

# Florida Water Environment Association

## Manasota Chapter Newsletter

Volume 32, August 2018



### Message from the Steering Committee

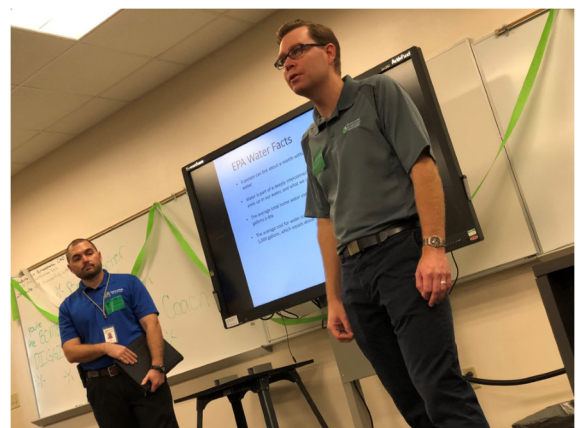
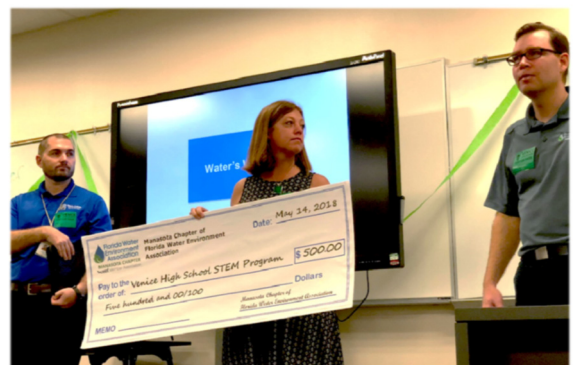
By Wendy Conn, Senior Scientist, VHB

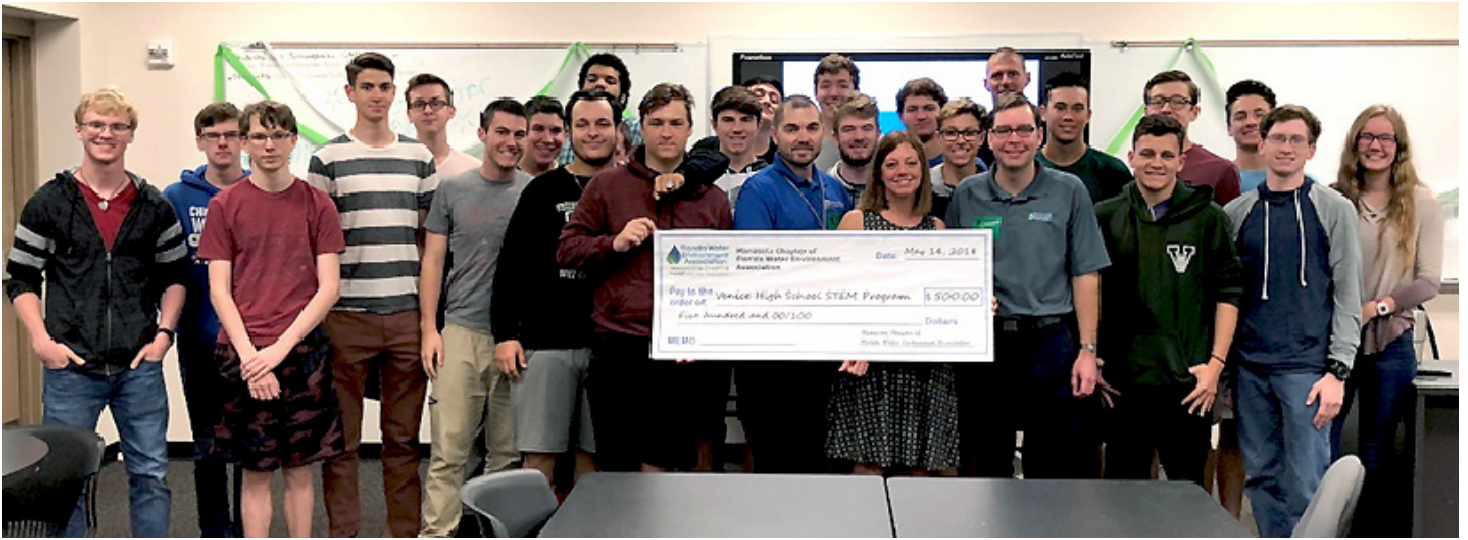
Florida's climate and low elevation supports a landscape rich in hydrology, with most of the freshwater contained within wetlands, lakes and rivers. However, due to the delicate nature and balance of these unique ecosystems, limited potable water availability, and increasing demand, combined with the desire for long-term sustainability and maintenance of water quality, it is a balance that can be difficult to manage. The development of modern technologies to improve water treatment and availability, combined with regulations that afford special protections to surface water quality and wetlands, are critical in supporting the inevitable population growth and ensuring the sustainability of future water supply.

On May 14, 2018, John Monville (Assistance Utility Director, City of Venice), Mike Nixon (Engineer Intern, McKim & Creed), and Wendy Conn (Senior Scientist, VHB) presented a check to the Venice High School STEM Program as part of an initiative to introduce students to the diversity of careers available in water resources engineering and environmental sciences.

Mike Nixon put together a presentation illustrating the importance of water conservation, waste reduction, and the utilization of high-quality potable water produced by local municipalities in lieu of bottled water. John Monville discussed local initiatives to treat stormwater that include systematic biological components to concurrently provide habitat for wildlife. He also discussed the challenges faced by the City of Venice in balancing population growth with the maintenance and replacement of older infrastructure.

Wendy Conn talked to students about how environmental science also plays an important role in the water resource field. She explained how habitat restoration projects help retain water within the landscape and promote natural sheet flow. This reduces the volume of water entering the downstream bays and estuaries, which are sensitive to significant pulses of freshwater.





The Florida Water Environment Association (FWEA) will continue to support local STEM programs increasing awareness to career opportunities in these important fields. The quality of our water resources depends on future generations.



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# Calendar of Upcoming Events

August through November 2018



## August

30 FWEA/AWWA/FWPCOA 11th Annual Southwest Florida Water & Wastewater Exposition, Punta Gorda



## September

20 ASCE SunCoast Branch Lunch, Sarasota

26 APWA Suncoast Branch Monthly Breakfast, Sarasota



## October

TBD FWEA Manasota/AWWA Region X Joint Luncheon, Sarasota

TBD FWEA Manasota/West Coast Chapter Octoberfest Social, St. Pete

18 ASCE SunCoast Branch Lunch, Sarasota

24 APWA Suncoast Branch Monthly Breakfast, Sarasota

TBD AWWA Region X CIP Night



## November

11 AWWA Region X Game Day, Tampa

15 ASCE SunCoast Branch Lunch, Sarasota

16 FWEA Manasota 4<sup>th</sup> Annual Sporting Clay Shoot

25-29 FSAWWA Fall Conference

28 APWA Suncoast Branch Monthly Breakfast, Sarasota

Check out the Manasota Chapter webpage for upcoming events and more information on the chapter. Visit [https://fwea.org/manasota\\_chapter.php](https://fwea.org/manasota_chapter.php).



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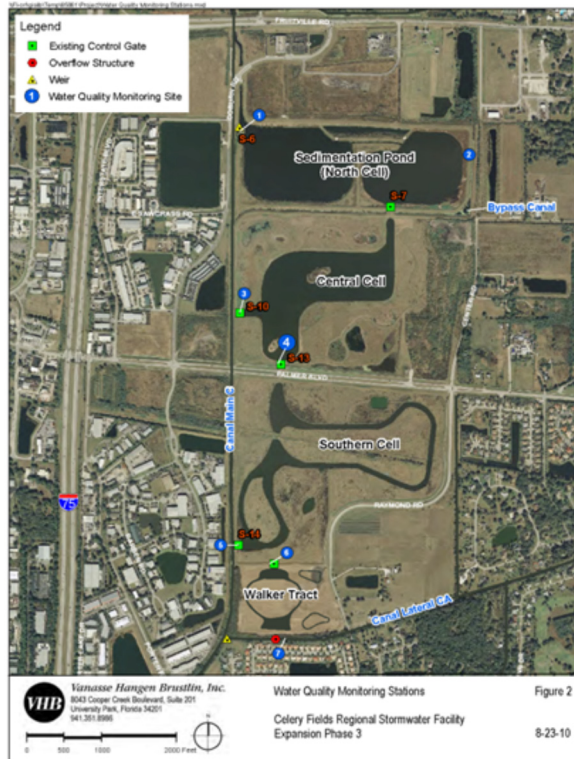
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# Celery Fields Stormwater BMP Evaluation Study

Gary Serviss, LEED AP, SE Region Environmental Services Leader,  
Vanasse Hangen Brustlin, Inc. (VHB)

Sarasota County acquired more than 400 acres of land, for what is currently known as the Celery Fields Regional Stormwater Facility (CFRSF), to provide stormwater-runoff retention, flood protection, and a diverse environmental filtration system. CFRSF is located south of Fruitville Road and east of Interstate 75.



The project was developed after major flooding occurred in the Phillippi Creek watershed in 1992. The initial phases were completed in 1997 and included construction of numerous control structures and large sedimentation ponds on roughly 300 acres in the North and Central Cell areas. Phase III of the CFRSF was built in 2011 and consists of two properties referred to as the South Cell and Walker Tract. With funding from capital stormwater assessments in the Sarasota County Phillippi Creek Drainage Basin, and cooperative and grant funding, a number of additional water control structures were constructed and approximately 150 acres of upland, wetland, and open-water habitat were created and/or restored.

As part of the CFRSF Phase III project, Sarasota County and the Florida Department of

Environmental Protection (FDEP) wanted to determine the effectiveness of the facility at removing pollutants and nutrients from the upstream Phillippi Creek watershed (approximately 3,583 acres). VHB was selected by Sarasota County Public Works to perform the Celery Fields Regional Stormwater Facility Best Management Practice (BMP). The FDEP Total Maximum Daily Load water quality grant required a site-specific BMP monitoring program that evaluated the project's objectives of reducing nutrient loadings to Roberts Bay North, a Group 3 impaired water body.

The BMP study specifically included monitoring and analysis of continuous rainfall, water stage and flow, and water quality over a 24-month period. The ultimate goal of this study was to assist making practical management decisions that targeted improvements in future nutrient load reductions for the CFRSF and other stormwater facilities. Monitoring was conducted at seven different locations at sites that representing the majority of inflows and outflows, as well as the various cells. A telemetry system was set up for this project to monitor the status of water stage and discharge/inflow and to allow for real-time data observation. Daily rainfall monitoring occurred at three sites in the watershed along with continuous stage and/or discharge at the seven sites.



Flow-weighted composite water quality sampling for nutrients and other parameters was conducted during seven baseflow monitoring and nine storm flow monitoring events. A data sonde was used to measure the pH, specific

conductivity, water temperature, turbidity, and dissolved oxygen levels at each station concurrent with water quality sample collection. In addition to the primary data, a Rhodamine dye time-of-travel study was conducted to determine the residence time of water flowing through the different cells. The total rainfall averages for both years were generally drier than the historic average, but there were several substantial rainfall events. The inflow from Phillippi Creek ranged from no flow to 84.09 cubic feet per second (cfs), and averaged 7.62 cfs. The mean discharge at the outfall was 5.53 cfs, and shows that a substantial volume of water (approximately 34%) is lost through infiltration and evapotranspiration.

The overall facility had positive annual nutrient/pollutant load removal and removal efficiencies for all analyzed parameters, with the exception of biological oxygen demand (BOD) study. The load removals for the overall facility were approximately 925 kg/yr and 6,894 kg/yr, respectively, for TP and TN.

The annual removal efficiency of the overall facility for all nutrient parameters (total phosphorus and total nitrogen and their individual components) ranged from 13% to 97% during the study period. TP, TN, and TSS removal efficiencies for the CFRSF were 50%, 53%, and 82%, respectively.



A review of the nitrogen to phosphorus ratios indicated that these nutrients were available in balanced proportion for plant protoplasm production, but nitrogen was more efficiently removed from the system. This resulted in a nitrogen limited condition which will reduce the potential for undesirable algal blooms in downstream waters. The CFRSF also removed approximately 239,711 kg/yr in TSS.

If you have any questions, please contact Gary Serviss, [gserviss@VHB.com](mailto:gserviss@VHB.com)



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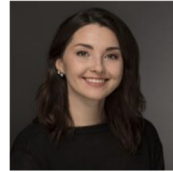
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## FWEA Manasota Steering Committee Contacts



### Chair

**Mike Nixon**  
McKim and Creed  
(941) 379-3404



### Secretary

**Madeline Kender**  
Kimley Horn  
(941) 379-7604



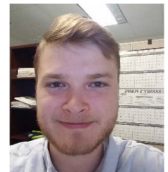
### Vice Chair

**John Banks**  
City of Venice  
(941) 882-7297



### Communications

**Wendy Conn**  
VHB  
(941) 921-4183



### Treasurer

**Kyle Ward**  
Carollo Engineers  
(941) 371-9832



### Membership

**Michael Jankowski**  
McKim & Creed  
(727) 442-7196

### Past Chair:

**Mike Knowles**  
**Lindsay Marten**

### Founding Chair:

**Kristiana Dragash**

### Founding Secretary:

**Linda Maudlin**

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### Utility Liaisons:

**Mike Acosta** | City of North Port  
**Tony Centurione** | City of Sarasota  
**Jeff Goodwin** | Manatee County  
**Pete Hardy** | Sarasota County  
**Stephen Kipfinger** | Charlotte County  
**Javier Vargas** | City of Venice

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**Chuck Hlavach** | EnviroSales of Florida, Inc.  
**Julie Karleskint** | Hazen and Sawyer  
**Ashley Miele** | Kimley-Horn  
**Samantha Nehme** | Stantec

### Director at Large:

**Lindsay Marten**

If you are interesting in joining the Steering Committee, please contact us.





# FWEA Manasota Chapter 4<sup>th</sup> Sporting Clays Shoot



**Event Description:**

**50 Shot Tournament with Four Person Shoot-off Finale**

The Manasota Chapter is excited to be putting on our 4<sup>th</sup> Sporting Clay Shoot at the Sarasota Trap, Skeet and Clays facility. Novice and expert shooters are all welcome. Teams will proceed between the shooting stations and each team could share a single shotgun so there's no need to get everyone a gun. Please bring your own gun if you have one but there are several guns available for rent at the facility. Ammo is available at the facility as well but if you bring your own, please make sure it's acceptable to the facility. The highest scoring five individuals from the tournament will enter a shootoff at the end of the team play. Trophies will be presented for top 3 teams after door prizes are announced and then the top 5 individuals will compete for 4 trophies. GML Coatings will be on-site providing a demonstration of their protective system. Please sign up to sponsor the event if you would like your company's name on the event T-shirts and station signs and your logo on the banner.

**Date:** **Friday, November 16, 2018**

*(RSVP by Nov 9)*

**Location:** *Sarasota Trap, Skeet & Clays*

3445 Rustic Rd, Nokomis, FL 34275

[www.sarasotagunclub.com](http://www.sarasotagunclub.com)



**Exhibit:**



**GML Coatings (Live Demonstration & product overview of polyurea)**



**Schedule:**

11:00am	Registration Begins
11-12pm	Lunch & Warm-ups
12:00pm	Safety Briefing
12:30pm	Shotgun Start

**Entry Form:**

**Company Name** \_\_\_\_\_

**Contact Name:** \_\_\_\_\_

**Contact Email/Phone:** \_\_\_\_\_

**Player Name(s)** \_\_\_\_\_ **T-Shirt Size** \_\_\_\_\_

**Player Name(s)** \_\_\_\_\_ **T-Shirt Size** \_\_\_\_\_

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Registration Options	
<input type="checkbox"/>	<b>Lunch Only \$10</b>
<input type="checkbox"/>	<b>Individual Entry \$65</b> <ul style="list-style-type: none"> <li>• Shooting fee</li> <li>• Lunch &amp; beverage</li> <li>• Event T-shirt</li> </ul>
<input type="checkbox"/>	<b>Foursome \$240</b> <ul style="list-style-type: none"> <li>• Shooting fee (x4)</li> <li>• Lunch &amp; beverage (x4)</li> <li>• Event T-shirt (x4)</li> </ul>
<input type="checkbox"/>	<b>Sponsors \$100</b> <ul style="list-style-type: none"> <li>• Lunch &amp; Beverage (x1)</li> <li>• Company logo on banner</li> <li>• Company name at station</li> <li>• <u>Company name on t-shirts</u></li> <li>• Door prize recognition</li> </ul>
Add-ons	
Items can be pre-purchased or purchased the day of event but some quantities are limited.	
QTY	Item
	<b>Mulligans 1/\$4 OR 3/\$10</b>
	<b>Cart \$20</b>
	<b>12 Clay Warm-up \$10</b>
	<b>Ammo \$20 / 50 shots</b>
	<b>Gun Rental \$25 (Limited availability)</b>



Register Online: [https://fwea.org/manasota\\_chapter.php](https://fwea.org/manasota_chapter.php)

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Registration can be sent to: [kward@carollo.com](mailto:kward@carollo.com) or Kyle Ward, Carollo, 401 N Cattlemen Rd, Ste 306, Sarasota, FL 34232

Questions? Call Mike Knowles 941.444.2950 or email [mknowles@greeley-hansen.com](mailto:mknowles@greeley-hansen.com)