING
- BIOSOLIDS LAND
APPLICATION

Over 47 Years In Business!

All Operators 40 Hour Hazwoper Trained

GUARANTEED
You Must Be
Satisfied Or You
Pay **NOTHING**
for Our Services!



A CARYLON
COMPANY

MOBILE DREDGING & PUMPING CO.

The Environmental Protection Specialists

3100 Bethel Road • Chester, PA 19013-1488 • Fax (610) 497-9708

Call Toll Free **1-800-635-9689**

Perdue Powers Ahead at 2009 Biosolids Beauty Contest

The 2009 Biosolids Beauty Contest was held in Ocean City on Sep 2, 2009. Six samples were received from biosolids producers from around Maryland, Washington, D.C. and Delaware. Perdue Farms Incorporated of Georgetown, Delaware; Seneca, Damascus and Piscataway WWTP operated and maintained by Washington Suburban Sanitary Commission (WSSC), and Blue Plains wastewater treatment plant operated and maintained by DC Water and Sewer Authority (DCWASA) took part in this year's contest.

Due to lack of objectionable odors, appearance and texture, Perdue Farms biosolids was ranked #1. Piscataway and Seneca WWTP biosolids were ranked #2 and #3, respectively.

The Biosolids Committee would like to thank all our participants for bringing the biosolids for the competition and judges for doing a fabulous job of ranking them. The judges included Karl Ott and Michelle Cutler of Charles County, Jeanette Brown of Water Environment Foundation, Danny Coats of DCWASA, and Winfield McKell of WSSC. Each judge was asked to judge an anonymous biosolids sample, and rank the sample on a scale of 1 to 5, 5 being the best quality. The scores were then added up and the facility with the highest score was ranked no. 1.

Note: This article is being reprinted to correct errors in the Fall 2009 issue of Ecoletter.



Pete Thomson (Biosolids Committee), Jeanette Brown (WEF), Paresch Sanghavi (Biosolids Committee), Marilyn O'Neal (Perdue Farms)



2009 Biosolids Beauty Contest judges



Photos: Cynthia Lane

Heyward

INCORPORATED

Established 1908



Representing leading process equipment manufacturers with state of the art technologies for the water and wastewater industry



BÖRGER.



Komline-Sanderson



SIEMENS Water Technologies



TURBLEX

- AERATOR PRODUCTS
- GENERAL FILTER
- MICROFLOC
- STRANCO
- ENVIREX
- JWI
- SERNAGIOTTO
- WALLACE & TIERNAN



Ed Presnell Tel (301) 473-4700 Cell (301) 676-0917 Fax (301) 473-9555
 John Seaman Tel (410) 726-2960 Cell (410) 726-2960 Fax (757) 414-0253

Visit our website at www.heywardincorporated.com



O'BRIEN & GERE
www.obg.com

Water & Wastewater Solutions for Municipalities, Authorities, & Agencies



For more information:
 Farah Foster
fosterf@obg.com
 (757) 285-8116

MARYLAND Landover Hunt Valley
 VIRGINIA Virginia Beach Richmond
 NORTH CAROLINA Raleigh Fayetteville
 with 28 offices throughout the U.S.

McCRONE

ENGINEERS • SURVEYORS • PLANNERS

Evaluation, Design, Construction Services

- Wastewater Collection: Pump Stations, Various Collection Technologies
- Infiltration and Flow Analysis
- Wastewater Treatment: Activated Sludge Sequencing Batch Reactors, Membrane Bio Reactors
- Wastewater Disposal: Surface Discharge, Innovative Septic and Land Application Systems, Drip Irrigation, Subsurface Disposal
- Industrial Waste Treatment Systems



McCrone is a full service environmental and civil engineering firm. We are proud to have several LEED APs on staff and we are an active member of the USGBC.

Contact us for all your engineering needs.

Annapolis • Centreville • Dover • Elkton • Richmond • Salisbury • West Grove
www.mccrone-inc.com • 410-267-6947 • annapolis@mccrone-inc.com



Maybe It Is Time. . .

—By William J. Bertera, Executive Director Water Environment Federation

As the deadline for the United Nations' millennium development goals for water and sanitation draws closer it becomes increasingly certain that we will not achieve even the modest intent of cutting in half the number of people in the world without clean drinking water and adequate sanitation. The United Nations' Year of Sanitation passed with hardly a notice and the Fifth World Water Forum occurred in Istanbul and barely made a ripple. And then there is global warming and climate change and the threat they pose for the very existence of everyone and everything on the planet. But the most obvious environmental threat facing us all is the absence of leadership globally and here in the United States specifically.

We in the water community can do little about issues of global interest when we cannot or are unwilling to talk with one another. . . and then to do what is necessary to serve what is clearly in the public interest. In this instance, it is clearly in the public interest that the professional water community find a way to speak with a single, authoritative and unambiguous voice on the issues of the day as they relate to water, sanitation, public health and environmental protection. The costs of not doing so are both obvious and unacceptable.

Those costs include something worse than bad public policy decisions. . . they encourage making no decisions at all. Precious time is being irrevocably lost and options narrowed as a result. And while the implications for us here in North America are serious, they are not lethal as they are in much of the rest of the world, especially that part of it that we refer to as "developing." In truth, the list of countries that are not developing is not diminishing. . . nation states that hardly warrant the name. . . poverty stricken, ungovernable tracts welcoming only to terrorists and worse.

The United States has spent much of its history attempting to separate itself from the consequences of its good fortune, its wealth and its economic and political influence. We are doing so today with respect to water and sanitation. Unfortunately or not, the decision is not conscious. We have not decided to "not lead." We have simply chosen not to do that which is required to make leadership possible. Making leadership possible requires a critical mass, a critical mass which is otherwise available within the water community, but is diffuse under the

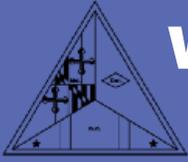
cloak of a score or more competing associations.

It is not just that there are too many professional water associations in the United States. . . there certainly are. The problem, however, is not only in their numbers, but that their very existence works against the public interest. They have become part of the problem rather than the solution. Instead of becoming clarion voices for adaptation and change, some protect the past as though it were not only today but the future as well. It is not. Drinking water and what we used to call wastewater are not separate sciences, technologies or industries. They never have been. . . we just did not know it until relatively recently. Now that we know it, not recognizing it is unconscionable.

It is abundantly clear that our existing institutions are not capable of adapting to the needs of the changing world of water without some help. . . some help from outside the confines of their corporate logos and bureaucracies. The petty disputes between the largest of our organizations at both the state and national levels indict us all and seem exacerbated rather than mitigated by the current economic crisis that has enveloped our national psyche. We need a path forward. . . badly.

Each year, for the past several years, under the initial leadership of the American Water Works Association, and then with the endorsement of many but not all of our leading water associations, we have held an annual "summit" in Washington. The summits are a wonderful idea, but they have been less than fully worthwhile. Little has been accomplished that really matters. . . no strategic understandings or decisions reached. . . just conversation that is readily lost within a year as the leaders of all the organizations change yet again and a new crop of leaders takes the helm of their respective organizations. No continuity, no horsepower, no change and therefore, no progress. That itself needs to change. Here is an idea. . .

It is time to move the conversation "up a notch" as a famous celebrity chef often suggests. It is time not only to engage the leading organizations of the water community, but the leading leaders of the water community as well, from both the public and private sectors. Maybe what we need is a real national summit of senior public officials and CEOs. Maybe what we need is a White House Summit on Water and the Environment. Maybe this is something we could all agree upon and on which we could work together. Maybe that would be a real beginning.



WWOA Executive Board and Committee Chairs for FY 2009–2010

PRESIDENT

Duane McCoy
202 787-4158
duane.mccoy@dcwasa.com

PRESIDENT-ELECT

Rose Cline-Lowe
302 236-9221
rosedrwa@yahoo.com

VICE PRESIDENT

Russ Sharpe
301 498-5678
russSharpe@msn.com

PAST PRESIDENT

DuWayne Potter
301 863-5143
dpotter@metcom.org

TREASURER

Mike Emery
240 687-3151
mikeemery@comcast.net

SECRETARY

Janet Owens
202 787-4197
janet.owens@dcwasa.com

DELAWARE TRUSTEE

Samuel Allen
302 422-6141
samuel19960@aol.com

MARYLAND TRUSTEE

Kristy McAndrew
301 609-5606
mcandrel@charlescounty.org

DC TRUSTEE

Melvin Keys
202 787-2378
melvinkeys2153@aol.com

EASTERN SHORE SECTION

William Jones

CENTRAL SECTION

Morgan Turner
301 206-7550
m.turner@wsscwater.com

SOUTHERN SECTION

Joe Whittaker
301 609-5616
whittakerj@charlescounty.org

WESTERN MD SECTION

Bruce Darner
240 674-8936
bdarner@ci.middleton.us.gov

AWARDS

Danny Coats
202 787-4046
dcoats@dcwasa.com

BY-LAWS

Sharita Lyle
202 787-4191
slyle@dcwasa.com

ECOLETTER CO-EDITOR

Floyd Johnson
202 379-6085
crittonrun@hotmail.com

EDUCATION

Sharita Lyle
202 787-4191
slyle@dcwasa.com

FINANCE & BUDGET

Mike Emery
240 687-3151
mikeemery@comcast.net

MEMBERSHIP

DuWayne Potter
301 863-5143
dpotter@metcom.org

NOMINATIONS

Rose Cline-Lowe
302 236-9221
rosedrwa@yahoo.com

CONFERENCE

Rose Cline-Lowe
302 236-9221
rosedrwa@yahoo.com

PUBLIC RELATIONS

Winfield McKell
301 206-7550
wmckell@wsscwater.com

SHORT COURSE

Marshall Phillips
410 396-9815
marshall.Phillips@
baltimorecity.gov

MD CERT.LIAISON

Don Sprinkle
410 313-4970
dsprinkle@co.ho.md.us

DEL CERT.LIAISON

Sarah Smith
302 227-7801
grannylewsmith@yahoo.com

DC CERT.LIAISON

Clarence Gilliam
cgilliam@dcwasa.com

TRE COMMITTEE

Michelle Cutler
301 609-5603
cutterm@charlescounty.org

STRATEGIC PLANNING

Sharita Lyle
202 787-4191
slyle@dcwasa.com

WEBPAGE

Anthony Rocco
410 313-4997
arocco@howardcounty
md.gov



CWEA Officers, Committee Chairs and Vice-Chairs for FY 2009–2010

CWEA BOARD OFFICERS

PRESIDENT

Hiram Tanner

Manager, Sewer Pumping
125 O Street, SE
Washington, DC 20003
W/ 202 264-3861
F/ 202 264-3871
hiram.tannerjr@dcwasa.com

PRESIDENT-ELECT

Craig W. Murray

Malcolm Pirnie, Inc.
111 S. Independence Mall East
Suite 1010
Philadelphia, PA 19106
W/ 215-931-4344
F/ 215-625-0172
CMurray@PIRNIE.COM

VICE PRESIDENT

Ted DeBoda

URS Corporation
1800 Washington Blvd.,
Montgomery Park, Suite 320
W/ 410-468-0875
F/ 410-468-3259
Ted_DeBoda@urscorp.com

PAST-PRESIDENT

Aaron Nelson

Brown & Caldwell
295 Bendix Road, Suite 100,
Virginia Beach, VA 23452
W/ 757-518-2410
C/ 757-493-1528
ANelson@BrwnCald.com

SECRETARY

Carlos Espinosa

KCI Technologies
936 Ridgebrook Road
Sparks, MD 21152
W/ 410-316-7858
C/ 410-937-6922
F/ 410/316-7935
Carlos.Espinosa@kci.com

TREASURER

Tim Wolfe

KCI Technologies
936 Ridgebrook Road
Sparks, MD 21152
W/ 410-316-7849
C/ 443-465-8839
F/ 410-316-7935
Timothy.Wolfe@kci.com

TRUSTEE—MD

Laurie Perkins

RJN Group
1589 Sulphur Spring Road
Suite 107
Baltimore, MD 21227
W/ 410-242-3838
F/ 410-242-3840
lperkins@rjn.com

TRUSTEE—DC

Salil Kharkar

DCWASA
5000 Overlook Ave. SW
Washington, DC 20032
W/ 202-787-4146
F/ 202-787-4226
skharkar@dcwasa.com

TRUSTEE—DE

Carrie DeSimone

CABE Associates
144 South Governors Ave.
Dover, DE 19904
W/ 302-674-9280
F/ 302-674-1099
cds@cabe.com

WEF DELEGATE

Jon Doane

Black & Veatch
18310 Montgomery Village Ave.,
Suite 500
Gaithersburg, MD 20879
W/ 301-921-2866
C/ 240-449-9158
F/ 301-921-2862
doanejw@bv.com

WEF DELEGATE

Ray Schulte

KCI Technologies
10 North Park Drive
Hunt Valley, MD 21030
W/ 410-316-7982
C/ 443-610-1740
F/ 410/316-7935
Ray.schulte@kci.com

PWO REPRESENTATIVE

Sam Amad

Washington Suburban Sanitary
Commission
12600 Great Seneca Highway
Germantown, MD 20874
W/ 301-206-7903
F/ 301-206-7920
OAMAD@WSSCWATER.COM

COMMITTEE CHAIRS & VICE-CHAIRS

AWARDS CHAIR

Russ Sharpe

7614 Stratfield Lane
Laurel, MD 20707-5501
H/ 301-498-5678
C/ 301-518-1722
RussSharpe@msn.com

AWARDS VICE CHAIR

David Kappe

Kappe Associates, Inc.
100 Wormans's Mill Court
Frederick, Maryland 21701
W/ 301-846-0210
F/ 301-846-0808
dkappe@kappe-inc.com

BIOSOLIDS AND RESIDUALS MANAGEMENT CHAIR

Paresh Sanghavi

Brown & Caldwell
4061 Powder Mill Road, Suite 700
Beltsville, MD 20705
W/ 301.273.2170
F/ 301.273.2032
C/ 301.873.6235
Psanghavi@BrwnCald.com

Continued on page 44

BIOSOLIDS AND RESIDUALS MANAGEMENT VICE CHAIR

Mark Ramirez

DCWASA

Dept of Wastewater Treatment

5000 Overlook Ave., SW

Washington, DC 20032

W/ 202-787-4002

F/ 202-787-4226

mramirez@dcwasa.com

BUSINESS PRACTICES CHAIR

Karl Ott

Pretreatment Specialist

Mattawoman WWTP

5310 Hawthorne Road

La Plata, MD 20646

W/ 301-609-5632

F/ 301-753-8410

ottk@govt.co.charles.md.us

BY-LAWS AND DIRECTORY CHAIR

Sharon Cole

Anne Arundel County DPW

Heritage Office complex

2662 Riva Road, 2nd Floor

Annapolis, MD 21401

W/ 410-222-7976

F/ 410-222-7939

pwcole01@aacounty.org

BUDGET/FINANCE CHAIR

Karl Ott

Pretreatment Specialist

Mattawoman WWTP

5310 Hawthorne Road

La Plata, MD 20646

W/ 301-609-5632

F/ 301-753-8410

ottk@govt.co.charles.md.us

COLLECTION SYSTEMS CHAIR

Kraig Moodie

ADS Environmental Services

37 Loveton Circle – Suite N

Sparks, MD, 21152

W/ 410-472-1590

F/ 410-472-1589

MoodieK@idexcorp.com

TRI CONFERENCE (2010) CHAIR

Kristi Perri

Stearns & Wheler GHD

16701 Melford Blvd. Suite 330

Bowie, MD 20715

T/ 301 805 5629

D/ 301 805 2582 ext 229

kristi.perri@ghd.com

TRI CONFERENCE (2010) VICE-CHAIR

Craig W. Murray

Malcolm Pirnie, Inc.

111 S. Independence Mall East

Suite 1010

Philadelphia, PA 19106

W/ 215-931-4344

F/ 215-625-0172

CMurray@PIRNIE.COM

GOVERNMENT AFFAIRS CHAIR

Paul Sayan

Black and Veatch

sayanpd@bv.com

LABORATORY PRACTICES CHAIR

Clarence Beverhoudt

Washington Suburban Sanitary

Commission

12245 Tech Road

Silver Spring, MD 20904

W/ 301-206-7575

F/ 301-206-7576

cbeverho@wsscwater.com

LABORATORY PRACTICES VICE CHAIR

Dale Baker

Garrett County DPU

Deep Creek Lake Lab

762 Mayhew Inn Road

Oakland, MD 21550

W/ 301-387-6162

F/ 301-387-6527

dbaker@garrettcountry.org

MAMWA LIAISON

Angela Essner

Greeley and Hansen

8201 Corporate Dr.,

Suite 1030

Landover, MD 20785

W/ 301-552-6121

F/ 301-577-3247

aessner@greeley-hansen.com

MEMBERSHIP CHAIR

Muminu Badmus

DCWASA

125 O Street, SE, Bldg H

Washington, DC 20003

W/ 202 264-3861

F/ 202 264-3871

Muminu.Badmus@dcwasa.com

NOMINATIONS CHAIR

Karl Ott

Pretreatment Specialist

Mattawoman WWTP

5310 Hawthorne Road

La Plata, MD 20646

W/ 301-609-5632

F/ 301-753-8410

ottk@govt.co.charles.md.us

PLANT O&M CHAIR

Akshay Kumar

Brown and Caldwell

4061 Powder Mill Road

Beltsville, MD 20705

W/ 301-479-1253

AKumar@BrwnCald.com

PLANT O&M VICE CHAIR

Jim Worthington

Little Patuxent Water

Reclamation Plant

8900 Greenwood Place

Savage, MD 20763

W/ 410-880-5810

jworthington@howardcountymd.gov

PUBLIC EDUCATION CHAIR

Shelley Pitter

DCWASA – Public Affairs

W/ 202-787-2212

Shelley.Pitter@dcwasa.com

PUBLICATIONS CHAIR

Cynthia Lane

American Water Works Assoc.

Government Affairs

1300 Eye St. NW, Suite 701W

Washington, DC 20005

W/ 202-326-6122

F/ 202-628-2846

clane@awwa.org

PUBLICATIONS VICE CHAIR

Robert (Bob) Wimmer

Black & Veatch

2533 Paso Fino Dr.

Finksburg, MD 21048

W/ 410-871-2847

F/ 301-921-2862

wimmerb@bv.com

SAFETY CHAIR**Sorin Schwartz**

DCWASA
 5000 Overlook Avenue, SW
 Washington, D.C. 20032
 W/ 202-787-4347
 F/ 202-787-4383
 sschwartz@dcwasa.com (WORK)

SHORT COURSE CWEA COORDINATOR**Wayne Reed**

DCWASA
 5000 Overlook Ave
 Washington, DC 20032
 W/ 202-612-3520
 H/ 301-855-5387
 C/ 301-704-4812
 Wayne.Reed@dcwasa.com

SPRING MEETING CHAIR**Joan I. Fernandez, P.E.**

Brown and Caldwell
 4061 Powder Mill Road
 Suite 100
 Beltsville, MD 20705
 Tel: (301) 479-1251
 Fax: (301) 479-1300
 jfernandez@brwnald.com

SPRING MEETING VICE CHAIR**Jasvir Grewal**

Black & Veatch
 18310 Montgomery Village,
 Suite 500
 Gaithersburg, MD 20879
 W/ 301-556-4299
 F/ 301-921-2862
 C/ 301-830-0623
 GrewalJ@bv.com

STRATEGIC PLANNING AND IMPLEMENTATION**Russ Sharpe**

7614 Stratfield Lane
 Laurel, MD 20707-5501
 H/ 301-498-5678
 C/ 301-518-1722
 RussSharpe@msn.com

WATER FOR PEOPLE CHAIR**Carrie DeSimone**

CABE Associates, Inc.
 144 S. Governors Avenue
 Dover, DE 19903
 W/ 302-674-9280
 F/ 302-674-1099
 cds@cabe.com

STUDENT ACTIVITIES CHAIR**Janine Yieh**

EA Engineering
 15 Loveton Circle
 Sparks, MD 21152
 W/ 410-771-4950
 F/ 410-771-4204
 jyieh@eaest.com

TECHNICAL EDUCATION CHAIR**Eric Coates**

McKissack and McKissack
 1401 New York Ave. NW, Ste. 900
 Washington, DC 20005
 W/ 202-220-0150
 F/ 202-347-1489
 Ecoates@mckissackdc.com

TRAINING, REVIEW AND EVALUATION CHAIR**Gary Wagner**

Baltimore City DPW
 3501 Asiatic Avenue,
 Baltimore, MD 21226
 W/ 410-396-2898
 F/ 410-574-7143
 Gary.Wagner@baltimorecity.gov

WATER REUSE CHAIR**Robert M. Beringer**

URS Corporation
 1800 Washington Blvd, Suite 410
 Baltimore MD 21230
 W/ 410-649-4010
 C/ 410-917-4397
 F/ 410-468-3259
 robert_beringer@urscorp.com

WATER REUSE VICE CHAIR**Tiffany G. Bain**

Geiger Pump & Equipment
 8924 Yellow Brick Rd
 Baltimore, MD 21237
 W/ 410-682-2660
 C/ 443-823-9785
 F/ 410-682-4750
 tbain@geigerinc.com

WEB SITE**Anthony Rocco, Webmaster**

Howard County Bureau of Utilities
 8270 Old Montgomery Rd.
 Columbia, Maryland 21045
 W/ 410-313-4997
 F/ 410-313-4989
 ARocco@howardcountymd.gov
 webmaster@wwoa-cwea.org

WERF LIAISON**Paresh Sanghavi, Chair**

Brown & Caldwell
 4061 Powder Mill Road, Suite 700
 Beltsville, MD 20705
 W/ 301.273.2170
 F/ 301.273.2032
 C/ 301-873-6235
 Psanghavi@BrwnCald.com

YOUNG PROFESSIONALS CHAIR**Beth Blair**

Black & Veatch
 18310 Montgomery Village Ave.,
 Suite 500
 Gaithersburg, MD 20879
 W/ 301-556-4295
 C/ 240-277-3152
 F/ 301-921-2862
 bblair@bv.com

YOUNG PROFESSIONALS VICE CHAIR**Sarah Ridgway**

EA Engineering, Science
 and Technology
 15 Loveton Circle
 Sparks, MD 21152
 W/ 410-771-4950
 F/ 410-771-4204
 sridgway@eaest.com

ALAN WILL**Past-President Emeritus**

W/ 443-834-4432
 AWill@jmt.com
 Alan.Will@baltimorecity.gov

HARTWELL ENGINEERING, INC.

ENGINEERS • INTEGRATORS

Electrical • Instrumentation • SCADA
Control Systems • Communications
Design • Integration • Construction

2141 Priest Bridge Drive, Suite 8, Crofton, Maryland 21114
(410) 451-7335 FAX: (410) 451-1412
www.he-inc.com solutions@he-inc.com



EBA ENGINEERING, INC.

Professional Services Since 1952

- Civil ■ Structural ■ Geotechnical ■ Environmental
- Haz-mat ■ Transportation ■ Water/Wastewater Utility
- Construction Management and Inspection
- Surveying and Mapping ■ Materials Testing

4813 Seton Drive • Baltimore, MD 21215
(410) 358-7171 • (800) 950-3223 • (410) 358-7213
www.ebaengineering.com



Headquarters:
81 Mosher Street • Baltimore, Maryland 21217
410-728-2900 • 410-728-2992 Fax
www.rkkengineers.com

Rummel, Klepper & Kahl

Water
Wastewater
Water Resources
Residuals Management
Computer Applications/GIS
Hazardous & Solid Waste Management

Maryland • Virginia • North Carolina • Pennsylvania
Maine • West Virginia • Delaware • D.C.

WHITE MARSH ENVIRONMENTAL SYSTEMS, INC.

"Systems....Operations.....Solutions"
For Your Water and Wastewater Contract
Operation Needs

1100 South Little Creek Road
Dover, DE 19901

1-800-523-7224
Email: sschlegel@tuiwater.com

Wastewater Collection & Treatment Systems
Facility Planning & Design
Process Control Engineering
Biological Nutrient Removal
Construction Management



JOHNSON, MIRMIRAN & THOMPSON
Engineering A Brighter Future®

72 Loveton Circle
Baltimore, MD 21152-0949
410-329-3100 • fax 410-472-2200

www.jmt.com

Richmond, Virginia • York, Pennsylvania
Pittsburgh, Pennsylvania • Morgantown, West Virginia
Newark, Delaware • Dulles, Virginia • Orlando, Florida

WASTEWATER • WATER • FACILITIES
STORMWATER • HAZARDOUS/SOLID WASTE
PLANNING, DESIGN, AND CONTRACT MANAGEMENT SERVICES



Gannett Fleming

SINCE 1915

4701-A Mount Hope Drive 410.585.1460
Baltimore, Maryland 21215 (fax) 410.585.1470
www.gannettfleming.com

TIDEWATER ENVIRONMENTAL SERVICES, INC.

Professional Engineering — Construction Services For Large
Centralized and Decentralized Water and Wastewater Systems

*"Full responsibility for permitting, design, construction and
ownership of water and wastewater utilities serving
residential and commercial customers"*

1100 South Little Creek Road 800-523-7224
Dover, DE 19901 Fax: 302-734-9297

WR&A WHITMAN, REQUARDT & ASSOCIATES, LLP

ENGINEERS - ARCHITECTS - PLANNERS EST. 1915

- | | |
|---|------------------|
| • Sewershed Planning | Baltimore, MD |
| • Collection and Conveyance | Georgetown, DE |
| • Wastewater Treatment,
including BNR and ENR
Processes | Wilmington, DE |
| • Class A and Class B
Biosolids Processes | Pittsburgh, PA |
| • CSOs and SSOs | York, PA |
| | Fairfax, VA |
| | Newport News, VA |
| | Richmond, VA |

www.wrallp.com





RIORDAN

Maryland Office

P.O. Box 3404
Crofton, MD 21114-3404
301-858-0609
FAX: 301-858-0569

Tom Schell

Pennsylvania Office

6198 Butler Pike, Ste 150
Blue Bell, PA 19422-2600
215-629-9936
FAX: 215-628-9979

Carl Janson

Bob Smith

Art Auchenbach

Matthew Seng



What type of
wastewater/
water treatment
problem do you
need to solve?

Call us
today
for help
with the
best
solution!

RIORDAN MATERIALS CORPORATION

P. O. Box 3404, Crofton, MD 21114-3404

PHONE: (301) 858-0609, **FAX:** (301) 858-0569

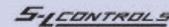
WEB SITE: <http://www.riordanmat.com>

WVOA/CWEA ECOLETTER
Cynthia A. Lane
American Water Works Association
1300 Eye Street NW, Suite 701W
Washington, DC 20005

PRESORTED
STANDARD
U.S. POSTAGE
PAID
PERMIT #273
ANNAPOLIS, MD



Manufacturers' Representative for Engineered Instrumentation, Process Equipment, and Pumping Systems, serving Maryland, Virginia, Pennsylvania, Delaware, New Jersey, and the District of Columbia for over 30 years



WWW.SHERWOODLOGAN.COM

MD. Annapolis (410)841-6810

VA. Richmond (804)897-1361

PA. Philadelphia (610)207-3200