George Dow Memorial Golf Tournament

The George Dow Memorial Golf Tournament was held once again at the picturesque Cedar Knoll Golf course on Friday, August 17. Golfers arrived at the event and played in the sunshine, though, George Dow and the golf gods were with us as a downpour began as soon as everyone got to the clubhouse for lunch. Players feasted on barbecued chicken and corn on the cob while Cedar Knoll staff braved the rain to retrieve the markers showing who came closest to the prize on holes 9 North, 9 West, and 2 West, along with the longest drive marker on hole 7 West. Sadly, no one got a hole in one and Jen and Lisa were unable to be persuaded to say otherwise so now $10,000 cash prize was given out but we’re ever hopeful it will happen.

I would like to thank all participants, Cedar Knoll and the Golf Committee for another successful Tournament.

1st Place
Hoehl Team: Tad Hoehl, Rob Hoehl, Ted McGinnis, Chris Magistrate

2nd Place
Hayes Pump Team: Tim Fisher, Jay Ives, John Baxter, Matt Traver

3rd Place
Aldrich + Elliott Team: Wayne Elliott, John Choat, Bryan Osborne, Kevin Dorn

GMWEA Fall Conference

GMWEA’s annual Fall Conference is taking place on November 8th at the DoubleTree (formerly Sheraton) in South Burlington. We hope that everyone is able to join us for a fun day filled with training classes, visiting exhibitors, hearing from regional associations, connecting with friends and colleagues and, if you’re lucky, winning free stuff in one of the raffles.

GMWEA’s Continuing Education Committee is working diligently to craft sessions that are hands on, informative, and useful to operators of all levels. Do you have suggestions for trainings we should offer? Please tell us -- we want to present educational opportunities that best serve your daily work and your career plans!

Save the Date!
Thursday, November 8, 2018
DoubleTree by Hilton
(formerly Sheraton)
Water Resources Stewardship In Action at Middlebury WRRF

This setup puzzled some visitors during Middlebury WRRF’s recent Water Quality Day open house. It collects condensate from the facility’s air conditioner and the staff use it to water their garden. Photo by Bob Wells.

Read more about Water Quality Day on page 4.
Summer in Vermont always seem to fly by! I can’t believe that it is already late August as I sit to write this article! As always, GMWEA had a busy itinerary this summer and I’d like to highlight some of what went on in case you missed any of it.

The GMWEA Membership Committee organized and hosted our first Charity Motorcycle Ride in July. The weather was touch and go, but the event and ride were a great success. The ride raised money for GMWEA members in need and was a good opportunity to meet fellow GMWEA members who are also motorcycle enthusiasts. Going forward, the Membership Committee plans to organize a similar event each summer. Contact Ryan Peebles, chair of our Membership Committee, if you’d like to help organize, or just participate in, the event.

The George Dow Memorial Golf Tournament took place at the Cedar Knoll Country Club in Hinesburg Vermont on August 17, 2018. Again, the skies threatened rain, but in the end the day was a great success. I attended (as I do every year) and had a great time. I’m not much of a golfer, but that didn’t matter. The event was well organized and the food was great. I’d encourage everyone, even if you can barely hit a golf ball, to come out for a fun day with your friends and colleagues.

Finally, as part of Water Quality Day GMWEA members hosted tours of wastewater, drinking water, and stormwater facilities around the State. These tours took place on August 2 and 3, during Clean Water Week. Governor Phil Scott signed a proclamation, prepared by GMWEA, declaring August 3, 2018 to be Water Quality Day. The proclamation acknowledged the important work that Vermont’s wastewater, drinking water, and stormwater operators do on a daily basis to keep our waterways clean. Our Public Relations and Government Affairs Committees worked closely with Vermont DEC to coordinate these facility tours with other events related to Vermont Clean Water Week. We plan to continue this collaboration going forward. I’d encourage all facilities to give a tour next year. We gave tours where I work and it was a great experience. It provides the public with an easy way to learn more about how you provide them the great service and products that they expect, and sometimes take for granted.

Going forward, the GMWEA event calendar will keep up its frenetic pace! The legislative session will be starting up before we know it and the Fall Trade Show is just around the corner. Our Government Affairs Committee is gearing up for a variety of events, including a meet and greet with Senators and Representatives at the Statehouse. Also the GMWEA Continuing Education Committee is hard at work organizing educational sessions for the fall show. I hope you enjoy these last days of summer. I look forward to seeing you at the GMWEA trade show in November.

Submitted by:
Tom DiPietro
GMWEA President
GMWEA’s fourth annual Water Quality Day saw a fine turnout for its water, wastewater, and stormwater facility tours. On August 3rd (August 2nd in Burlington), over 230 Vermonters attended open houses or tours at 10 facilities!

In addition to members of the general public of all ages, the visitors included legislators, members of many selectboards/town councils, representatives of environmental organizations, and the press. GMWEA was especially pleased to host Vermont Agency of Natural Resources Secretary Julie Moore, ANR Communications Director Elle O’Casey, and Vermont Dept. of Environmental Conservation Deputy Commissioner Rebecca Ellis. We’re very pleased to see their interest in the nuts and bolts of water pollution prevention!

The facilities participating this year were three of Burlington’s wastewater, stormwater, and drinking water plants; Essex Junction WRRF; Hinesburg WTF; Middlebury WWT; Montpelier WRRF; South Burlington WRRF; South Burlington Stormwater; and Champlain Water District. Sincere thanks are due to the operators and other hard-working staff who made the extra effort to welcome the public.

GMWEA initiated Water Quality Day in 2014 and has coordinated public facility access and outreach each year since then. This year, GMWEA moved the date from May to August to synchronize activities with the Vermont Agency of Natural Resources’ Clean Water Week, July 29 to August 4. The week featured over 80 events, celebrating Vermont’s natural waters, presented by 50 public and private organizations statewide. Activities included lectures, community forums, walking tours, canoe trips, wildlife explorations, fishing lessons and aquatic ecosystem discussions, coastal cleanups, and hydro-electric plant open houses, all focused on natural and working waters.

Thanks to public outreach synergy between GMWEA and the Vt. ANR, Vermont Public Radio, *Vermont Digger*, *Barre-Montpelier Times Argus/Rutland Herald*, WCAX, and other media outlets covered the statewide observance, and dozens of local papers featured articles on nearby activities.

Water Quality Day is important because it provides the public and policymakers with an inside view of just how huge and complex our water/wastewater infrastructure is, and how important it is to our daily lives. While often criticized for occasional failings, our water quality management systems are – as proclaimed by Gov. Scott and Gov. Shumlin before him -- the most important safeguards for the public health and the natural environment.

If facility visitors’ comments are any indication (“Really eye-opening!” “Good job!” “Fun!” “I had no idea!”), every one of them emerged with a better understanding of how these systems work and a greater appreciation for just how important they are.

Submitted by:
Daniel Hecht
Executive Director
Operation Water Workers - Motorcycle Charity Ride

On Saturday, June 23rd 2018 GMWEA hosted its first annual Operation Water Workers Motorcycle Charity Ride. This annual charity event will be used to support members and their families who have experienced recent hardship and could use a helping hand. The ride is open to the public.

This year we had a great turnout given the poor weather conditions. There were eight motorcycle riders and two passengers. The ride started in Randolph and ended at Rosie’s restaurant in Middlebury where the riders stopped and had an awesome sit down lunch. This event offers a great opportunity to network with other GMWEA members, enjoy rural Vermont scenery and raise money to help support members.

In spite of the poor weather conditions the Charity Ride was able to raise a few hundred dollars. If you know of any members and/or their families who have experienced recent hardships and could use a helping hand, please email admin@gmwea.org. We look forward to having more riders join us next year. Stay tuned for more details about the 2nd Annual Operation Water Workers Motorcycle Charity Ride!

Submitted by:
Christopher Cox
GMWEA Director
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  
   d. 24 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
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 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
Longest Drive Men - Alan Huizenga
Closest to the Prize at 9 North - Jim Fay, 3’ 2”
Closest to the Prize at 9 West - Ben Smith 2’ 2”
Closest to the Pin at 2 West - Kevin Dorn 3’ 10”

Thank you again to our generous sponsors including:
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Submitted by:
Steve Crosby
Golf Committee Chair
Vermont Operators Visit Rhode Island Through Operator Exchange Program

GMWEA will be participating in the Operator Exchange program again this fall. Below you’ll hear from last year’s exchange operator about what the experience is like and why it’s valuable.

My husband and I had the wonderful opportunity to be a part of the NEWEA Operator Exchange program this year as a husband and wife team. I work for the City of South Burlington, while my husband, Arthur Garrison works for the Town of Milton. I am the Laboratory Analyst for our department, and I’m also an Operator. Arthur is the Lead Operator for Milton, handling water distribution as well as wastewater treatment.

First of all, let me just say that our hosts made us feel very welcome in Rhode Island. Everyone we met was very genuine and enthusiastic about our visit. Our first day started with a tour of the Warwick treatment plant. The first thing to mention is that this plant suffered severe flooding in 2010. It took 5 days for the plant to regain primary treatment, and about 2 months to regain secondary treatment. I cannot imagine the stress of getting through that ordeal. The levee has since been raised, to hopefully prevent another disaster of this scale. This plant uses odor control added to the influent, something I have not seen much of in Vermont. They also use “micro-sand” (which is recycled) along with aluminum sulfate for phosphorus reduction. Solids are thickened at the site, but trucked out to another facility for incineration.

Our second tour that day was at the Cranston treatment plant, the 3rd largest plant in Rhode Island. About 50 people work at this facility, making up 3 shifts. The most impressive thing about this plant is the incineration process. We were able to see inside an operating incinerator, which burns the sludge to ash at about 1300 to 1400°F. This facility also had large tunnels under the plant where pumps are located. The plant is run under contract operations, a practice I was not familiar with, even though there are some plants run this way in Vermont.

The West Warwick treatment plant was our last tour of the first day. This plant also has 3 shifts for operations. Methanol is used as a carbon source for de-nitrification, and aluminum sulfate is used for phosphorus reduction. Odor control is also implemented at this plant. Sludge is de-watered to “cake” and trucked out for incineration. This plant uses “micro-sand” for nutrient removal and UV for disinfection.

On our first day of tours I noticed that the plants we visited aren’t digesting sludge, or creating bio-solids. Perhaps it’s not very useful or cost effective in this state. They do use effluent for plant processes, a practice that is probably more common at most treatment plants now. I am really impressed by the re-use of effluent at treatment facilities.

On our second day in Rhode Island, we visited 3 more plants. The first was the Westerly plant, built in 1959. Only 6 people work there, much like my department and Art’s as well. This plant is a 3.5mgd facility under contract operations that uses chlorine and sodium bisulfite for disinfection. Sludge is trucked out for incineration elsewhere. The unusual process at this plant is the sponge media that is aerated in suspension. It is recirculated and reused, and should last for about 10 years. We had never seen anything like this before. Operation of this plant had very recently changed from one company to another, and its condition was in need of improvement. Operators are working very hard to bring this facility back from neglect while still meeting their permit requirements.

The second tour for the day was at East Greenwich. This plant was last upgraded in 1988. Only 5 people work at this plant with a design flow of 1.8mgd. The most impressive thing about this plant was the RBC building, housing huge RBC units. It was amazing to walk past these massive machines as they were turning. This plant also uses sand filtration for nitrogen removal, and methanol for de-nitrification. This was the first treatment plant in RI to use UV for disinfection, but they still have the chlorine contact chamber as a backup. A lot of thought was put into the architecture at this plant to make it more aesthetic. The community was quite affluent and it was interesting to see the contrast between building upkeep and equipment maintenance. Despite the state of this facility, the operators here are working hard to keep things running smoothly. In my short time in this industry, I have learned much about the struggle to educate the public on the importance of caring for wastewater treatment facilities and collection systems.

(Continued on page 10)
Our final tour was at Field’s Point, the largest treatment facility in Rhode Island, which was first built around the year 1900. There are 3 shifts and approximately 250 people work here. This facility has a 77mgd design flow, but has had to handle more than twice that at times of heavy rain events because of the combined sewer system. Everything about this plant is massive, the aeration basins, the clarifiers, and the pumps. I can’t imagine working at a facility so large that you use golf carts to get from one place to another. The aeration process includes 10 trains of basins filled with tiny disk media, and 10 blowers to aerate them. Sludge is thickened at this plant, but then contracted out for de-watering and incineration or sent to a landfill. I was mostly interested in the laboratory, which by itself was larger than the entire building I currently work in. The lab analysts run daily TSS and BOD, and daily MPN for fecal coliform and Enterococcus on their final effluent.

The last thing we had hoped to see was the history-making storm water tunnel that was completed in 2017 by the Narragansett Bay Commission, but the elevator was not working that day, and climbing 50 flights of stairs didn’t sound like too much fun. The $1 billion project was designed to divert the flow of storm water from the aging system in Providence and prevent the overwhelming and overflow of that system and the treatment facility, therefore reducing pollution into the bay.

Before this trip, there were processes and methods we were previously unfamiliar with including the use of methanol, sand filtration, incineration of sludge, and suspended media. Also, the plants we toured in Rhode Island routinely receive a significant amount of septage, and they each had their own way of evaluating it before adding it to their treatment processes. There are so many differences between our plants and the plants we toured in Rhode Island, but one thing is the same, operators at the plants we toured owned a sense of pride in their work, even at the facilities that need restoration and updates.

I would like to take this opportunity to thank the Narragansett Water Pollution Control Association for their hospitality. We stayed at a nice hotel, ate fantastic food with new friends, all while enjoying the beautiful scenery of the State of Rhode Island. Art and I also had a great time at the Trade Show on our last day there, before heading home. I encourage any operator who’d like to learn more about the wastewater industry to become a part of the Operator Exchange Program.

Submitted by:
Jennifer Garrison
Lab Analyst/Operator
City of South Burlington

Aerial view of Fields Point.
# Upcoming Events & Trainings

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<td>Collection System Specialty Conference &amp; Exhibit</td>
<td>NEWEA</td>
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<td>9/16 to 9/19/18</td>
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<td>Montpelier, VT</td>
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<tr>
<td>10/22/18</td>
<td>LaBaron Hills Country Club</td>
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<td>11/8/2018</td>
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<td>Save the Date!</td>
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<td>11/26/18</td>
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<td>11/27/18</td>
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Please check the GMWEA website at www.gmwea.org for the latest training schedule and links to training resources.

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## Notes from the Continuing Education Committee

As the Continuing Education Committee prepares for the fall technical sessions, and looks ahead to next spring, now is the time to contact us if there is anything you would like to attend. Assuring that all Water and Wastewater Operators have the opportunity to help plan the technical sessions without being on the committee is a valuable part of what GMWEA stands for. Remember, this is your organization and together we can make the fall show spectacular. You can email me at eileen.toomey@gmwea.org with any thoughts or questions. See you in November.

**Submitted by:**
Eileen Toomey  
Chair, Continuing Education Committee
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