



Marc Hamel

Testing the Waters

Last summer's wave of tropical storms left the East Coast scrambling to ensure drinking water quality. *Water Quality Products* editorial intern Raissa Rocha spoke with Marc Hamel of testing equipment manufacturer Horizon Technology Inc. to discuss the impact weather events may have on water quality.

Raissa Rocha: What is your experience with companies and laboratories concerning water samples that need to be taken after a weather event occurs?

Marc Hamel: There are a variety of different water matrices that people are concerned about after a catastrophe. Drinking water is a primary concern because after a flood, hurricane or tornado, you end up with various types of water—whether it be runoff from a river or stream, overflow from a lake or contamination in a factory from floodwaters—all migrating to drinking water sources: wells, state/municipal water sources, reservoirs, things like that. So there are many areas along the way, before that water gets into the drinking supply, where people are concerned about what is in this floodwater.

We see an increase in demand for sample preparation from people interested in the groundwater [and] people interested in wastewater from factories, whether it is influent or effluent. We see people concerned about solid wastewaters from dumpsites, [who] measure the runoff from these various sites.

We also experience an increase in demand from those labs that are focused on analyzing and monitoring drinking water, whether it be a reservoir in a town or in a state, or whether it be well water—people concerned about the water coming out of their taps. They will often ask for testing to be done to make sure that their groundwater is safe.

Horizon Technology Inc. makes equipment for front-end sample preparation of all types of aqueous samples, [the] primary matrix being water. And we use solid phase extraction as a primary mechanism for extracting

different analytes, contaminants or compounds from water. We do extraction of semi-volatile compounds as well as organic compounds, like oil and grease, from water.

Rocha: What contaminants are of concern after a flooding event? Do they vary by region?

Hamel: What we focus on mainly are semi-volatile compounds: pesticides, herbicides, TCBs (trichlorobenzene) [and] PAHs (polycyclic aromatic hydrocarbons). There is [also] always a concern about oils and greases getting back into the drinking water table or into the oceans or into the lakes. Companies are now also more and more looking at the impact of pharmaceutical byproducts getting back into the drinking water table.

Regionally, you might be in the Midwest or somewhere along the [Mississippi River] where a flood might have occurred. You have overflow into agriculture land, where pesticides or herbicides are used, and after the event, water recedes and a lot of those chemicals [move] into the river when they normally would not have. So in different parts of the world, there are different causes and effects based on what particular industries are strong or prevalent in those regions.

Rocha: What risks exist for certain types of drinking water supplies in particular?

Hamel: The risks are always being uncovered. It is something that I think the scientific community is trying to keep up with. They range from birth defects in children to headaches [from] drinking water that has certain types of contaminants or volatile/semi-volatile compounds in it. We are still trying to

understand the impact of some of the pharmaceuticals that people take ... what all of that means to both human populations and the ecological system.

Rocha: What can municipalities do to be prepared if a major weather event drastically affects drinking water quality?

Hamel: By far the most prevalent means of analyzing water in any laboratory, especially state and government laboratories, is [through] manual techniques. A common technique to extract these types of semi-volatile compounds from water is a technique called liquid-liquid extraction (LLE).

LLE is a very manually intensive technique in which someone has to add solvent to a particular water sample, typically in a big separatory funnel. They physically shake it up to expose the solvent.

The way more laboratories react to an increase in sample demand is bringing on new people. The results are typically very inconsistent from operator to operator. A laboratory using an automation technique could have the ability to get much better consistency and keep the same level of data quality. *wqp*

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NSF Intl. earned accreditation from Brazil's National Institute of Metrology, Standardization

and Industrial Quality to certify water treatment products and bottled water for the Brazilian marketplace.

Pentair Wins Innovation Award at Aquatech Amsterdam

Pentair Inc. won the overall Aquatech Innovation Award 2011, which recognizes the most innovative product, service or solution in the water industry.

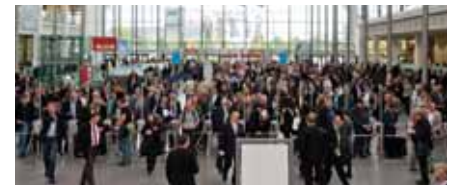
Mississippi Aquifer Suffers Substantial Storage Losses



More than 280 million acre-ft of groundwater have been withdrawn from the Mississippi embayment

aquifer system between 1870 and 2007, according to the U.S. Geological Survey. The cumulative withdrawal contributes to one of the largest losses of groundwater storage in the U.S.

Munich to Host IFAT ENTSORGA



IFAT ENTSORGA 2012 will take place May 7 to 11, 2012, in Munich. A diverse program of events will include company and product presentations, symposiums and country specials in water, sewage and waste management. Siemens, E.ON and Brentwood will present their latest products and services in environmental solutions.

Networking News

Water-Right Inc. hired Allen Hurtado as regional sales manager for the West Coast, including Montana and Idaho.

Aquion Inc. named Calvin T. Stuart as president and CEO.

DS Waters of America Inc. acquired the assets of Colorado-based Deep Rock Water Co. and will assume management of bottled water delivery for Deep Rock Water customers.

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