GMWEA Fall Trade Show and Technical Sessions

The GMWEA 2013 Fall Trade Show and Technical Sessions is complete. This year's event was a huge success with great attendance and excellent training sessions. For the first time in two years we didn't have a big weather event impacting the show. Hurricane Sandy last year changed the plans of several vendors and attendees, and Tropical Storm Irene in 2011 impacted everyone, recovery is still taking place. We appreciate everyone's participation as always as this event would not happen without our 95+ vendors.

We had more than 400 participants at this event including members, guests, speakers, vendors and the Board of Directors, including more than 30 walk-ins. It's wonderful when people's days free up long enough to get training, networking and vendor interaction all at one time.

Special guests Dave Harris, NEWWA Past President and Mike Bonomo, NEWEA President joined us for the event and shared updates from their respective organizations. There are lots of exciting collaborations and educational efforts happening in New England. Bob Fischer, GMWEA President also gave members and guests an update on what's happening here in Vermont.

There were six very well attended workshops before and after lunch. Some were standing room only. Thanks to all the presenters who came and generously gave of their time for our sessions! The day rounded out with a reception and the always popular vendor give-aways.

Many thanks to the 2013 event sponsors:
Efficiency Vermont, E.J. Prescott, Ferguson Water Works, Statewide Aquastore, Ti-Sales and Vellano.

And, a special thank you to Charlie Tyler our excellent photographer who always captures the best shots of all of our events. Check out his photos of this year's event on the next page.

As always, let us know if you have ideas for training sessions or other additions to this staple of the GMWEA year.

In the meantime, mark your Calendars for 2013:

The Spring and Annual Meeting will be held on Thursday, May 22, 2014 at the Killington Grand Hotel in Killington. The Fall Trade Show and Technical Program will be held on Thursday, November 6, 2014 at the Sheraton Hotel Burlington.

Thanks to you for your constant support. Have a wonderful holiday season!

Submitted By:
Lisa Goodell
VLCT/GMWEA
Training Notes

Rave reviews accompanied the technical sessions at GMWEA's recent fall show at the Sheraton Hotel and Conference Center in South Burlington. Comments like "best session I've ever attended", "this session was very helpful for our system" and "great talk on required maintenance" were overheard on the trade show floor and written on the evaluation forms. Heartfelt thank yous go out to everyone who worked so hard to bring top notch speakers and timely topics to this year's meeting.

There's no time to stop and enjoy our success, however. The New Year is rapidly approaching and training programs for 2014 are already being discussed and scheduled by the Continuing Education Committee (CEC). The CEC welcomes to its roster of dedicated, hard-working members Elizabeth Walker, Julia Butzler and David Love and welcomes back (after short leaves) Paula Jackson and Jay Nadeau. A terrific brainstorming meeting was held in November and some great new initiatives are being pursued to enhance the educational opportunities GMWEA offers to you. You'll hear more about these in future newsletters and mailings as their development progresses and we'll be asking for your input and assistance to ensure their success.

Coming up in 2014 are courses from NEWWA and NEIWPCC as well as another SAC course. Keep an eye out for dates and times - training topics include several "hands-on" opportunities so you can practice what you learn. Sampling, pumps maintenance, valve o + m, distribution system and collection system overviews, lab classes and clarifier optimization are all in various stages of completion for presentation in 2014. The CEC is looking forward to another dynamic year filled with training on the topics you told us you wanted.

Thanks to everyone who attended training in 2013 and especially to those who took the time to thoughtfully fill out the evaluation forms - it really does help us focus on what's important to you.

Happy New Year to all from the CEC!!

Submitted by:
Michele Eisenstein,
GMWEA Director
Thank you to everyone who exhibited, attended, sponsored, and worked to make this event a success!

Save the Date!

GMWEA will be holding a Legislative Luncheon on Wednesday, February 26, 2014. The event is a terrific opportunity for Legislators to hear the issues that are important in the water and waste water industry.

2014 Spring & Annual Meeting

May 22, 2014

Killington Grand Hotel, Killington, VT

Exclusive exhibitor opportunities for GMWEA Corporate Sponsors. Only 10 spaces available!
**Activities Report 2014**

GMWEA is planning fun-filled activities for all members and their families in 2014.

**Vermont Lake Monsters Baseball Game**
Back by Popular demand - Thursday, July 17, 2014 at Centennial Field in Burlington, Vermont.
Come watch potential future Major League Baseball players, and have a fun evening with family and friends. The Lake Monsters have agreed to have one of our members throw out the first pitch of the game!
Each person receives a ticket to the game, a Cheeseburger, Hot Dog, Chips, Cookie and a soft drink.

General Admission - $15.00 per person
*Price includes tax and gratuity. Menu and pricing subject to change*

Game Time at 7:05 pm
BBQ Time 6:00-7:30 pm
*BBQ parties start an hour before the game and are open for 1 1/2 hours.*

**Save the Date!**
George Dow Memorial Golf Tournament – Friday, August 22, 2014 - Cedar Knoll Country Club

Please contact Harry Hagan, GMWEA Director and Activities Committee Chair at hhagan@besttank.com with your suggestions or ideas!

**Submitted by:**
Harry Hagan,
GMWEA Director

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**This could be your last newsletter!**

GMWEA Membership Renewals were put in the mail to you last week. GMWEA membership is a way for you to stay in touch with industry news, get training and connect with other professionals. Plus, members get exclusive discounts on event registration! Renew today to continue your membership benefits. Questions? Contact Lisa Goodell, lisa.goodell@gmwea.org
In Vermont, biosolids recycling has received little support over the past decade. And it shows. According to DEC, in 1987, “nearly all biosolids being generated were land applied” (VT Agency of Natural Resources, readopted in 2006, State of Vermont Revised Solid Waste Management Plan). Ten years later, only 40% were recycled to land. Then CSWD, which collectively manages a majority of the state’s wastewater solids, began sending Burlington area solids to Quebec, where they were composted. The result was a 74% recycling rate in 1999. In 2004, DEC reported 61% EQ production and 9% land application state-wide – a recycling rate of 70%. But most of it was out of state. Vermont was not proactively dealing with its own.

In the Management Plan, DEC stated: “With the increase in regulatory oversight of land application and composting since 1987, and the improvements in biosolids quality, beneficial reuse options are more environmentally sound than ever before.” The same report highlighted the benefits of composting biosolids, noting that the programs in Springfield, Bennington, Wilmington, and Johnson were processing 11% of the state’s solids. DEC noted public concerns about biosolids use, and a committee “concluded that a lack of information on biosolids contributes to these concerns.”

Over the past decade, the Management Plan for biosolids has seen little progress. In that plan, DEC stated “The Agency will promote beneficial use of biosolids and encourage generators to consider beneficial use options for managing biosolids” and “The Agency will work with other departments and agencies to use biosolids and septage on state owned land.” Stated goals included a revision of the biosolids rules and a rate of 75% biosolids recycling.

Fast forward to 2013. Wastewater solids management has been a growing topic of discussion this year. But not because of proactive efforts to promote biosolids. The debate broke into the public arena during the spring-time biosolids utilization permit renewal process in the Town of Stowe. Then the debate shifted to the Chittenden County Solid Waste District (CSWD), which is likely to contract with Casella Organics to have Burlington area solids trucked to the new Grasslands lime-stabilization facility in Chateaugay, NY. The debate was driven mostly by just one person, Kai Mikkel Forlie, a concerned citizen in Burlington, who wrote copious emails and letters to the editor in opposition to the use of biosolids, citing concerns about trace chemicals in biosolids and calling for adoption of decentralized eco-san sewage management instead. James Ehlers and Ross Saxton of Lake Champlain International (LCI) also raised concerns. Even though these opponents cited only minimal, carefully-selected research and other documents to support their arguments (ignoring the preponderance of research supporting biosolids use on soils), Vermont DEC listened. On November 5th, the agency held a biosolids forum, at which it announced its intention to start formal biosolids rulemaking in the near future.

DEC data indicate that, in 2011, 8400 dry tons of biosolids were generated in Vermont, and, of that, 69% was landfilled and 2% was incinerated. Most of the reduction in beneficial use came when CSWD solids were no longer composted in Quebec, but, instead began to be landfilled. The biosolids recycling rate is now just 29%, split equally between Class B land application and production of Class A EQ materials (composts). A few facilities – notably South Burlington and Brattleboro – have invested large sums of local money in progressive biosolids recycling programs. Essex Junction has led the way in maximizing the use of energy and nutrients in biosolids through it co-digestion and land application programs. But, simultaneously, some biosolids recycling programs have ended, such as Bennington’s composting program.

At the biosolids forum on November 5th, DEC heard from biosolids managers and farmers about the benefits derived from the relatively few remaining biosolids recycling programs. More than 80 people showed up, and only a few were opposed to biosolids use. Farmers from Essex and Stowe explained the benefits they receive from using biosolids: slow-release nutrients, reduced chemical fertilizer needs, and significant cost savings – Lorenzo Whitcomb saves $100/acre on fertilizer costs by using Essex Junction biosolids.

Charley Hanson of Resource Management Inc. pointed out that synthetic fertilizer costs have risen 619% since 1990, and biosolids, rich in phosphorous and nitrogen, is a long-proven alternative that recycles local nutrients. Josh Tyler of CSWD indicated that the city of Burlington could save $51,000 to $68,000 if they recycled biosolids through the new Chateaugay, NY facility. Jeff McBurnie (Casella Organics) stressed that, as population increases, our sustainability depends on wise recycling of resources. Land application of well-managed and treated biosolids reduces the burden on limited-capacity landfills. Ned Beecher of NEBRA addressed the most significant concern being raised: microconstituents in biosolids. He stressed that toxicity is de-
(Continued from page 5)
termined by dose, transport, and fate of biosolids constituents, and research to date does not indicate any likely significant harm to human health or environmental organisms from trace contaminants in modern biosolids applied in accordance with current regulations and best practices. Abe Noe-Hays of the Rich Earth Institute gave testimony regarding the value of source-separated urine as fertilizer, which they are demonstrating in a pilot project in Brattleboro.

Despite being included on the agenda of the forum, neither of the two most prominent objectors showed up. So, in the end, only two of the more than 80 forum attendees spoke against biosolids recycling. Naomi Leary, representing “Toxics Action and Vermonters Against Toxic Sludge” (formed by Kai Mikkel Forlie) suggested urine diverting dehydration private toilets with door-to-door collection as a solution to replace current wastewater infrastructure. Ross Saxton of LCI urged caution, claiming that there is not enough research regarding the safety of biosolids use.

The November forum was attended by several DEC managers as well as residuals management division staff. They described the upcoming rule revision process, which could lead to new rules late in 2014. Those in attendance at the forum spoke strongly in favor of revising the rules to current standards and best practices that ensure continued support of land application. As Beecher noted, the state’s dismal biosolids recycling rate leaves much room for improvement, and new rules could help or hinder the state reaching its goals of keeping more organic residuals out of landfills.

Two weeks after the DEC biosolids forum, the CSWD Commissioners held their own biosolids education session, with some of the same speakers presenting. Again, the most vocal opponent to biosolids use – Kai Mikkel Forlie – was on the agenda, but did not appear. CSWD General Manager Tom Moreau and Project Manager Josh Tyler added a summary of their extensive review of the research literature, especially regarding microconstituents in biosolids. Judging from Commissioners’ questions and statements, it appears likely that, at their December meeting, CSWD will vote to approve the 5-year contract with Casella Organics to have Burlington and some other area community biosolids treated at the Chateaugay facility for land application in upstate New York.

These recent discussions clearly show an increasing interest in biosolids management in the wastewater community. Biosolids recycling to land is often the most cost-efficient and environmentally sound option, especially in areas with plenty of open space, such as Vermont. Options for recycling to land are many and varied, from standard farm land application to use on intensive forest-product plots or reclamation of minelands and gravel pits.

And now, organics in general have become a major focus. Vermont’s new Act 148 is driving diversion of organic residuals from landfills – but mostly food waste. Yet the impacts of biosolids in landfills is the same as food waste: unrecoverable greenhouse gas methane emissions and loss of valuable nutrients and organic matter. And biosolids and food waste provide the same benefits when recycled to soils: improved soil quality, return of macro- and micro-nutrients, and reduced need for imported fertilizers. And biosolids are already collected and consistent, all ready to go; they don’t need new infrastructure for collection and they don’t have the plastics, etc. contamination that food waste does. Yet, so far, DEC is not including biosolids and other large-scale organic residuals (e.g. paper mill residuals) in its broader organics management planning. Nor is the agency promoting biosolids, as it said it would a decade ago.

For biosolids managers in Vermont, this is a critical time to engage with DEC and the public and help ensure that options for biosolids management remain open and that this resource finally gets the attention it deserves. The upcoming rulemaking will determine whether or not Vermont keeps pace with the high biosolids recycling rates in many other states, including Maine (74%) and New Hampshire (66%). What happens now will determine what happens with biosolids in Vermont for the next 10 – 20 years. Will the farmers using local biosolids be denied this resource? Will the several-million-dollar investment by South Burlington (in a 2-PAD system) be stranded? Vermont is a professed leader in sustainability. But if cannot find a way to recycle biosolids sustainably, its visionary goals cannot be reached.

Submitted by:
Ned Beecher
Executive Director, NEBRA

Answers to Check Your Knowledge questions
1.d, 2.c, 3.a, 4.b, 5.c, 6.d, 7.b, 8.d, 9.d, 10.c
Check Your Knowledge

1. In coliform analyses using the presence-absence test, a sample should be incubated for
   a. 24 hours at 25°C
   b. 36 hours at 35°C
   c. 24 hours and 36 hours at 25°C
24 hours and 48 hours at 35°C

2. *Giardia* cysts range in size from
   a. 1 to 2 microns
   b. 2 to 7 microns
   c. 8 to 20 microns
   d. 12 to 20 microns

3. The quantity of oxygen that can remain dissolved in water is related to
   a. Temperature
   b. pH
   c. Turbidity
   d. Alkalinity

4. What is apparent color?
   a. Color in a sample after it is filtered
   b. Color in a sample before it is filtered
   c. Color in a sample after it is disinfected
   d. Color in a sample before it is disinfected

5. Electrical demand is
   a. The same as horsepower
   b. Opposition by a circuit to passage of electrons
   c. Amount of power in watts required during a certain time interval
   d. The maximum kilowatt load during a billing period

6. Which one of the following is a major factor in predicting the performance of wastewater clarifiers?
   a. DO
   b. BOD₅
   c. COD
   d. Solids loading

7. If a secondary clarifier has floatable debris in the effluent, what is the most likely cause?
   a. Solids detention time is excessive
   b. The clarifier is hydraulically overloaded
   c. Outlet baffle is not in the proper position
   d. Denitrification is occurring in the bottom of the clarifier

8. What is the optimal pH range for the biological nitrification process?
   a. 7.0 to 7.3
   b. 7.3 to 7.9
   c. 7.3 to 8.0
   d. 7.5 to 8.5

9. Along with nutrients anaerobic bacteria need mostly
   a. Carbon dioxide
   b. Organic matter
   c. Hydrogen sulfide
   d. Volatile acids

10. What should the operator do if the oxidation ditch becomes hydraulically overloaded due to a heavy rainstorm?
    a. Temporarily store the excess rainwater in the primary clarifier
    b. Increase the dissolved oxygen levels
    c. Shut down one or more rotor assemblies
    d. Send excess wastewater to the settling tank

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Upcoming Events & Trainings

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<td>GMWEA Legislative Luncheon</td>
<td>GMWEA</td>
<td>Save the Date! Registration Coming Soon!</td>
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<td>April 16 - CWD, April 17 - Rutland</td>
<td>Sacramento Course</td>
<td>GMWEA</td>
<td>Not yet scheduled</td>
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<tr>
<td>May 22 - Killington Grand Hotel, Killington</td>
<td>Pumps &amp; Pumping Overview</td>
<td>NEWWA</td>
<td><a href="http://Www.gmwea.org">Www.gmwea.org</a> to download form when available</td>
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<tr>
<td>June 18 - CWD, June 19 - Morrisville</td>
<td>GMWEA Spring &amp; Annual Meeting</td>
<td>GMWEA</td>
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<tr>
<td></td>
<td>Sound Procedures for Drinking Water Sampling</td>
<td>NEWWA</td>
<td><a href="http://Www.gmwea.org">Www.gmwea.org</a> to download form when available</td>
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Please check the GMWEA website at www.gmwea.org for the latest training schedule and links to training resources.
GMWEA wishes to thank the following Corporate Sponsors.

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