

FWEA Manasota Chapter

Vol 14 - May 2013

Message from the Steering Committee

*By Kristiana Dragash, Carollo Engineers
Chair, Manasota Chapter*

This past March, leaders from local chapters, committees, and the board of directors met at the Leadership Development Workshop at the picturesque Mission Inn in Howey-in-the-Hills, Florida. The summit is a 2-day event focusing on team building, leadership, sharing successful ideas and lessons learned from previous years, and aligning the many moving parts of the association with a common theme and vision. As proposed by the new president for FWEA, *Greg Chomic*, this year's common goal is FWEA are **ENGAGED**. As leaders in the association, it is our duty to be engaged, and to engage the members in ongoing efforts to contribute to a high value of membership, provide professional development opportunities, educate the public on the importance of the water quality engineering profession, and recruit bright new talent into the field.

I was extremely proud to report to the board and the association leaders that not only has the membership in our local chapter increased, but also the Manasota steering committee itself has grown into an efficient and very engaged team of dedicated professionals. The Chapter that began being led by two people now has a very strong backbone of 11 steering committee members! I am indebted to each of you for your hard work and support. The Manasota Chapter is the first new chapter that has been created in many years, and now, other chapters that cover large geographic areas of professionals are looking to us for guidance and assistance for forming new chapters so that they can better serve the FWEA members in their area – what an honor it is to provide assistance and guidance to them!

The 3rd birthday celebration for the Manasota Chapter was held on April 18th. The group enjoyed snacks and beverages in the breezeway of the Polo Grill. If you were not able to make it, don't worry - there's plenty of exciting events that you can be



Members of the FWEA Manasota Chapter celebrated the Chapter's 3rd birthday at the Polo Grill.

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engaged in this year! May 30th will be our next quarterly luncheon at our new venue - FCCI Insurance Group (6330 University Parkway). Tom Jackson from the City of Punta Gorda and Kimberly McCue from Royal Consulting Services will be speaking on their recent biosolids application site permit and nutrient management plan.

The Florida Water Resources Conference was from April 28 - May 1 at the Renaissance Sea World Resort in Orlando. Make sure to check the Chapter Corner of the upcoming June edition of the Florida Water Resources Journal for special coverage of the conference written by the Manasota Chapter! The Chapter is pursuing opportunities to team up with the FWEA biosolids committee and the new wastewater process committee to help organize upcoming luncheons, seminars, and round-table discussions this year. If you have an interesting project or story to tell about biosolids or the wastewater treatment processes at your or one of your clients' facilities, please contact me to get on the rapidly growing list of speakers for these exciting upcoming events.

It is that time again! Please renew your company's sponsorship to support the Manasota Chapter. Your contributions help fund our many exciting events and initiatives, and support worthy causes in the local area. As a sponsor, your company will have the opportunity to appear in our quarterly newsletters and receive recognition at each luncheon and event. In addition, you will be invited to submit an article in one of our quarterly newsletters. Please contact Laura Baumberger at lbaumberger@carollo.com if you are interested in sponsoring our chapter.



Julie Karleskint and Kristiana Dragash enjoy the YP Social at the Florida Water Resources Conference.

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If you are interested in joining the Steering Committee, please contact us. We are currently seeking a Vice-Chair and additional At-Large Members.



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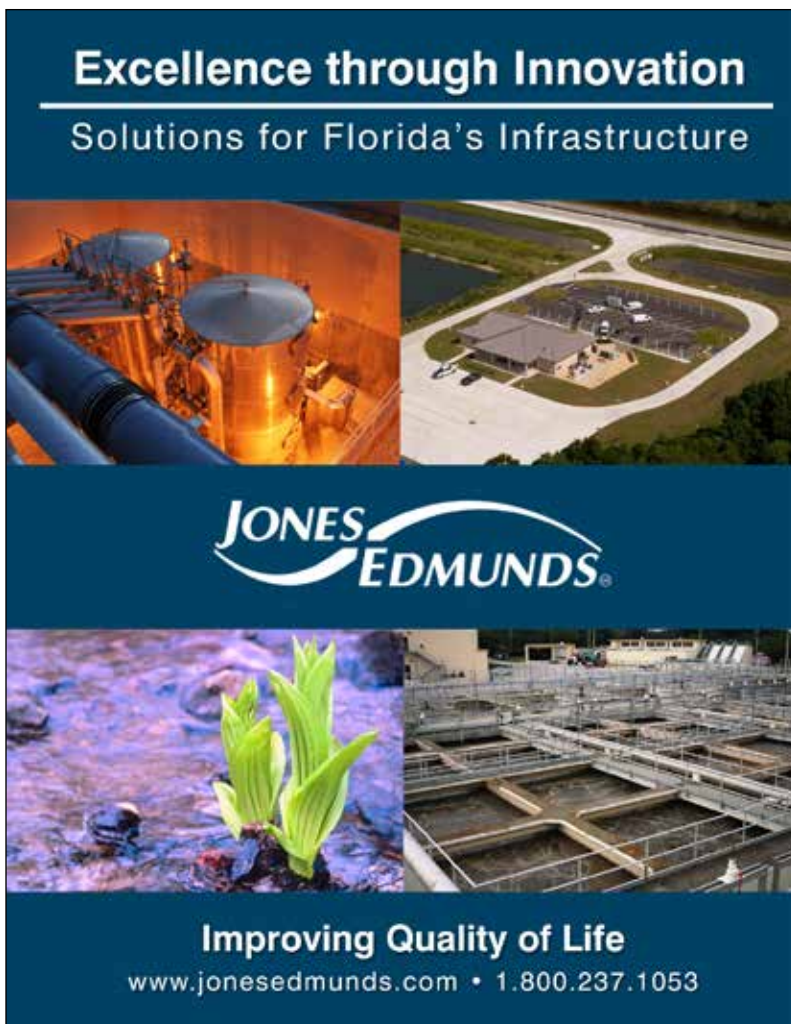
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Project Spotlight: Traveling Bridge Filters Keep Chugging Away at Manatee Southwest WRF

By Paul Klebs - Aqua Aerobic Systems, Inc. and Chuck Hlavach - EnviroSales of Florida, Inc.

The Traveling Bridge Sand Filter, also known as the Automatic Backwash Filter (ABF), is a technology that has been utilized on water and wastewater projects for over 50 years. There are a number of reasons why the technology has had such staying power in an industry where there are a number of “newer” technologies that are utilized in the same applications. The ABF is a relatively simple design that is low maintenance, fully automatic, and delivers the high quality effluent dictated by Florida’s reuse standards. On a well maintained ABF applied on a typical municipal plant with secondary treatment, an effluent target value of 2 NTU can be easily and reliably achieved. It is this reliability that has allowed the ABF to be installed in nearly 1,000 plants nationwide, a number of which can be found in the State of Florida and several of those which are located in the local Manatee and Sarasota County area.

Despite its robust design, and as with any type of filtration device, there are certain components on the ABF that eventually need to be replaced. ABFs applied in wastewater typically utilize either sand or a combination of sand and anthracite. The filter media itself is typically replaced every few years, as the sand grains abrade over time, and change their size, shape, and filtering ability. Additionally, the underdrain material which is usually either HDPE or aluminum oxide porous plate, as well as the caulk used to seal the plates in place, eventually wears or fouls over the course of the filter’s expected life of 15-20 years. Recently, the Manatee County Southwest Water Reclamation Facility undertook a project to upgrade some of their ABFs. Their reason for addressing this issue was that they were able to pass a smaller and smaller volume of water through the filter



Aluminum oxide plates being installed by TLC Diversified, Inc. of Palmetto, FL, during the 2012 filter rehabilitation at the Manatee Southwest WRF.



before an appreciable amount of headloss would send them into an automatic backwash mode of operation. In some instances, ABF owners can prolong the life of the underdrain and media by performing preventative maintenance to minimize the risk of fouling. Chemicals such as sodium hypochlorite, caustic soda, and acetic acid have been utilized successfully to help minimize the potential for the underdrains to foul. In the case of Manatee County, such measures were performed unsuccessfully, leading them to their decision to embark upon a more certain solution to what was becoming a bottleneck in their treatment process. County personnel determined that even with proper maintenance, their



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Project Spotlight: Traveling Bridge Filters Keep Chugging Away [cont.]

By Paul Klebs - Aqua Aerobic Systems, Inc. and Chuck Hlavach - Envirosales of Florida, Inc.

ABFs had gotten to the point where the underdrains needed to be replaced.

Another sure sign that an underdrain needs to be replaced is a loss in the media located in the individual cells of the filter. This can occur as a result of the caulk wearing out after repeated backwashing and chemical cleaning. It can also occur due to the underdrain being fouled as a result of influent that is high in oil and grease, or fouling with biological material. When this occurs, an underdrain replacement is in order. Upon completion of the underdrain rehab and replacement of media, the filter's hydraulic capacity and solids removal capacity is restored to "like new" status.

As mentioned previously, one local installation that has gone through this process is the Southwest Regional WRF in Manatee County. The Manatee Southwest WRF has six 16' x 66' ABF dual media filters that were installed in the mid 1980s. According to Tom Birk, the Plant Superintendent, some of the existing filters were originally installed with aluminum oxide porous plates and others were installed with HDPE porous plates. As the filters aged, the plant noted that the backwash water from the filters with HDPE plates became clear, despite repeated chemical cleaning. The clarity of the backwash water was a sign that the backwash was not effectively cleaning the filter, and the underdrain needed to be replaced. Another factor driving the plant's desire to rehab the underdrains was the fact that the filters with aluminum oxide porous plates could pass about 50 percent more flow than the filters with HDPE plates despite the fact that the filters were both 66' long. The plant also noted that the aluminum oxide plates were

physically sturdier than the HDPE plates, which has allowed the plates in some of the existing filters to stand up to repeated backwashing and chemical cleaning without flexing or warping.

These factors lead Manatee County to advertise for bids to have two of their ABFs rehabilitated in 2012



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Rehabilitated filters at Manatee Southwest WRF.

Project Spotlight: Traveling Bridge Filters Keep Chugging Away (cont.)

By Paul Klebs - Aqua Aerobic Systems, Inc. and Chuck Hlavach - EnviroSales of Florida, Inc.

with aluminum oxide underdrain plates. In addition to providing the new underdrains, the older media in the filter was removed and replaced with new sand and anthracite specifically sized for removing the finer solids present in the effluent stream after secondary clarification. The County also took this opportunity to assess the mechanical integrity of other filter components during this process and lead them to rehab some of their bridge components as well. Other components that are frequently considered in ABF rehab projects typically include the rails, festoon system, wear strip, pumps, and controls.

Since the time of their rehab project, the Southwest WRF has been pleased with the results of the revitalized ABFs, both from the standpoint of improved hydraulic capacity as well as the improved solids removal efficiency. The additional flow that they can now put through the two rehabilitated filters also lead them to do required maintenance on one of the other, older filters in parallel operation to the re-worked units.

In Florida, there are well over 100 traveling bridge filter installations. As these plants age, many of them are going through the same rehab process as the Manatee County Southwest WRF and they are reaping the benefits of rehabilitating their underdrains, media and other filter components. Among other West Coast WWTPs that have undertaken this project are the Pinellas County Utilities William Dunn WRF, the City of Naples WWTP, and the Charlotte County East Port WWTP. The efforts these plants have put forward to work on their sand filters has allowed this tried and true technology to keep chugging away in many installations across Florida and across the country.

Aqua Aerobic Systems would like to thank Tom Birk, Plant Superintendent at the Manatee Southwest WRF for his input in this article.

Paul Klebs is the aftermarket sales manager at Aqua-Aerobic Systems, Inc., Chuck Hlavach is the Vice-President of EnviroSales of Florida, Inc.

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Calendar of Upcoming Events

MAY

- 9** FES Myakka Chapter Luncheon, Lakewood Ranch
- 18** ASCE Suncoast Branch Annual Golf Tournament, Bradenton
- 23** FWEA West Coast Chapter Luncheon, Tampa
- 30** FWEA Manasota Chapter Luncheon, Lakewood Ranch
- 31** FWEA/FBC Benchmarking Workshop, Pompano Beach

May

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

JUNE

- 7** FES Myakka Chapter Picnic, Sarasota
- 10-14** AWWA Annual Conference and Exposition, Denver, CO

June

SUN	MON	TUE	WED	THU	FRI	SAT
						1
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City of Punta Gorda Biosolids Land Application Site Permit and Nutrient Management Plan

***by Tom Jackson - City of Punta Gorda Utilities Director and
Kimberly McCue, P.E. - Royal Consulting Services, Inc.***

Abstract

The City of Punta Gorda owns and operates a 4-mgd wastewater treatment plant and land applies biosolids on site. As a result of changes to Florida biosolids rules, the City recently applied for an FDEP land application site permit. The permit application required a Nutrient Management Plan for the site. This presentation will include an overview of the City of Punta Gorda wastewater treatment plant, history of biosolids land application, and development of its Nutrient Management Plan.

Tom Jackson

Mr. Jackson started in the environmental field in 1978 as part owner of an environmental testing laboratory and utility operating company. Following that, he began a 10-year career as a regulator ending up in the FDEP South District office in the Compliance/Enforcement Section first in domestic wastewater and then as the sole industrial wastewater compliance/enforcement person. In addition, he was the residuals coordinator for the South District under the old biosolids rule. He has been with the City of Punta Gorda for 11 years serving first as Permit Compliance Coordinator, Assistant Utility Director, and finally Utilities Director for the past 7 years. Mr. Jackson is also on the Board of Directors for the Florida Rural Water Association.

Kimberly McCue, PE

Ms. McCue is an Environmental Engineer and Senior Project Manager with Royal Consulting Services, Inc.,

a certified Technical Service Provider for the Natural Resource Conservation Service. She has over 16 years of experience and was awarded the American Society of Agricultural and Biological Engineers "Young Engineer of the Year" award in 2011.

She specializes in the permitting of large agricultural operations and has successfully designed and permitted Nutrient Management Plans (NMPs) and Best Management Practices for multiple utilities and over 40 large agricultural facilities including dairy farms, poultry facilities, cow/calf operations, Class B Biosolids sites, and biofuel processing facilities. Ms. McCue led the development of the Biosolids NMP for the City of Punta Gorda. She also has extensive experience working with the Florida Department of Environmental Protection, Florida Department of Agriculture and Consumer Services, United States Department of Agriculture and Natural Resources Conservation Service, Army Corps of Engineers, and several Water Management Districts throughout Florida.

THANK YOU!

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