

# FWEA Manasota Chapter

Vol 11 - August 2012

## Message from the Steering Committee

*By Lindsay Marten, Stantec  
Public Relations/Webmaster Chair*

This has been an exciting year for the Manasota Chapter, including our May luncheon and the induction of our newest member into the Steering Committee.

On Thursday May 17th, our first ever coordination with ASCE Suncoast's new branch, Environmental & Water Resources Institute, took place at Dutch Heritage. Two incredible speakers were featured: David Rathke, the Chief of Staff of the Southwest Florida Water Management District, and Theresa Connor, the Sarasota County Director of Environmental Utilities. Not only was this luncheon very informative and a great success, but PDHs and CEUs were offered as well!

If you missed out, the next luncheon will be held on Wednesday, September 12<sup>th</sup>, featuring Bruce MacLeod of Manatee County. Bruce has a great topic lined up: Manatee County Utilities Water Resources, Water Treatment Plant Updates, and Future Plans. Please note that luncheon pricing has changed and will be in effect for the September 12<sup>th</sup> luncheon. Members who preregister will be charged \$20, non-members who preregister will be charged \$25, and anyone on the day of the luncheon who has not preregistered will be charged \$25. We hope to see you all there!

The Manasota Chapter continues to expand, as there has been another new addition to the Steering Committee. Mike Jankowski with Manatee County has joined the Committee as the Membership Action Coordinator.

The Manasota Chapter along with FSAWWA Region X will be hosting the 4<sup>th</sup> annual Water For People Kayak and BBQ event this fall! The goal of this event is to bring friends, families, and members of the water profession together for a fun day of kayaking while raising awareness and funds for Water For People. Also coming this fall is the 10<sup>th</sup> annual AWWA Model Water Tower Competition. This event allows water quality professionals from the community to join forces, including members from our very own Manasota Chapter to help plan and participate in this noteworthy event. This event is important because it introduces students to water issues and water professionals from their community by challenging them to design and construct miniature water storage towers.

Don't forget to mark your calendars and keep your eyes and ears open for details regarding upcoming events and luncheons for the remainder of the year!



# Calendar of Upcoming Events

## AUGUST

- 10** Laws and Rules Class, Sarasota County
- 16** FWEA West Coast Chapter Luncheon, Tampa
- 16** ASCE Suncoast Branch Luncheon, Sarasota
- 18** FSAWWA Region IV Member Appreciation Night at the Ballpark, Clearwater
- 23** FSAWWA Region IV Brackish Water Workshop, Oldsmar
- 23** FWEA Central Florida Chapter and FSAWWA Region III - Wastewater Utilities Panel Luncheon, Orlando

## August

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	

## SEPTEMBER

- 5** FWEA and FSAWWA Utility Councils Joint Meeting, Orlando
- 6** Florida Water Forum, Orlando
- 9-12** Annual WateReuse Symposium, Hollywood
- 12** FWEA Manasota Chapter Luncheon, Lakewood Ranch\*
- 12-13** FWEA Biosolids Charting for Future and Nutrient Management Plan Workshop, Gainesville
- 13** Southwest Florida Water and Wastewater Exposition, Fort Myers
- 27** ASCE Suncoast Branch Luncheon, Sarasota
- 28** FWEA Southwest Chapter and FSAWWA Region V Golf Tournament, Fort Myers

## September

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

## FWEA Manasota Chapter Steering Committee Officers

### Chair

Kristiana Dragash: 941.371.9832

### Treasurer

Todd Bosso: 813.371.9400

### Secretary

Linda Maudlin: 941.378.3579

### Content/Newsletter

Laura Baumberger: 941.371.9832

### Public Relations/Webmaster Chair

Lindsay Marten: 941.225.6178

### Membership

Mike Jankowski: 941.708.7450  
ext. 7663

### At Large

Seton Katz: 941.861.0879  
Len Bramble: 941.480.3333  
Jeff Goodwin: 941.792.8811

*If you are interested in participating as an officer  
on the Steering Committee, please contact us.*

*We are currently seeking a Vice-Chair  
and additional members at large.*

## THANK YOU!

We would like to  
thank our newsletter  
sponsors who help to  
make our chapter possible.  
Newsletter sponsorships  
help to fund our chapter  
activities and initiatives.  
If you would like to advertise  
in future editions,

*Please contact  
Laura Baumberger at  
941.371.9832*



**MAINTAINING  
THE MAJESTY OF  
FLORIDA'S WATER.**

**carollo**  
Engineers...Working Wonders With Water®

**Sarasota County** | 941.371.9832  
**Broward County** | 954.837.0030  
**Miami-Dade County** | 305.716.4279  
**Orange County** | 407.478.4642  
**Palm Beach County** | 561.209.6004

In an era when less must do more,  
Carollo can help make the most of  
your investment. Contact us today, and  
together we'll help solve your toughest  
water challenges....right now.

carollo.com



**Stantec**

**WATER** IS ONE OF OUR  
MOST PRECIOUS  
NATURAL RESOURCES.

Effective management of this resource and its supporting infrastructure is critical to public health and the long-term health of the environment. With a focus on resource renewal and sustainability, Stantec applies knowledge and technology to deliver and manage Water and Wastewater Solutions.

In Florida, call (941) 365-5500



One Team. Infinite Solutions.

# Monthly Feature: City of St. Petersburg Water Resources Department Succession Plan

By Dwight D. Wilson, City of St. Petersburg

Around 2005, many utilities across the country were aware of the statistical data indicating that as the baby boomer generation reached retirement, and there would be a substantial number of employees with many years of experience and expertise departing the workforce. The expected time frame varied with some believing the impact would begin to be felt within 5 to 10 years while others believed the impact would not occur for 10 to 20 years.

This forecast would create a competitive nature among utilities for technical staff and experienced personnel in unique positions. A strong focus and area of interest became apparent as how to recruit, train/develop, and retain the necessary skill base needed to be a viable and productive utility for years to come; thus the energy shifted to succession planning. While some organizations consistently had succession planning as part of their business plan, the priority level, efforts, and commitment were low. This would hopefully change as we mobilized to address the concerns of lost talent and thus became better talent managers.

Succession planning became a high priority for utilities of all sizes and status (public and private) out of necessity. A comprehensive approach to understanding the impacts these changes would have upon the utility was crucial. Therefore, the recognition of these changes coupled with planning and support were necessary. Utilities had to act - NOW and FAST!

The City of St. Petersburg, FL, Water Resources Department is one of those utilities that has made their mission to act now and fast with developing a comprehensive Succession Plan. To address the forecasted loss of experience and expertise, we became very aggressive and developed a four-part Succession Plan in 2007. The plan was created to address the employee from a holistic perspective in the areas of Education, Staff Development and Training, Health and Wellness and Financial Education/Wealth Building.

The blue print of a succession plan will allow an organization to continue functioning at no less than the current service levels, preferably better, as



Coming this Fall...

4th Annual  
**Water For People  
Kayak & BBQ**

Details to follow



water for people

## Monthly Feature: City of St. Petersburg [cont.]

By Dwight D. Wilson, City of St. Petersburg

staff matriculates through promotions, retirements, and separations. While this certainly is not a new phenomenon, it has taken on a more urgent and focused effort due to the expectation of the large numbers of retirees. While the economy has played a role in delaying some exoduses as of late, the impact was still felt in the first year. For example from October 2006 to October 2007, the Water Resources Department saw over thirty staff separate their employment for various reasons, taking with them their knowledge and years of experience.

So one might ask why these four areas and what have been the results? We believe that education (knowledge) is the fundamental base to one's success. The more knowledgeable one is, the better they are and all of their affiliations. Therefore, we encourage and support staff to pursue degrees of higher education, certifications, and licensing. From achieving a Bachelors Degree to becoming a Certified Operator to a PE/CPA, we encourage our staff. This positions them for future opportunities within the organization. Industry knowledge can only enhance the utility. There have been many activities under this area such as hosting College Educational Fairs, partnering with local colleges and universities to teach specific industry related courses and curriculum offerings. We offer tuition reimbursement and have hosted scholarship sessions to show staff where additional funding might be available.

Staff development and training is another very critical area. Often organizations do not perform enough in this area to ensure their staff gets properly trained and

the staff that is promoted gets the training to develop in their new areas of responsibility. This process should be standard procedure that goes beyond just name alone.



Water Resources Department is reviewing its current job training programs and has already revised several to ensure the quality of the materials and the content.

Our employees' health and wellness is also important to us. We have hosted health forums, cancer screenings, blood and bone marrow drives, and even have fresh fruit and veggies delivered on-site as a healthy alternative to traditional snacks. We also have restocked our vending machines with healthier options, encouraged walking groups, hosted Employee Assistance Program (EAP) Sessions and rolling out in the very new future, we will have a 'tobacco-free campus' policy.

When the Financial Education and Wealth Building was presented as the fourth component, initially, many were unclear and even skeptical as to how this would impact our Succession Plan. The goal of this component is to give all of our staff the basic tools for budgeting and to help them be more responsible in the area of money management. We have hosted Deferred Compensation Sessions and taught courses in the areas of Budget 101, Identity Theft and Financial Planning, just to name a few. We also facilitated a Financial and Wealth Building Fair where area banks, credit unions and financial institutions came in to discuss financial matters one-on-one with staff.

As a result of our succession plan some staff have transferred to other divisions within our department that would have never done so otherwise. Additional skill set learning has become more of the norm than the exception and this culture change has resulted in internal promotions that historically might not have happened.

These are just a few initiatives that are happening in our department that are making a huge and positive difference in our workforce and our plan for future success as a strong and viable utility.



**MCKIM & CREED**  
ENGINEERS SURVEYORS PLANNERS

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

Clearwater • Daytona Beach • Fort Myers • Lake Mary • Palm Coast • Sarasota • Tampa

EOE M/F/D/V

# Consultant's Corner: City of Bradenton Drinking Water Distribution System Study

By Chris Baggett, PE and Guanghui Hua, PhD, PE - Jones Edmunds & Associates, Inc.

The City of Bradenton (City) is located east of the Manatee County. The City has a population of approximately 54,000 people. The Bradenton water treatment plant (WTP) treats and provides drinking water to the consumers within the City's service area. The Bradenton WTP is a surface water and groundwater treatment facility. The source water for the WTP is the Evers Reservoir which covers nearly 350 acres and is fed by the Braden River watershed. The reservoir holds approximately 1.5-billion gallons of water. An on-site groundwater augmentation well can be used to supplement the supply. In addition, the City owns an Aquifer Storage and Recovery (ASR) well, located at the City's downtown high-service pump station. The ASR is designed to supplement the potable water supply during drought conditions.

Raw water from the Evers Reservoir is first treated with granular activated carbon at the WTP to remove taste and odor causing compounds. Coagulation, sedimentation and filtration are then used to remove particles from the water. The filtered water is treated with chloramines for disinfection. After disinfection, fluoride is added to the water. The finished water from the WTP is pumped to ground storage tanks located in town and then to the consumers.

The City's water distribution systems consists of 6 elevated storage tanks and approximately 180 miles of piping ranging from 2 to 30 inches in diameter. The City has implemented water conservation programs to reduce the system water demand. The water conservation programs have successfully reduced per-capita water demand. However, reduced water demand results in an increase in distribution system residence time. This increase in residence time can result in loss of disinfectant residual, leading to degradation of water quality. The City installed many backflow prevention devices in the distribution system in response to the mandatory cross-connection protection. These devices have caused reductions in service connection pressure.

The City of Bradenton authorized Jones Edmunds to update the City's water system hydraulic model and use it to plan system improvements. The goals of the system improvements are to increase service connection pressure, prioritize the water main replacement sections, improve water quality and reduce the system flushing.

As the first part of this distribution system study project, City of Bradenton's hydraulic model will be updated to incorporate the latest pipe network revisions, spatial distribution of recent water demands and current operating condition information to more accurately predict water age throughout the system. The updates to the model include monthly water demands, flushing use, future system piping modifications, and operating strategies and settings for system components. The hydraulic model will be calibrated to match model results to the collected field data under time-varying demand conditions.

After completing the City's hydraulic model updates, total residual chlorine (TRC) model will developed to predict the total chlorine concentrations in the system. The chlorine bulk decay coefficient will be determined through laboratory tests of field samples. The TRC model will use this coefficient to calculate the total chlorine decay occurred in the bulk phase. A

**Excellence through Innovation**  
Solutions for Florida's Infrastructure



**JONES EDMUNDS®**



**Improving Quality of Life**

www.jonesedmunds.com • 1.800.237.1053

## Consultant's Corner: City of Bradenton Drinking Water Distribution (cont.)

By Chris Baggett, PE and Guanghui Hua, PhD, PE - Jones Edmunds & Associates, Inc.



2011 AADD Model Demand Distribution



2033 AADD Model Demand Distribution

wall decay coefficient will be inserted into the model to simulate those reactions occurring near the pipe wall. The TRC model will be calibrated by adjusting the wall decay coefficient to match the model results to the field sampling results. The calibrated TRC model will be used to evaluate the impact of the potential system improvements on distribution system total chlorine levels. Multiple scenarios will be performed to simulate the proposed system improvements

Based on the hydraulic model and TRC model results, Jones Edmunds will work with the City to develop a list of potential distribution system improvements to help maintain the system pressure and water quality, reduce the required flushing volumes, and improve the system operation. The budgetary cost for each improvement and an implementation schedule will also be developed.

The City of Bradenton's distribution system pipe network consists of cast iron, galvanized iron, ductile iron, polyvinyl chloride pipe, and asbestos cement pipe. The pipe age ranges from over 50 years to less than one year old. As part of the distribution system study project, Jones Edmunds will perform an in-depth evaluation of the distribution system piping based on age of pipe,

material of pipes, and nature and frequency of pipe breaks. A model will be developed to correlate the pipe breaks with pipe age and material. This model will be used to prioritize the water main replacement sections. It is expected that this distribution system study project will help the City improve the water quality, maintain the system pressure, and reduce the operation cost.

# King

ENGINEERING ASSOCIATES, INC.

Civil • Environmental • Transportation • Planning  
Ecological • Landscape Architecture • Surveying

**Serving Florida's water environment since 1977**

Sarasota • Tampa • Miami • Jacksonville • Austin • Dallas

[www.kingengineering.com](http://www.kingengineering.com)  
941.358.6500

## ADVERTISE HERE!

Consider advertising your company in the FWEA Manasota Chapter Newsletter and show your sponsorship of our organization.

Contact Laura Baumberger  
for advertising sizes and rates: 941-371-9832



advancing\*innovation™



Engineers



Scientists



Consultants



Constructors

We are focused on client needs, bringing decades of engineering and scientific experience to every project.

Wastewater/Reclamation | Water Quality | Watersheds  
Water Supply and Treatment | Modeling & GIS

Tampa | Sarasota | Miami | Jacksonville | Orlando | West Palm Beach

**Brown AND Caldwell**

941.373.1338

100% Environmental | Employee Owned | Offices Nationwide  
BrownandCaldwell.com

## Professional Engineer Exam Review Classes - Open to All

All sessions will be held at the  
1001 Sarasota Center Blvd (BOB), Conference Room 3  
5:30 PM to 7:30 PM

Upcoming Exam Dates: October 26, 2012 /  
April 12, 2013

Schedule:

Date	Topic	Conf. Room
Aug 7	Test Preparation Overview/ Horizontal & Vertical Curves	Conf Rm BOB 3
Aug 14	Stormwater, Hydrology, Hydrographs, SCS	
Aug 21	Foundations & Retaining Walls, Soil Mix, Geotechnical	
Aug 28	Water Supply, Pumps, Pipes, Reservoirs, Water Quality	
Sep 4	Construction, Scheduling, Engineering Economics	
Sep 11	Wastewater Design	
Sep 18	Traffic Systems, Intersection Design, HCM, Accidents	
Sep 25	Structural Engineering, Steel, Concrete	



Two-thirds of our planet is made up of water.  
Naturally, it takes a global company to care for it.

Whether the issue is water treatment, water supply, coastal management, or worldwide climate change — solving the challenges of water is what we do best. For over a century, our experts have used insight and innovation to solve our clients' water problems.

Now, with the fusion of ARCADIS and Malcolm Pirnie, we can bring our unmatched global resources to bear on your water project. Using a comprehensive, results-driven approach based on broad experience in water management and treatment, we create lasting solutions, sustainable quality and ecological balance in both the business and natural worlds.

[www.arcadis-us.com](http://www.arcadis-us.com)

Imagine the result



### The Severn Trent Services Advantage:

Severn Trent Services understands water and wastewater treatment plant operations. From the plant to the home and back again, Severn Trent is responsible for operating, maintaining and managing over 60 facilities in Florida through public-private partnerships. It is this understanding that allows us to provide safe drinking water and compliant wastewater treatment to nearly 1 million Florida residents.

To partner with Severn Trent Services,  
call +1 941 925 3088 or visit [www.severntrentservices.com](http://www.severntrentservices.com)

UNDERSTANDING  
A VALUABLE RESOURCE





## Manatee County Utilities Water Resources and Treatment Update

by Bruce MacLeod - Water Treatment Plant Superintendent, Manatee WTP

### Abstract

The Manatee County Water Treatment Plant (WTP) is an 84-mgd plant that can treat 30 mgd of groundwater by lime softening and treat 54 mgd of surface water by conventional treatment. The finished water is a blend of roughly two-third treated surface water and one-third treated groundwater. To provide for supply redundancy, a 3.95-mgd RO facility is planned for North Manatee County. This plant would use upper Floridan and the Intermediate aquifers. The upper Floridan water would be provided through the use of reclaimed water offsets. The County is currently finalizing the Water Use Permit for this facility.

Another current project is to replace 12 dual granular media filters on the surface treatment trains with ultrafiltration (UF) membranes. The existing filters are nearing the end of their useful life, and the desire to provide for an absolute particle barrier led to the selection of UF. Two pilot studies have been completed demonstrating the effectiveness of UF and establishing operating parameters. The County is currently reviewing the best approach to deliver this project.

Pilot testing investigating the removal of odorants utilizing a biological process has been ongoing for the last 2 years. This biological treatment study is unique in that the biological process is in front of conventional treatment to take advantage of the nutrients in the raw water. Results have been encouraging with excellent

removals of spiked odorants. Odorant removals during an actual algal bloom in Lake Manatee were still high, but less than spiked odorant removal. This has led to additional research to optimize removal during actual blooms.

### Bruce MacLeod

Bruce MacLeod is the Plant Superintendent at the Manatee County WTP located in Bradenton, FL. He started at the 84-mgd facility in 1980 as a Laboratory Technician, then as the Laboratory Supervisor of the Water Quality Control Laboratory, later he became the Operations Coordinator at the WTP, next the Water Quality/Facility Compliance Supervisor and finally as the Plant Superintendent (a position he could finally kind of understand).

Bruce received a B.S. in biology in 1973. His research activities includes: the evaluation of ion exchange and membrane filtration for total organic carbon and algal by-product removal; optimization of powdered activated carbon for odorant removal; evaluation of granular activated carbon for geosmin/2-methylisoborneol removal using rapid small-scale and pilot-scale columns; evaluation of geosmin/2-methylisoborneol production by Anabaena; the removal of odorants by biologically active roughing filters; agricultural best management practices for nutrient control in Lake Manatee; various cyanobacteria control studies; and watershed land use impacts on water quality.



**Shaping the Future**

Consulting Engineering Services

- Water Supply
- Wastewater
- Reclaimed Water
- Water Resources

380 Park Place Blvd, Suite 300  
Clearwater, FL 33759  
727.531.3505

22 Sarasota Center Blvd.  
Sarasota, FL 34240  
941.377.9084

Bruce has been a member of AWWA for 30 years and a peer reviewer for the Journal AWWA and a member of the AWWA Taste and Odor Committee. He serves on Water RF Project



**EnviroSales**  
of Florida, Inc.

Advisory Committees, the Community Health Advisory Board, FDEP Technical Advisory Committees and is active in FS/AWWA.

**FWEA MANASOTA CHAPTER LUNCHEON MEETING**

**FÊTE/POLO GRILL RESTAURANT**

10670 Boardwalk Loop, Lakewood Ranch, FL 34202

Registration - 11:30 • Lunch and Program - 12:00

**Choice #1 - Chef's Seafood Pasta of the Day**

**Choice #2 - Lynn's Salad** with chicken or vegetarian

**Dessert - Freshly Baked Cookies**

Cost: \$20 for pre-registered members, \$25 for pre-registered non-members  
 (please register online or by mail, phone, fax, or e-mail) OR \$25 at the door, \$15 for student  
 No credit card payments day of event - check (made payable to FWEA) or cash only please.

*Pre-registration deadline: Friday, September 7*

**REGISTRATION FORM**

Registration can be made by mail, phone, fax, or e-mail, with payment mailed in advance or collected at the door.

Name	Company/Affiliation	Phone	Choice of Meal

You can register online at [www.fwea.org](http://www.fwea.org) or register by phone, fax, or e-mail to Linda Maudlin  
 2601 Cattlemen Road, Suite 100, Sarasota, FL 34232  
*Ph: 941-378-3579 • Fax: 941-378-9489 • E-mail: [lmaudlin@greeley-hansen.com](mailto:lmaudlin@greeley-hansen.com)*



**ATKINS**

Architecture  
Engineering  
Environmental  
Construction

**Engineering solutions for today's complex water challenges**

From water strategy planning to infrastructure design and maintenance, Atkins' water specialists in the US have worked on more than 200 wastewater treatment facilities. Each day, hundreds of Atkins employees are solving the world's greatest water engineering challenges.

If you are looking for top technical skills, innovative thinking and commitment to the environment, Atkins is ready to help you preserve and manage our most precious natural resource.

[www.atkinsglobal.com/northamerica](http://www.atkinsglobal.com/northamerica) **941.378.0272**

**Plan Design Enable**



**HAZEN AND SAWYER**  
Environmental Engineers & Scientists

**Engineering Excellence**  
*Providing Customized Solutions to Environmental Challenges*

Hollywood • Coral Gables • Boca Raton • Fort Pierce  
Sarasota • Tampa • Orlando • Jacksonville

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



**GREELEY AND HANSEN**

*Designing better urban environments*

water Tampa (813) 873-3666  
 wastewater Sarasota (941) 378-3579  
 water reuse Ft. Myers (239) 226-9660

[www.greeley-hansen.com](http://www.greeley-hansen.com)