

Training at DelTech's Environmental Training Center  
January – May 2008 — Please call DTCC for time, fees and CEUs.

**DTCC Owens Campus, Georgetown: (302) 855-1617**

	<b>DATES</b>
• INSTRUMENTATION AND PUMPING	1/17-5/8
• PROGRAMMABLE LOGIC CONTROLLERS	1/15-4/1
• BASE LEVEL WATER OPERATOR COURSE	1/16-5/21
• CHASING THE THERMAL DEMONS	1/23
• WATER/WASTEWATER OPERATIONS FOR ELECTED/APPOINTED PUBLIC OFFICIALS	1/23
• 21ST CENTURY DRINKING WATER CORROSION CONTROL	1/24
• TEN LITTLE-KNOWN WATER/WASTEWATER OPERATORS' SECRETS	1/25
• INTRO TO SCADA	1/25
• WATER TREATMENT & CHLORINE SAFETY	1/31
• ELECTRICAL BLUEPRINT READING FOR OPERATORS	2/8
• WATER SUPPLY HYDROLOGY, SOURCES AND WATER CONSERVATION	2/13
• SUBMERSIBLE PUMPS	2/15
• US EPA GROUNDWATER COMPLIANCE WORKSHOP	2/20
• TRENCHING & SHORING SAFETY	2/22
• EXCAVATION	3/3
• WATER QUALITY	3/5
• OSHA CONSTRUCTION SAFETY COURSE	3/6 & 3/20
• DELAWARE'S HYDROGEOLOGY AND THE ROCKS AND FOSSILS OF THE MID-ATLANTIC	3/7
• BASIC ELECTRICITY FOR OPERATORS	3/13
• TROUBLESHOOTING PUMPS	3/14
• PUMPS: INSTALLATION, MAINTENANCE & REPAIR	3/26
• PUMP FUNDAMENTALS FOR WELL DRILLERS	3/28
• WATER OPERATOR CERTIFICATION DISINFECTION COURSE	4/1-4/29
• WATER OPERATOR CHEMICAL FEED COURSE FOR FLUORIDE, LIME, PH ADJUSTMENT AND INHIBITORS	4/3-5/1
• VALVES	4/2
• TEAM BUILDING	4/4
• PUMPS: MOTORS & CONTROLS	4/11
• GLOBAL POSITIONING SYSTEMS	4/14

	<b>DATES</b>
• PUMP HYDRAULICS	4/16
• ELECTRICAL TROUBLESHOOTING FOR OPERATORS	4/17
• WELL CONSTRUCTION TECHNIQUES	4/18
• THREE PHASE AC POWER WORKSHOP	4/18
• EFFECTIVE WATER DISTRIBUTION SYSTEMS FLUSHING	4/24
• PIPELINE ASSESSMENT CERTIFICATION PROGRAM	5/8-5/9
• CUSTOMER RELATIONS FOR ENVIRONMENTAL TECHNICIANS	5/2
• INTO TO MAPPING AND GIS FOR OPERATORS	5/5
• PREPARATION FOR THE DELAWARE PUMP INSTALLERS AND WELL DRILLERS EXAM	5/16
• CHLORINATION TECHNOLOGY	5/30

**Terry Campus, Dover: (302) 857-1406**

	<b>DATES</b>
• DISINFECTION OPERATIONS FOR WATER & WASTEWATER SYSTEMS	2/6-2/7
• TEST METHODS FOR WATER/WASTEWATER OPERATIONS	2/12
• TRAIN THE TRAINER/HAZCOM/PERSONAL PROTECTIVE EQUIPMENT	3/4
• FIRE HYDRANT OPERATION AND MAINTENANCE	4/2
• MATH REVIEW FOR WATER OPERATORS	5/22

**DTCC Stanton Campus: (302) 453-3000**

	<b>DATES</b>
• 21ST CENTURY ULTRA VIOLET DISINFECTION	1/29
• TRUE CONFESSIONS OF A WATER/WASTEWATER OPERATOR	2/5
• TIPS AND TOOLS FOR 21ST CENTURY WATER/WASTEWATER PROCESS MONITORING	2/8
• LOCKOUT-TAGOUT/RESPIRATOR USAGE/CONFINED SPACE ENTRY	3/5
• REVERSE OSMOSIS FLUORIDATION	3/19
• BASIC INSTRUMENTATION & PROCESS CONTROL	3/19
• SURFACE WATER TREATMENT	5/14

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# TAPTALK H<sub>2</sub>O!

Division of Public Health Vol. 8, No. 1 Winter 2008

Tapping Into Good Health

## ODW Wishes You A Happy New Year!



Photo By: Becky Moody

Pictured from left to right: Corinne Stayton, Becky Kohout, Anita Beckel, Ed Hallock, Heather Warren, Terry Pinder, Donna Trader, Sharon Scheers, Linda Olsen, Lynn Perry, Danny McClain, Frank Paquette, John DeGour, Bill Milliken, Davison Mwale, Jimmy Porter, Tommy Stepnay, Kevin Cottman, Rebecca Fahey, and Doug Lodge. Not pictured are Brenda Haire and Rick Relford.

**We have a celebrity amongst us!**

Dr. Davison Mwale, an engineer at Office of Drinking Water is lead author of the September/October (2007) issue of the Journal of Hydrologic Engineering (ASCE). He and his collaborators have developed a procedure to decode the nonstationary variability of climate processes and a computer model to predict the nonlinear variations of climatic elements, such as precipitation. Dr. Mwale says the methods and the model have public health significance because climate variations affect the availability of surface drinking water resources, especially when the variations become extreme, such as extended droughts. Dr. Mwale believes that understanding and reducing society's vulnerability to these variations requires a sound scientific basis, which partly depends on the knowledge of the dominant precipitation regimes in a given region, state or country. Dr. Mwale explained that although historical records depict climate to

be inherently nonstationary or variable in space, time and the frequency domains and its association with external force functions, such as sea surface temperature (SST) or sea level pressures (SLP) is non-linear, for over a hundred years, researchers have extensively employed methods that assume climate to be stationary, and its association with SST to be linear. "This, has resulted in modest prediction skill of precipitation," he explains. "But by applying the new methods, known as Wavelet Empirical Orthogonal Functions (WEOF) and Huang Empirical Orthogonal Functions (HEOF), and the new versatile model which he calls ANN-GA, which combines ideas from Artificial Intelligence and the principles of evolution, has resulted in improved precipitation prediction, which ranges from 70 to 80%, compared to previous estimates which ranged from 20-60%." Other of his publications have appeared in the International Journal of Climatology, (2004) and Journal of Applied Meteorology (ASCE), 2005.



DELAWARE HEALTH AND SOCIAL SERVICES

Division of Public Health

Office of Drinking Water

## The Administrator's Corner



By Ed Hallock

Program Administrator  
Office of Drinking Water

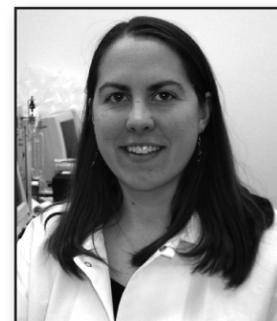
The Office of Drinking Water (ODW) has been working with EPA on getting ready for the implementation of the new Stage 2 Disinfectant/Disinfection Byproducts and Long Term 2 Enhanced Surface Water Treatment rules. We are also busy figuring out the new Groundwater rule as well. ODW will be working on getting these new rules adopted into our regulations. In addition, EPA recently finalized the Lead/Copper Rule Short Term revisions. ODW is reviewing this rule and considering the possibility of implementing some of these changes prior to formally adopting the rule into our regulations.

Also, we are working on revisions to our operator certification regulations. A workshop was held early in 2007 and have been on hold waiting on guidance from the Attorney's General Office. We will be making significant changes to the enforcement section of

these regulations in order to make them more implementable. ODW is planning on holding at least one more workshop on the proposed changes before we begin the formal process through the Administrative Procedures Act. We are hoping to have more information by the time of the Delaware Rural Water Association annual conference at the end of February.

You may recall that in the last newsletter I was happy to report that ODW was fully staffed. Well, apparently I wasn't knocking wood hard enough or on the right kind of wood because we recently lost two employees. Linda Popels has left for a position in the Public Health Laboratory and Darryl Ivery left for a position in the private industry. We will still be able to take advantage of Linda's talents since she will be conducting analyses for the drinking water program.

Lastly, I hope everybody had a wonderful holiday season and are now ready to move forward into 2008. ODW is ready for some exciting and challenging times as we begin full implementation of the new EPA regulations.



## Employee Spotlight Linda Popels:

Welcome and Goodbye!

Linda Popels worked for ODW from August 2006 until November 2007. She was responsible for conducting sanitary surveys and

making sure that all of the compliance samples were collected for northern Delaware. Linda is now working at the Public Health Laboratory in Smyrna, running Volatile Organic Compound (VOC) samples for ODW.

Before arriving at ODW, Linda conducted research in the biology department at Bowling Green State University in Bowling Green, Ohio where she studied algae in the Great Lakes. She received her Ph.D. in biological oceanography from the University of Delaware in Lewes where her dissertation focused on harmful algae. Linda's hobbies include swimming, spending lots of time with her husband and baby girl and walking her dog.

## Annual Technical Conference & Exhibition

From February 26 through February 28, 2008, Delaware Rural Water will be holding its annual Technical Conference and Exhibition at the Delaware State Fairgrounds in Harrington, DE. For more information contact the Delaware Rural Water Association at (302) 398-9633. We hope to see you there!

## CCR Update

The Office of Drinking Water is still reviewing the Consumer Confidence Reports for 2006. If you have any questions about your CCR, call Donna Trader at (302) 741-8630 ext 8594. Thank you for your cooperation and patience.

## Public Notices 2007

System Name	Violation	Date Issued	Date Returned to Compliance
Bayville Shopping Center	Bacteria	08/06/07	11/01/07
Bethany Club Tennis	Bacteria	08/06/07	10/01/07
Blue Coast	Bacteria	10/17/07	Pending
Briarwood Manor Mobile Home Park	Nitrate	10/25/07	Pending
Bridgeville Commercial Park	Nitrate	09/21/07	Pending
Broadkiln Beach Water Company	Bacteria	11/27/07	Pending
Carey Estates	Bacteria	10/11/07	11/20/07
Centerville School	Bacteria	08/17/07	10/10/07
Childrens Secret Garden	Bacteria	10/12/07	11/26/07
Delaware Emergency Operations Center	Bacteria	10/22/07	Pending
Delaware State Fire School	Bacteria	09/04/07	10/16/07
Downing's Loving & Learning	Bacteria	10/17/07	11/19/07
Dow Reichold Chemical	Bacteria	09/04/07	11/26/07
Flying Dutchman III	Bacteria	09/17/07	09/24/07
Forest Park	Nitrate	09/13/07	Pending
Frederica Water Department	Treatment	08/17/07	Pending
Guardian Angels Daycare	MTBE	11/16/07	Pending
Gulls Way Campground	Nitrate	09/25/07	Pending
Holiday Estates	Bacteria	08/21/07	09/24/07
Holly Lake Campsite System 1	Bacteria	09/07/07	09/26/07
Holly Lake Campsite System 2	Bacteria	09/07/07	09/26/07
Irenes Trailer Court	Nitrate	09/14/07	10/03/07
Kristins Care and Learning Center	Bacteria	05/07/07	06/22/07
Middletown Water Department	Bacteria	03/08/07	03/30/07
Mills Brothers Market	Bacteria	07/19/07	09/10/07
National Vulcanized Fiber II	Bacteria	08/16/07	Pending
North Gate Shopping Center (Imperial SC)	Bacteria	07/19/07	08/29/07
Pickering Beach	Bacteria	09/25/07	Pending
The Pit	Bacteria	06/30/03	09/27/07
Savannah Place	Nitrate	03/07/07	Pending
Sea Breeze Longs Trailer Park	Bacteria	07/02/07	Pending
Shore Stop 227	Bacteria	10/12/07	11/20/07
Shore Stop 231 - Rising Sun	Nitrate	11/02/07	Pending
Shore Stop 236	Bacteria	07/23/07	11/15/07
Smith Landing	Nitrate	07/19/07	Pending
St. Andrews School	Bacteria	11/08/07	11/19/07
Tastee Freez	Nitrate	06/12/07	09/04/07
Townsend Water Department	Bacteria	09/12/07	11/26/07
Twin Maples Trailer Park	Bacteria	08/09/07	09/20/07
Woodside Goose Creek	Bacteria	11/06/07	Pending
Woodland Trailer Park	Bacteria	09/21/07	Pending
Woodside Inn	Bacteria	09/20/07	11/20/07