



www.nebiosolids.org



All the best to you and yours this holiday season!
We look forward to working with you in 2010....

CONTENTS

- **Biosolids at NEWEA Annual Conference**
- RMI Facility Gets EMS Certified!
- **Belmont, NH Considers Further Biosolids Restrictions**
- Update from WERF - Advancing Biosolids Knowledge
- Update: PFCs in Land-Applied Biosolids in AL
- USDA / Dairy Farmers To Cut GHGs
- In Brief / En bref...from Canada
- **In Brief / En bref... from the U. S.**

NEBRAMail is distilled biosolids and residuals news for New England and eastern Canada, provided on an "as-needed" basis. Feel free to forward it. Please have your email program download pictures. To subscribe or unsubscribe: info@nebiosolids.org. Notable news from past NEBRAMails: see [News](#) page of the NEBRA website. Enjoy reading!

Biosolids at NEWEA Annual Conference

At NEWEA's Annual Conference in Boston, Session 6 is "The Long and Short of Biosolids," on Monday, Jan 25, 2 – 4 pm. NEWEA's Residuals Committee will meet the same day at 12:00 noon. The NEBRA Board of Directors will meet the same day at 4:30 pm. Check the conference schedule for details for locations.

RMI Facility Gets EMS Certified!

The National Biosolids Partnership (NBP) recognized the Resource Management, Inc. (RMI) Residuals Management Facility in New Hampton, NH as the 26th organization in the nation to be certified and admitted to the Partnership's environmental management system for biosolids program (EMS). According to an NBP news release, "RMI is one of 100 organizations currently participating in the NBP EMS program. As the 26th organization certified and admitted into the NBP EMS program, and the first in New Hampshire, RMI's achievement recognizes that the agency has been independently verified as having an effective biosolids environmental management system. The RMI Residuals Management Facility... bio solids EMS was independently verified on October 22, 2009 by the audit firm, KEMA-Registered Quality, Inc."

Details about RMI's EMS audit and certification can be found [here](#).

NEBRA congratulates RMI for this significant

accomplishment!



Belmont, NH Considers Further Biosolids Restrictions

There are 40-some towns in New Hampshire that took steps in the late 1990s to significantly restrict, or ban, the use of biosolids within their borders. These ordinances came in response to heated debate triggered by lack of state regulations and some poorly managed biosolids programs earlier that decade. Over the past ten years, there have been few local concerns, and more than 50% of New Hampshire sewage sludges have been routinely applied to soils.

Now, the Town of Belmont, in the Lakes Region, has decided to consider changes to how biosolids are addressed in their land use regulations. The town currently allows biosolids land application, subject to obtaining a special exception, and several farmers use biosolids regularly. The local planning board is proposing a complete ban on biosolids use in town, based on a presentation by the chair of the local conservation commission. In response, several local farmers have submitted a petitioned warrant article for town meeting that would remove any local restrictions and have the town adopt the state regulations by reference, as recommended by the state's environmental and planning agencies.

In response to several letters to the editor in local papers, NEBRA drafted an op-ed that provides additional information and encourages broader discussion of the topic. Belmont is a contributor of sewage and septage to the broad Winnepesaukee River Basin Project and its Franklin wastewater treatment facility, so the town contributes to the creation of solids that must be managed in some way. NEBRA is helping organize a tour of the Franklin wastewater treatment facility and an information session or two. [See the op-ed.](#)



Update from WERF - Advancing Biosolids Knowledge ...Seeking Input on Coordinated Micro-Constituents Research

The Water Environment Research Foundation (WERF) is compiling information on what research is being conducted on micro-constituents - also known as trace organics, PPCPs, or compounds of emerging concern - in biosolids. They are asking anyone conducting such research to let them know. According to their website, "WERF already has funded a *State of the Science* study, which is scheduled to be available by the end of 2009. The *State of the Science* report will identify data gaps and will be used to help define a specific research plan." For more details, click [here](#).

...Offering Free Biosolids Research Reports

On July 1, 2009, the Water Environment Research Foundation (WERF) began an open access policy for research reports which are more than two years old. See [here](#). These open access reports are free to the public as downloads and are marked in blue in the chart.

WERF notes that...

- Almost a third of WERF's research projects have focused on the treatment and management of residuals and biosolids.
 - This research is valued at over \$20 million. Two of the six programs in WERF's new program-directed research process launched in 2005 will continue work in this area – they include Solids Treatment, Residuals & Reuse, and Wastewater Treatment & Reuse.
 - The biosolids TCR (Targeted Collaborative Research) program was set up by WERF to fund research on key biosolids-related issues identified in the 2003 WERF-EPA Biosolids Research Summit and by the TCR funding partners.
-



Update: PFCs in Land-Applied Biosolids in AL

U. S. EPA, USDA, the Alabama Department of Environmental Management (ADEM), and public health officials are continuing to investigate potential impacts of unusually high levels of perfluorochemicals (PFC) in biosolids applied to 5,000 acres of farm fields near Decatur, Alabama. The chemicals had been manufactured in the area for many years, making this PFC occurrence a localized event. A July 24, 2009 story in *NEBRAMail* provided [many details](#).

Now, in the latest development, public health officials will test the blood of 200 people for PFCs, according to the *Decatur Daily*. PFCs have been found contaminating some drinking water in the region where biosolids from the Decatur wastewater treatment plant was land applied, although only two wells showed levels above the U. S. EPA advisory level; the households that had relied on those two wells were switched to public drinking water. More recently, USDA completed tests of beef grown in the area and concluded it was safe for consumption.

EPA provides information about the situation [here](#) and about PFOA (C8) and related chemicals [here](#).



USDA-Dairy Farmers Announce Commitment to Cut Greenhouse Gas Emissions by 25 %

The U.S. Department of Agriculture (USDA) announced

on December 15 a memorandum of understanding with U.S. dairy farmers: a commitment to reducing their greenhouse gas emissions by 25 percent by 2020 while the department committed to helping farmers get funding for emissions and energy-related projects (see [announcement](#)). The memorandum was signed by the secretary of agriculture and the chief executive officer of the Innovation Center for U.S. Dairy and Dairy Management Inc., an organization that promotes milk sales and works to foster competition in the industry. Secretary of Agriculture Tom Vilsack said in a speech in Copenhagen that dairy farmers had committed to the reduction in greenhouse gas emissions and that the Department of Agriculture had committed to help get anaerobic digesters at more dairy farms.

According to EPA, manure management accounted for 8 percent of anthropogenic methane emissions in the United States in 2007, and the agriculture sector is responsible for 6 percent of greenhouse gas emissions overall. Cows produce large amounts of methane through their flatulency and manure. Anaerobic digesters use captured methane and manure to produce energy. USDA will work with the Innovation Center for U.S. Dairy and Dairy Management Inc. to install more anaerobic digesters. The department will prioritize applications for loans or grants that come from dairy farmers seeking to install the digesters, adjust timing of the awards to better match the construction seasons, and work to publicize manufacturers of digesters and opportunities for funding. Additionally, USDA will encourage research in other ways for dairy farms to reduce greenhouse gas emissions.



In Brief / En bref... from Canada

Several Québec towns are following the lead of

Elgin and banning land application of biosolids. Earlier this year, Elgin's local ban was upheld by a superior court. However, that case has gone to appeal and could be overturned.

GSI Environnement Compost Product Receives

BNQ Certification: On November 3rd, GSI Environnement of Québec received certification for its "Composol St. Henri – Type B" compost from the BNQ, the independent quality standards organization in Québec. Like all BNQ-certified products, this compost can be used on soils without needing a certificate of authorization (C of A) from the environment ministry. In Québec, residuals usually require a C of A for use on land.

Canadian Biosolids Professionals Meet to Develop Coordinated Research Effort: In early December, the Canadian Council of Ministers of the Environment

(CCME) convened a one-day workshop for biosolids managers and research scientists from around the country. The day's goal was to develop an agreed-upon structure and process for coordinating biosolids research. There was much interest in the effort, and CCME's biosolids group is expected to take the recommendations from the workshop and begin to develop a plan for establishing an organizational structure.

Land application of septage will come to an end on Prince Edward Island, beginning January 1, according to a late October CBC [story](#). During the past few years, the island's two large wastewater treatment plants, at Charlottetown and Summerside, have been upgraded. Charlottetown now has secondary treatment, ultra-violet disinfection, anaerobic digestion, and solids treatment to produce Class A biosolids. With the infrastructure now in place to handle more septage, the environment ministry will now require all septage be delivered to one of the two wastewater treatment plants.

Ottawa is stepping up its biosolids land application program, according to an eastern Ontario *Agri-News* [story](#). In 2009, half of Ottawa's treatment plant solids – about 20,000 tonnes – were used on farmland. For 2010, the goal is 100% land application. A manager of the biosolids was quoted as saying that there has been more demand than supply in recent years, but that in 2010, with the increased volume intended for land application, additional permitted farmland will be needed. If all the city's biosolids are land applied, the cost savings over landfill disposal are more than \$1 million per year.

The 5th Canadian Residuals and Biosolids Conference was held in Niagara Falls on September 13 - 15, 2009. Most of the conference powerpoint presentations are [available online](#). Complete proceedings may be ordered from [WEAO](#).



In Brief / En bref... from the U. S.

Enviro.BLR.com reported from the North East Biosolids and Residuals Conference November 4 and 5, posting an article entitled "[What's on EPA's Radar for Biosolids Regulation?](#)" Rick Stevens, biosolids coordinator for U. S. EPA in Washington, provided an update to conference attendees.

The summit of Mt. Washington, the highest point in the northeast, has a new wastewater treatment plant, according to the December *Water 21*. With over 350,000 visitors each year and a year-round research

facility staff, the old system of septic tanks, UV disinfection, and sand filters had failed. The challenge at the site is the “world’s worst weather,” which includes high winds, dense fog, rime, and temperatures as low as -50 deg. F. The new plant, which went on line this fall, is designed to treat a flow of up to 5,000 per day with a membrane bioreactor, UV disinfection, and subsurface discharge. It is built with plenty of pre-insulated pipes and heat tape.

NH Medicine Disposal Update - The State of NH has now established a state website to provide information on medicine disposal. See [here](#). Currently the site has background info, residential medicine disposal guidance, school nurse medicine disposal guidance, and suggested protocols for conducting medicine collection events. It also has links to other relevant websites.

Vermont’s new limits on lead in plumbing and other consumer products go into effect January 1, 2010. Act 193, passed in 2008, includes limits for lead in fixtures, pipes, fittings, and solder used for conveying potable water. California has a similar law that takes effect at the same time. In both states, the amount of lead can be no more than 0.25% of the portion of fixtures and 0.20% of the portion of solder that come in contact with water.

Wilmington, Delaware continues to struggle with a pile of “hundreds of thousands of tons” of mixed residuals, including coal ash and wastewater solids, that was allowed to accumulate near the city’s wastewater treatment facility. See recent [story](#).

Meanwhile, a University of Delaware researcher has been awarded a \$400,000 grant from USDA to “study the fate and transport of hormones and antibiotics in runoff from agricultural watersheds,” according to a university [news release](#). The researchers “will evaluate the fate, persistence, transport, and potency of animal hormones and antibiotics, including their transformation products, in an agricultural watershed receiving land-application of poultry litter.”

Microconstituents research: In 2006 and 2008, Chad Kinney of Colorado State University at Pueblo (CSUP) and USGS scientists published results of research that found a variety of microconstituents – e.g. pharmaceutical and personal care product chemicals – in biosolids and earthworms that lived in soils treated with biosolids or swine manure (see [here](#)). Now Kinney has been awarded a Lindbergh grant to determine whether vermicomposting as a biosolids treatment process breaks down microconstituents. A CSUP [press release](#) states: “The normal metabolic activity of earthworms and the

increase in bacterial activity associated with a high density of earthworms is hypothesized to reduce the quantity of organic wastewater contaminants (OWCs), such as disinfectants, pharmaceuticals, etc. in the final biosolid product." WeCare Organics, which operates vermicomposting operations in Pennsylvania, is providing materials for the research.

The University of Toledo and USDA are conducting research on biosolids land application in northwest Ohio, where nearly 100% of the area's sewage sludge is land applied after treatment and testing. In 2007, a University of Toledo and Bowling Green University survey of self-reported health effects of residents supposedly living near fields on which biosolids were applied created some stir. After the methods of the study were challenged by other researchers, the survey team clarified that their "results remain inconclusive." The current research, which builds on and supplements the group's prior work, is generally aimed at determining "if there are human health or environmental impacts associated with the application of sewage sludge on agricultural fields." In 2009, bioaerosol sampling and dispersion modeling were conducted, as well as testing for pathogens in leachate. See the [project website](#) for some preliminary results and discussion.

In mid-December, the Virginia Department of Environmental Quality (DEQ) proposed new biosolids regulations and asked for public comment, according to a [story](#) in the *Richmond News Advance*. This is the first rule-making process since DEQ took over administration of the biosolids regulatory program from the health department (VDH) in 2008. According to the article, "Much of the proposed regulations address code inconsistencies. One provision would cause about 100 existing permits that VDH continued indefinitely before DEQ took over to expire on Dec. 31, 2012, said Neil Zahradka, biosolids program manager. Other changes include: neighbors can request larger buffers, up to 400 yards; signs must be posted on all right-of-ways five days before and after sludge is spread; new biosolids sources must be tested for PCBs before they are approved; proposed VDH regulations on field storage would be enacted."

BioCycle's November editorial that stated: "[T]he Organic Consumers Association (OCA) announced it was starting a major campaign against "toxic sludge." According to OCA's website, 'OCA will be educating and mobilizing its national network and calling on federal and state governments to classify sewage sludge as hazardous waste....' The more we thought and talked about 'anti' campaigns like this, the more logical it became to ask, 'well then, what are you for?' If you are against recycling sludge, are you for landfill

disposal or incineration? Organizations like OCA, Sierra Club and the Center For Food Safety (the latter two are very vocal with their anti-sludge positions) serve critically important roles in identifying problems, pointing out how horrifying they are for the environment and humans, and then providing a simple solution — usually that the problem doesn't have to exist in the first place. For better or worse, the problem of sewage sludge won't go away.”

East Bay Municipal Utility District has received increasing attention over the past few years for its innovative efforts to increase biogas production and electricity generation. Working with U. S. EPA, the wastewater treatment facility demonstrated the value of taking in additional organic wastes in underutilized anaerobic digesters to increase biogas and electricity production. In mid-November, a *USA Today* [story](#) described the district's “food waste into green energy” program. The utility shows what can be done to maximize use of valuable anaerobic digester capacity and bring wastewater treatment facilities closer to greener, more sustainable operations.

Recent popular magazine coverage of biosolids: *Scientific American* ran a [story](#) on the Ostara struvite recovery process recently put into operation in Oregon. The article stressed the importance of recovering phosphorus wherever possible, in anticipation of diminishing sources worldwide. Meanwhile, in early December, *Time* ran a [story](#) on humanure (of course, depending on it how it is treated and tested, humanure may or may not be biosolids). And *Atlantic Monthly* had a [story](#) on another anti-biosolids action of the Center for Food Safety and RILES. These two organizations led the unsuccessful 2003 petition to U. S. EPA for a moratorium on biosolids land application. This fall, they petitioned the city of San Francisco to stop giving away local biosolids compost. Many of the same arguments were used in the recent petition as were used in the 2003 one. U. S. EPA thoroughly rebuffed all of the allegations of the 2003 petition; a copy of that rebuttal is available from the NEBRA office.

North East Biosolids & Residuals Association

Box 422 • Tamworth, New Hampshire 03886-0422 • USA
Ned Beecher - Executive Director • 603.323.7654 • FAX 603.383.7666