Happy Holidays!

December 17, 2020

UPCOMING EVENTS:

NEBRA webinar on the State of the Regions Biosolids, **December 18th** at Noon EST.

U.S. Composting Council will be hosting COMPOST2021, a virtual event this year, **January 26th and 27th**.

The New England Water Environment Association's 2021 annual conference will be held virtually **January 26 and 28 and February 2 and 4**.

American Water Works Association is hosting a virtual conference **February 10th and 11th** on Sustainable Water, PFAS, and Waterborne Pathogens.

Northeast Waste Management Officials' Association Northeast Conference -- The Science of PFAS: Public Health & The Environment, **March 29th and 30th** in Framingham, MA.

North East Recycling Council's Spring Conference will be held virtually on **March 30th and 31st**.

PFAS Forum, **April 28th to 30th** in Tampa Florida.

FOR MORE EVENTS, go to NEBRA's Events Page.

Water Treatment Residuals Needed

Clear Creek Environmental Solutions is interested in water treatment residuals to repurpose for an alternate raw material. Clear Creek treats industrial wastewater and specializes in keeping material out of landfills.

Check out Clear Creek at www.ccenv.us. For more information, contact Mike Elliott via email or call 757-235-7000.

CHECK IT OUT:

Englobe's Serge Loubier wins Giant Pumpkin Contest using only compost as fertilizer -- see the picture and read more in BioCycle magazine.

NEBRA has new You Tube Station! Check out some of this past year's Lunch & Learn sessions.

Bioremediation Spotlight: NJ iron-concentrated soil bacteria breakdown PFAS?

Research Short Story: Wildlife Response to Terrestrial Grassland Application of Biosolids.

Researchers Recreate Europe's Centuries Old Scents.

Ancient Greek God bust found in sewers.

Biomass briquettes in Kenya.

Fossilized feces places humans in North America 14,000 years ago.

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Calendar
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THANK YOU!

Looking for Content

NEBRA is always looking for good content – like **stories for NEBRAMail and topics for webinars**. We welcome articles from and presentations by members. If you have any ideas or suggestions, please contact the NEBRA office as we plan the 2021 Lunch & Learn schedule.

SUBSCRIBE and get *NEBRAMail* direct to your inbox!

WBE Proves Its Usefulness, Detects COVID Spikes from Thanksgiving

On December 9th, Boston's NBC10 television news reported that wastewater being tested by the Massachusetts Water Resources Authority at its Deer Island treatment facility showed the highest levels of coronavirus detected since the COVID epidemic began. Similar spikes in virus fragment concentrations were detected in wastewater around the region, see Burlington, Vermont, for example, and show the repercussions of Thanksgiving celebrations.

All around the world, wastewater-based epidemiology (WBE) continues to prove its usefulness and evolve into a powerful tool in responding to the COVID epidemic. WBE is being used successfully at colleges and universities for early identification and quick isolation of infected students. The data is being reported and used by local health agencies for monitoring, planning and evaluating the effectiveness of mitigation measures. In the United States, the Centers for Disease Control (CDC) has taken the lead in developing protocols and a system (called the National Wastewater Surveillance System) to collect, store and analyze the data from wastewater testing. Read more . . .

EPA Refocused, Reinvesting in Biosolids Program

NEBRAMail is pleased to report that the U.S. Environmental Protection Agency (EPA) is reengaged and doing a lot of great work in support of biosolids management programs. There has been a flurry of activity at EPA and new resources being invested in biosolids management issues. Following the November 2018 Office of Inspector General (OIG) report, which was critical of EPA's biosolids program, and after hearing from stakeholders at the October 2019 Biosolids Convening organized by the Water Environment Federation (WEF), EPA is moving forward on a lot of fronts. Liz Resek, who heads the EPA Biosolids Program out of the Office of Science and Technology in Washington, D.C., has hired additional staff to tackle some long-overdue initiatives and is actively seeking to engage with states, tribes, practitioners, researchers and others to improve biosolids management. Just in the last month, EPA had a meeting to get input on its risk assessment model for per- and polyfluoroalkyl substances (PFAS, or rather two in particular: PFOA and PFOS) in biosolids, as well as a 3-day stakeholders meeting in which NEBRA participated. More . . .

WEF Creates a Director Position for Residuals and Biosolids

The Water Environment Federation (WEF) announced last week that its Board of Trustees approved the creation of a new Director position for Residuals & Biosolids. This is welcomed news to WEF's Residuals and Biosolids Committee (RBC) whose members have been advocating for more focus on and resources dedicated to biosolids and residuals concerns. At the December 14th meeting of the RBC Subcommittee called the Association of Biosolids and Byproducts Associations (or ABBA), advocates biosolids advocates for beneficial reuse welcomed the help.

"We need a biosolids champion at WEF! Someone to be proactive, work with utilities and reach beyond the usual stakeholders we've been working with to ensure smart policies across the country when it comes to managing biosolids and residuals, especially in this age of PFAS," said NEBRA Executive Director Janine Burke-Wells. Although NEBRA advocates mainly for beneficial reuse, biosolids managers would agree there is great need to ensure that all three options for wastewater solids management are maintained and supported in practice, in research, and in regulation and legislation. More . . .

Pima County Arizona Reinstates Biosolids Land Application Program and Adds to PFAS Knowledge Base

NEBRAMail learned at the end of November that Pima County (Tuscon area) Arizona has reinstated its Class B biosolids land-application program following a moratorium imposed by the Pima County Board of Supervisors effective December 31, 2019. Following a concern raised to the Board regarding the potential to contaminate ground water with per- and polyfluoroalky substances (PFAS) in the biosolids, the Board instituted the moratorium on agricultural land application of biosolids "pending obtaining a better understanding of how PFAS present in biosolids may disperse through soils into groundwater or fugitive dust" according to a memo obtained by NEBRAMail.

Pima County Administrator C.H. Huckelberry, in a memo dated October 29th, provided the Board of Supervisors with a copy of a report on a comprehensive study by the University of Arizona, Jacobs Engineering, and the National Science Foundation titled "PFAS in Biosolids – A Southern Arizona Case Study." The study was initiated in March 2020 and the results presented by Dr. Ian Pepper of the University of Arizona at a PFAS-related webinar on October 28th. To read the full report, go to: https://casaweb.org/wp-content/uploads/2020/11/PFAS-in-Biosolids_A-Southern-Arizona-Case-Study.pdf. Read more . . .

In Brief / en bref...

Industrial Ecology and Revegetation of a Mining Site From Tailings: The Case of Chapais Energie

Courtesy of Marc Hebert, M.Sc., Agr

The Chapais Énergie plant, owned by Nexolia, produces and sells electricity to Hydro-Québec. This renewable energy is produced by the combustion of residual biomass from the wood industry. However, the costs of burying the ashes are high. Work was therefore undertaken to recycle these residues in order to revegetate an orphan tailings site located near the homes of Chapais. The deep incorporation of ash at high doses increased the porosity of the substrate, promoting natural drainage of the site without liquid discharge. This then made other revegetation work possible. This daring technique allowed for the rapid creation of an abundant and permanent vegetation cover preventing wind erosion and contamination of the air by arsenic. There was colonization by herbivorous fauna, especially voles, as well as various species of birds and pollinating insects, then by predators including foxes and several species of raptors. This project has additional advantages, including the creation of a park and biological and chemical carbon sequestration and is a great example of industrial ecology.

NEBRAMail Note: Long-time NEBRA member Marc Hébert was a residuals regulator in Quebec for over 27 years. He is now a consultant and trainer and had been publishing a monthly newsletter, MRF Actualities (http://marchebert.ca/publications), for many years – what he calls his "Science Journalism Project". Marc emailed NEBRA on November 1st to announce he is embarking on the next stage of his life which includes slowing down (just a little).

UNH Studying Fate & Transport of PFAS in Wastewater Treatment Facilities

Dr. Pauler Mouser, Assistant Professor in the Civil & Environmental Engineering Department at the University of New Hampshire reported on her team's research into the "Fate of Long Chain and Short Chain PFAS Compounds in Wastewater Treatment Facilities" at the first session of the 2020 Northeast Residuals & Biosolids Conference held on October 1st. The research involved extensive sampling for 24 PFAS at numerous Water Resource Recovery Facilities (WRRFs) in New Hampshire at various process stages. In summary, the researchers found fractionation of PFAS through the wastewater treatment process – that is, PFAS separating into the water-loving compounds (mostly shorter chains that end up in the effluent) and water-repelling compounds (mostly longer-chain and precursor compounds that end up in the wastewater solids). They also found further fractionation depending upon the solids stabilization process. Read more In Brief. .

PFAS Cost Impacts Study Led By NEBRA Getting Noticed

The recently released report "Cost Analysis of the Impacts on Municipal Utilities and Biosolids Management to Address PFAS Contamination" prepared by CDM Smith for the Water Environment Federation (WEF) and the National Association of Clean Water Agencies (NACWA) has been getting a lot of mention in clean water circles. WEF and NACWA have assisted NEBRA in getting the word out. WEF has published a blog by CDM Smith Project Manager – and Chair of the Residuals Committee for the New England Water Environment Association – Eric Spargimino. WEF has also included a related Viewpoint article by NEBRA Executive Director Janine Burke-Wells in its December edition of Water, Environment & Technology magazine. Eric and Janine participated together with Chris Wilson, Chief of Processing, Engineering and Research at Hampton Roads Sanitation District in a Words On Water Podcast #170. The WEF/NACWA/NEBRA report was also cited in *Water Finance & Management* and *Global Water Intelligence* magazines. The next step is to get the report and this important information into the hands of federal and state legislators and regulators.

National Biosolids Data Project Update

The National Biosolids Data Project (NBDP) being led by NEBRA is progressing nicely. The NBDP is being implemented by a great team including professionals from the Northwest Biosolids Association, the Mid-Atlantic Biosolids Association, the California Association of Sanitation Agencies, and BioCycle. Thanks to the financial support of numerous partners, NEBRA has received full funding to complete this long-overdue project which will collect and compile data on the regulation, quality, end use and disposal of biosolids in the United States. We will look at trends since the last time the data was collected (for 2004). NEBRA even received a little extra in pledges which will allow the project team to put extra effort into compiling energy and economic data. Thanks to NACWA and WEF for leadership contributions and to the wide variety of organizations from around the country that have pitched in to ensure this important data resource is completed. A final report is expected at the end of March 2021.

North East Biosolids and Residuals Association (NEBRA)
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