

# Well Connected®



*A Publication of the Water Systems Council*

## AROUND THE STATES

### WSC Calendar

December 5-8, 2006

**NGWA Expo**

Las Vegas Convention Center  
Las Vegas, NV

February 27-March 2, 2007

**WSC Spring Members Meeting**

Park Hyatt Washington  
Washington, DC

See page 5 for details.



### Groundwater Remains the Center of Activity in New Mexico

*Domestic water well regulations finalized*

The proposed domestic water well regulations, discussed in previous *Well Connected* editions, were finalized by New Mexico's State Engineer on August 15, 2006. The regulations limit domestic permits to 1 acre-foot of water per year. In addition, the State Engineer may now declare "Domestic Well Management Areas," with almost total discretion. Within Domestic Well Management Areas, the State Engineer holds discretion to pass almost any rules, including prohibitions on new water wells. Although members of the New Mexico Ground Water Association presented written and oral testimony in response to the proposed regulations, their concerns

*Continued on page 3*

### Virginia Water War Comes to a Head

The six-day trial of a groundwater rights dispute that promises to make law in Virginia took place in Louisa County, Virginia in October. The judge ordered closing arguments to be made in writing and is expected to give his ruling from the bench on Wednesday, December 20, at 4:30 p.m.

The complex suit contains two main elements: injunctive relief and declaratory judgment. Plaintiffs, who include landowners within a historic district in Louisa County, seek an injunction that could halt the Louisa County Water Authority's operation of the three wells, including Spring Creek #3, which is already in use. To secure an injunction, the plain-

*Continued on page 4*

### Inside this Issue:

WSC Member News wellcare® Hotline Update & Un-Commonly Asked Questions	2
Around the States Vermont Restricts Groundwater Withdrawal While Maine Lawsuit Continues to Fester	3
SPECIAL REPORT INSERT: H <sub>2</sub> O: Ready, Set, Go! 2006 NC Children's Water Festival	
Washington Update	5
wellcare® Briefs	6

## WSC MEMBER NEWS

### Water Systems Council Participates in Georgia Environmental Conference

Water Systems Council organized a session on water supply for the 1st Annual Georgia Environmental Conference, held in Savannah from August 16-18. More than 600 people attended this inaugural conference.

The WSC-sponsored session was held once on August 16 and again on August 17, both times with a packed room. James E. Kundell, a professor at the University of Georgia, led the session with a discussion of the geology of the state. Jesse J. Richardson, Jr., Research and Policy Advisor for Water Systems Council, then explained how water rights factor into water supply planning. Ken Hume closed out the session with a discussion of the role of desalination in water supply.

# WSC MEMBER NEWS.....

**wellcare® Hotline**  
888-395-1033 or  
[click here](#)



## wellcare® Hotline Update

### Hotline Receives Nearly 1,000 Calls This Summer

The wellcare® hotline responded to nearly 1,000 inquiries during July, August and September of 2006, reports Hotline Specialist Charlene Greenstreet. This brings the total number of hotline inquiries for the year to 2,766.

Well owners and homebuyers continued to utilize the hotline more than any other group, with the majority of calls concerning questions on mechanical pumps, contaminants or water treatment.

Callers from 48 states, the District of Columbia, Canada and London contacted the hotline during the summer months, with the highest number of calls coming from Pennsylvania (9.4%), New York (6.8%) and Maryland (5.2%).

### wellcare® Hotline *Un*-Commonly Asked Questions

The hotline received a number of unusual inquiries this summer. Some examples are highlighted below.

- Q.** What was the name used for a well pump in the 1940s and 1950s, when a bucket was used to crank water from the well?
- A.** The terms "well jack," "well ram" and "slinger" have been used to describe the equipment used to raise water from a well. A "cranked windlass" is another term that has been used for such a device.
- Q.** What are the health effects from swimming in a pool that has high levels of lead?
- A.** Typically, lead would have to be ingested to have any health effects. However, young children may be more likely than adults to swallow harmful amounts of water when swimming, so check with your child's physician. Exposure to high levels of lead can result in delays in physical or mental development in children, and can result in kidney problems or high blood pressure in adults. Speak to a local water treatment specialist for treatment options.
- Q.** Our water is causing my wife's hair to turn green! What can I do?
- A.** A common treatment device called a chlorinator uses chlorine to treat the water. Minerals and other elements such as chlorine can sometimes cause hair discoloration, and the effects can be compounded in chemically-treated hair. Low pH levels (below 7) can also cause chemically-treated hair to turn green, so you might also consider testing your water's pH levels.

Typically, when a chlorinator is in place, an activated carbon system is installed to remove any excess chlorine. If you do not have an activated carbon system, we would recommend that you consider installing one. You may also wish to retest your water to determine if your chlorinator is still needed.

## Groundwater Remains the Center of Activity in New Mexico

*Continued from page 1*

were not addressed in the final regulations.

The Governor and Attorney General recently attempted to change the regulations with respect to the title loan industry through a similar administrative action. The district court in Albuquerque found that the executive branch lacked authority to enact those regulations. The creation of domestic water well regulations in New Mexico followed a similar path, so the legality of the enactment remains in doubt.

### *Environment New Mexico releases report*

An environmental group, Environment New Mexico, recently released a report entitled "Our Water, Our Future." In the report, the group advocates legislation requiring that developers prove an adequate water supply for a 100-year time period prior to approval of subdivision plats or building permits. Similar legislation has been passed in other western states, most in an attempt to stop development. The group additionally favors subsidies to promote community water systems instead of private water wells.

### *Upcoming legislative session promises to challenge the industry*

In light of the passage of the controversial domestic well regulations summarized in this issue, and advocacy of further regulations by Environment New Mexico, the 2007 New Mexico state legislative session, beginning in January, promises to challenge the water well industry. New Mexico Governor Bill Richardson has declared 2007 "The Year of Water," and the state legislature will undoubtedly consider a large number of bills impacting groundwater rights and the water well industry. Water Systems Council will continue to monitor the situation and keep its members advised.

## **Vermont Restricts Groundwater Withdrawal While Maine Lawsuit Continues to Fester**

Vermont recently enacted a law that requires anyone withdrawing more than 50,000 gallons of groundwater a day from a well drilled after July 1, 2006 to first acquire a withdrawal permit from the state Secretary of Natural Resources. Public water systems and water withdrawals for agricultural purposes are exempt from the statute. However, public water systems that withdraw water for the bottling must comply.

In addition, the legislature appointed a committee to study additional regulatory programs for groundwater. The preliminary report of the committee shall be released at the beginning of the legislative session in January, promising another challenging session for the water well industry.

The report must specifically recommend whether the groundwater resources of the state should be declared a public trust resource. Such a declaration would have profound implications for water rights, essentially taking all such rights by legislative sanction. Litigation would undoubtedly prove necessary to determine whether compensation would have to be paid to holders of groundwater rights.

Meanwhile, the court, considering two cases arising from efforts of Poland Spring Bottling Company to expand groundwater operations in western Maine, still has not issued a ruling. The court took the cases under advisement in July.

# AROUND THE STATES

## Virginia Water War Comes to a Head

*Continued from page 1*

tiffs must prove some degree of harm has occurred or is very likely to occur in the near future as a result of the pumping.

The true crux of the case, as originally filed, is the request for a declaratory judgment, which would outline the respective parties' water rights under the law. The Virginia Supreme Court has not ruled directly on groundwater rights. However, two circuit court cases, reported in Water Systems Council's *Who Owns the Water*, indicate that the American Rule, also called the Reasonable Use Rule, will apply. Louisa County Circuit Court Judge Timothy K. Sanner reportedly suggested that he would rule in a similar fashion.

The key claims allege that transporting water off site violates neighboring landowner rights. The controversy centers on three wells, located within the Green Springs National Historic Landmark District, that indirectly supply water to Spring Creek, a mixed-use resort and golf course community.

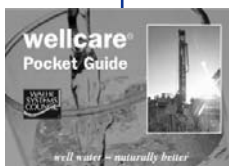
Regardless of the judge's ruling, the case will likely be appealed to the Virginia Supreme Court. That court will make the final, binding decision that will determine groundwater rights in the state. That ruling holds profound implications for the water industry. Water Systems Council will continue to follow the case and report on developments.

## wellcare® Pocket Guide Earns International Prize

The Association of Marketing & Communication Professionals has awarded a Gold 2006 MarCom Creative Award in the "Consumer Awareness Brochure" category for the Water Systems Council's *wellcare® Pocket Guide*.

The MarCom Creative Awards is the largest international awards competition to recognize outstanding achievement in marketing and communications. The Gold Award is presented to "entries judged to exceed the high standard of the industry norm." Only 16 percent of 5,000 entries received this distinction.

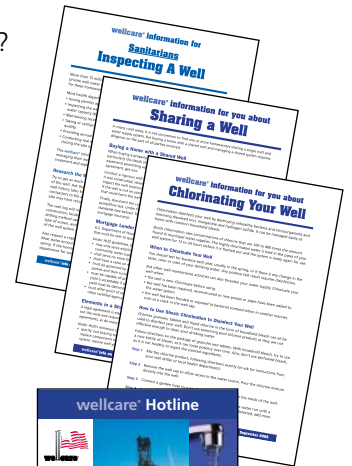
Our award-winning entry was submitted by Mhley/Davis & Associates Inc., which custom-designed the brochure for Water Systems Council.



## Coming Soon!!! New wellcare® Publications!

Ten new **wellcare® information sheets** will be published early in the new year. Topics are slated to include:

- Boiling Your Drinking Water: Why, When and How Long?
- Dillon's Rule – Can They Do That?
- Disinfecting Your Well
- Nitrates and Nitrites
- Shared Well Design
- Sizing a Pressure Tank
- Total Dissolved Solids
- Using Your Well Water for Other-Than-Household Uses
- Volatile Organic Compounds
- Well Components: Valves



The **wellcare® Hotline Annual Report**, summarizing the hotline's activity in 2006, will also be released in 2007.



Stay tuned to the Water Systems Council's website at [www.watersystemscouncil.org](http://www.watersystemscouncil.org) for updates.

# 2006 North Carolina Children's Water Festival

During the week of October 24-27, nearly 1,600 Rowan-Salisbury public- and private-school fifth graders took part in the 2006 North Carolina Children's Water Festival, "H<sub>2</sub>O: Ready, Set, Go!"



The event, which showcased water education through hands-on activities, took place over a four-day period at Horizons Unlimited in Salisbury, NC. More than 100 presenters and volunteers made the event a success, ensuring that the students had fun while learning where their water comes from and why it is important to protect and conserve water resources. Presenters and volunteers from Rowan County and beyond participated in the event.



Children craft water cycle bracelets while learning how water travels during "Incredible Journey."

Several well drilling companies – Corriher Well Drilling, Inc., DL Mullis Well Drilling, Inc., Gopher Utility Services, Inc., and Rowan Well Drilling – brought drill rigs and other equipment on site so the kids could learn first-hand about wells and how they are drilled. The captivated fifth graders engaged in a question and answer session with the presenters, asking such questions as "How deep is a well?" and "How much does a drill rig cost?" North Carolina has more than 914,000 household wells providing safe water to 36% of all North Carolinians. It is ranked third in the country for the total number of wells (only Michigan and Pennsylvania have more wells).

**"My favorite part about coming there was making the aquifers."**

- Kaitlin, 5th Grade,  
China Grove Elementary School

The students' water knowledge was challenged during Water Jeopardy, in which they answered questions related to the water cycle, groundwater, surface water, hydrologic geography and general hydrology. During "Incredible Journey," the children experienced the life of a water droplet and crafted water cycle bracelets, while learning that water on the earth is neither created nor destroyed.

The Stream Table displays the effects of erosion.



Continued...



Students arrive at the festival.



Students observe how water travels through sand, silt and clay in "Clean Dirt."

**"That day is on my funnest field trip list. I had a wonderful time."**

- Keiocha,  
5th Grade,  
Hurley Elementary School



Live drill rigs and drilling equipment, courtesy of several local well drilling companies, were available for up close inspection.

Continued from previous page...

In the water activity hall, students experimented with sand, silt and clay at the “Clean Dirt” station, viewed the process of stream erosion at the Stream Table, tested their water knowledge with the matching game “How Much H<sub>2</sub>O?,” experienced the water cycle with the Groundwater Simulator, and engaged in a “chilly” experiment that tested the body’s ability to move under the effects of hypothermia.

Students also learned about aquatic animals and their habitats during the Water Scavenger Hunt. Edible Aquifers – which allowed the children to learn the parts of a groundwater aquifer while constructing their own aquifer made of ice (rocks), clear soda (water), ice cream (confining layer), chocolate syrup (motor oil), and sprinkles (fertilizer) – reinforced the importance of protecting groundwater from contamination by appropriately disposing of used motor oil and not over-fertilizing lawns!

Major funding for the festival was provided by the NC Well Contractors Certification Commission, the NC Ground Water Association and Water Systems Council. Additional sponsorship was provided by the South Atlantic Well Drillers Jubilee.



Mike Keen of Franklin Electric explains how wells are constructed.

“I had a blast! I learned that the sun heats up the water and goes up into the atmosphere. This is called evaporation. Another thing I learned is how to save water.”

– Chris, 5th Grade, Hurley Elementary School

## 2006 North Carolina Children’s Water Festival Organizing Committee

Horizons Unlimited ● NC Division of Water Resources/NC Project WET  
 NC Division of Water Quality ● NC Ground Water Association  
 NC Well Contractors Certification Commission ● Rowan-Salisbury Schools  
 Salisbury Parks and Recreation ● Water Systems Council

## 2006 North Carolina Children’s Water Festival Sponsors



**IOK**  
 South Atlantic Well  
 Drillers Jubilee

**TRIATHLON**



**Other Donations and Sponsorships**

City of Salisbury  
 Krispy Kreme of Salisbury  
 Pet Dairy of Winston-Salem, NC

## WASHINGTON UPDATE

### CDC and HUD Release Updated Housing Inspection Manual

The U.S. Department of Health and Human Services (HHS) Centers for Disease Control and Prevention (CDC) and the U.S. Department of Housing and Urban Development (HUD) recently released an updated version of the Basic Housing Inspection manual, renamed the *Healthy Housing Reference Manual*.

The revised manual includes a new chapter on rural water supplies and water quality issues, including issues related to drilling and proper maintenance of wells. The manual is intended to be a reference for public health

and housing professionals who work in government and industry.

A copy of the manual can be downloaded at [www.cdc.gov/nceh/publications/books/housing/housing.htm](http://www.cdc.gov/nceh/publications/books/housing/housing.htm)

### USGS to Help Develop Guidelines for Communicating Water Quality Data in Human Health Context

The U.S. Geological Survey's (USGS) National Water-Quality Assessment Program (NAWQA) is working with other interested parties to develop a process for translating the results of NAWQA studies in the context of human health. USGS recently convened a meeting to discuss the process, involving groups such as the Association of State Drinking

Water Administrators (ASDWA), American Water Works Association (AWWA), Association of Metropolitan Water Agencies (AMWA), National Association of County and City Health Officials (NACCHO), and Clean Water Act-related groups like American Rivers and Clean Water Action.

NAWQA adopted a new measurement – Health-Based Screening Levels (HBSLs) – to translate Maximum Contaminant Levels (MCLs) into the context of human health. The purpose of HBSLs is to determine levels of health concern where MCLs have not been set, and to provide a means by which NAWQA can communicate the results of its studies to agencies, interest groups, water systems and private well owners.

*Join Us in the Nation's Capital!*

## Celebrate Water Systems Council's 75th Anniversary!



The **PARK HYATT WASHINGTON**, located at the edge of stylish Georgetown, reopened in May 2006 following a \$24 million "reconcepting." The **PARK HYATT WASHINGTON** is our nation's capital's newest and most innovative luxury hotel.

### WSC Spring Members Meeting

February 27 - March 2, 2007

Park Hyatt Washington

24th and M Streets, N.W. \* Washington, DC

Watch for registration information in early January!

**Tuesday and Wednesday, February 27-28** –  
Congressional Meetings (optional)

**Wednesday, February 28** – President's Welcome Reception –  
WSC wellcare® Awards and State Association Recognition

**Thursday, March 1** – Committee Reports – 75th Anniversary Celebration  
and Special WSC Member Recognition

**Friday, March 2** – Board of Directors Meeting

For more information, contact Kathie Auth at (202) 625-4387 or  
[kathie.auth@watersystemscouncil.org](mailto:kathie.auth@watersystemscouncil.org).



*Celebrating 75 years serving the  
water well industry!*

## wellcare® Briefs

### National Research Council Releases Report on Water Distribution Systems

At the request of the U.S. Environmental Protection Agency (EPA), the National Research Council of the National Academy of Sciences recently released a report on water quality as it relates to public distribution systems. The report, *Drinking Water Distribution Systems: Assessing and Reducing Risks*, discusses methods for reducing problems within distribution systems that threaten water quality, and pays special attention to “backflow events via cross connections, the potential for contamination of the distribution system during construction and repair activities, maintenance of storage facilities, and the role of premise plumbing in public health risk.”

The full report can be viewed or purchased from the National Academies Press at [www.nap.edu/catalog/11728.html](http://www.nap.edu/catalog/11728.html).

### Study Examines the Quality of Domestic Well Water

Results of a study of the chemical quality of domestic well water were released in an article appearing in the Summer 2006 edition of *Ground Water Monitoring & Remediation*. The study used existing water quality data collected from domestic wells to develop the first national-scale retrospective examination of domestic well water.

Inorganic contaminants in amounts exceeding Maximum Contaminant Levels (MCLs) were detected more often than organic compounds. Arsenic concentrations exceeded the MCL in 11% of the 7,580 wells evaluated, and nitrate in 8%, while

radon exceeded 4000 pCi/L (one of two potential drinking water standards under review by the U.S. EPA) in 9% of the wells. MCLs for fluoride and mercury were exceeded in less than 1% of wells in each case.

While a number of studies of domestic well water quality have been conducted at the local, state and regional levels, this study represents a starting point with respect to evaluation of water quality in domestic water wells on a national scale.

### California Judge Lowers Penalty for Modesto Dry Cleaning Pollution

A San Francisco Superior Court judge has lowered the punitive damages against two chemical companies in a water contamination suit brought by the city of Modesto. The city's award dropped from \$175 million to \$13 million.

Last June, a jury convicted Vulcan Materials Co., Dow Chemical Co., and RR Street & Co. Inc., for failure to instruct dry cleaners on proper use and disposal of their chemicals without causing harm to the environment.

The awards were lowered for Vulcan Materials and Dow Chemical, from \$100 million and \$75 million to \$7.25 million and \$5.5 million, respectively. The penalty for RR Street remained at \$75 million.

The two local dry cleaners named in the suit were not required to pay.

### North Carolina Passes Private Water Well Inspection and Testing Rules

In August, North Carolina Governor Mike Easley signed into law an act that requires permitting and inspection of new private drinking wells.

The law requires counties to have programs in place by July 1, 2008 to permit and test private water wells. The wells must be tested for 17 different contaminants, as well as bacteria and acidity.

### North Carolina Health Director Advises Lead Testing in Durham Homes

Following the report last May of a Durham child acquiring lead poisoning from his family's drinking water, North Carolina's health director has advised families living in Durham homes that are more than 20 years old to test their water for lead. She has asked operators of child care facilities built prior to 1986 to take similar action.

Lead was banned from plumbing in 1986. Water samples obtained from Durham homes built since 1986 have shown no traces of lead above the federal limit, while tests from older houses have shown high levels of lead in the water.

### Lake Norman Area Communities in North Carolina Overtax Water Supply

Residents in several upscale communities in the Lake Norman area in North Carolina have been asked to voluntarily conserve water. The water system that supplies 1,100 customers in three Mooresville communities – the Point, the Harbour and the Farms – pumped 1 million gallons of water a day for these customers this past summer. By comparison, the town's 11,000 residents used an average of 4.75 million gallons a day, or less than half the water of the residents in the upscale communities, on average.

The wastewater company that supplies these communities, TCW

Wastewater, says it is attempting to educate residents on appropriate water use. TCW Wastewater owner Tim Bannister says overtaxed irrigation systems are partly to blame.

### **New Hampshire to Investigate Link between Arsenic in Drinking Water and the Body**

New Hampshire's Public Health Laboratories is investigating the correlation between arsenic found in drinking water and the amount of the element that collects in the body. The study, sponsored by the Centers for Disease Control (CDC), will initially focus on homeowners in six towns who rely on private wells for their drinking water, who have not already had their wells tested for arsenic, and who do not currently have water treatment systems in place.

The study was inspired by a 2003 U.S. Geological Survey (USGS) report showing that an estimated 41,000 wells in three New Hampshire counties may contain arsenic levels above the U.S. Environmental Protection Agency's (EPA) standard of 10 micrograms per liter.

### **EPA to Clean Groundwater in New Jersey Aquifer**

The U.S. Environmental Protection Agency (EPA) will take steps to remove groundwater contaminants from the Pohatcong Valley Groundwater Contamination Superfund Site in Warren County, New Jersey. The plan involves drilling wells to pump out contaminated water, treating the water, then pumping the clean water back into the ground.

The water, from the Kittatinny Limestone Aquifer, contains tetrachloroethylene (TCE) and perchloroethylene (PCE) in amounts

that exceed the standards set by the state. The aquifer is the sole source of drinking water for public and private wells in the area.

### **Ruling Stalls Private Well Testing Regulations in New York**

An opinion handed down by New York's County Attorney has stalled the creation of regulations for private wells in the state, at least for now. According to County Attorney Ronald L. Wozniak, the state Board of Health lacks the authority to mandate private well testing. Last year, the Board of Health approved a change to the sanitary code requiring that the county certify that wells have been tested before homes with private wells can be sold.

Wozniak asserts that this regulation is a legislative function, stating that the Board of Health's role is to "advise, consult and recommend." The New York State Assembly and Senate both passed bills related to private well testing this year, but, because the bills did not match, there will be no action at the state level at this time.

The Board of Health disagrees with the County Attorney's opinion.

### **County Legislature in New York Approves Funds for Water Protection**

The Dutchess County Legislature voted to approve the use of money from the county's Partnership for Manageable Growth fund towards a variety of water protection activities. The proposal allows towns within the county to receive money towards water source protection plans or well-testing initiatives.

The Partnership for Manageable Growth was established to help

towns keep construction and commercial growth within the town's centers, thereby preserving outlying areas for farms and wildlife habitats.

As a result of the legislature's vote, that money can now be used to expand the ways the county safeguards its water supplies, such as by protecting the land near groundwater supplies and/or subsidizing the testing of private wells.

### **MassDEP Fines Company for Delayed Reporting of MTBE Contamination in Charlton Well**

The Massachusetts Department of Environmental Protection (MassDEP) has fined Worcester-based Honey Farms, Inc., for failing to report, in a timely manner, dangerous levels of Methyl-tertiary Butyl Ether (MTBE), found in a drinking water well near the company's Charlton gasoline station.

Honey Farms immediately removed the source of the contamination once the problem was detected. However, its failure to report the problem to MassDEP within the timeframe established under the regulations resulted in a \$6,500 fine.





WSC NATIONAL PROGRAMS OFFICE  
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WSC Spring Members Meeting  
&  
75th Anniversary Celebration

*Save the Date!*

February 27 - March 2, 2007

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*Look for more details on page 5, inside this issue.*

75 years serving the water well industry



1932 - 2007