



**SERVING FLORIDA'S  
WATER & WASTEWATER INDUSTRY  
SINCE 1987**

• Integrity is a choice. It is consistently choosing the purity of truth over popularity.

**Inside  
this  
Issue:**

<b><u>SRS CRISAFULLI</u></b>	<b>2</b>
NUTRIENT REDUCTION	
<b><u>FWEA</u></b>	<b>2</b>
AIR QUALITY SEMINAR	
<b><u>DUPERON</u></b>	<b>2</b>
FLEXRAKE MECHANICAL	
<b><u>EVOQUA</u></b>	<b>3</b>
LO/PRO CHEMICAL SCRUBBERS & ZABOCS BIOFILTERS	
<b><u>HALLSTEN</u></b>	<b>3</b>
ALUMINUM TANK COVERS	
<b><u>AMWELL</u></b>	<b>3</b>
CLARIFIERS & TELESCOPING VALVES	
<b><u>DUPERON</u></b>	<b>4</b>
STORMWATER TRASH RAKES	

Volume 10, Issue 1

April 2019

**EVOQUA WATER TECHNOLOGIES—Odor Control Systems**

**Evoqua Water Technologies** maintains its longstanding product offering—from small odor control systems with air flows as low as 35 to 50 CFM—to higher air flows as high as 20,000 to 30,000 CFM.

Biotrickling filters are applied with larger air flows and when higher hydrogen sulfide levels are present. As a result, biotrickling filter towers are commonly applied at wastewater treatment plants, headworks, and large sewage pumping stations.

Biofilters in general continue to be very popular due to their ability to biologically reduce odorous compounds effectively and economically.

Biotrickling filters feature a long lasting, inorganic media so utilities are not burdened with the costs and tasks of taking the odor control system off-line and replacing media on a regular basis.

The internal workings of a



biofilter are simple and very operator-friendly. Bacteria is naturally cultured internal to the biofilter where it metabolizes odorous sulfur compounds contained in the air stream as it moves through the biofilter. Thus the air stream is successfully treated.

The vapor phase odor control team at **Evoqua Water**

**Technologies** continues to offer the full range of treatment options and technologies. One technology does not fit all applications.

Please give us a call and let us assist you with comparing technologies so you can find the right solution for your particular application.

**AMETEK®**      **ROTRON Regenerative Blowers**



We are your Florida source for factory direct access to the complete line of **AMETEK TIP (ROTRON)** Regenerative Blowers.

The **ROTRON** brand has been a long standing world leader in regenerative blower technologies providing **chemical process blowers, environmental blowers, industrial blowers, and spa blowers** as well as a complete line of accessories.

Contact us today with your regenerative blower needs.

## STORMWATER NUTRIENT REDUCTION



The **ALUM PRECIPITATION PROCESS** is commonly used to reduce nutrients in stormwater applications throughout Florida.

With the new focus upon the Numeric Nutrient Criteria, more stormwater/nutrient treatment systems are entering the planning stage.

As nutrient-laden surface water enters these treatment facilities, alum is injected, which combines with the pollutants in the water and

settles to the bottom of the lagoons.

The settled alum sludge then needs to be periodically removed to make way for additional treatment volume within the lagoons or ponds.

**SRS CRISAFULLI** manufactures an unmanned mini dredge which can be used to remove the alum sludge from the bottom of the lagoons.

The dredge is set up using traversing cables which span across the pond.

Controls are located near the pond, allowing the operator to maneuver and control the dredge from the shoreline.

**SRS CRISAFULLI** also offers a radio controlled option. (*Lawn chairs and sun shades for this approach are optional!*)

**SRS CRISAFULLI's FLUMP™** dredges are being used in Lake County as well as Hillsborough County to remove alum sludges at nutrient reduction facilities.



## FWEA AIR QUALITY COMMITTEE UPDATE

The **FWEA AIR QUALITY COMMITTEE** held their annual seminar at the City of Tavares in February. The city hosted this year's event at their utilities administration facility next to the Water Reclamation Facility.

The workshop was well attended by utility personnel and engineers from throughout the State of Florida.

Technical presentations were provided by a nationally acclaimed group of consultants

in the odor control field.

This seminar was an opportunity for attendees to gain an in-depth understanding of odor control system design issues along with sound engineered solutions.

The event was a continued education opportunity providing CEUs and PDH credits for those in attendance.

Please watch the **AIR QUALITY COMMITTEE** link on the FWEA website for upcoming

news on the next workshop. Plan ahead as this annual seminar sells out each and every year.

Also, the **FWEA Air Quality Committee** is pleased to announce that **Lee County Utilities** is the recipient of the **2019 FWEA ENVIRONMENTAL STEWARDSHIP AWARD FOR ODOR CONTROL**.

This award is presented annually at the Florida Water Resources Conference.



## DUPERON® FlexRake® — Mechanical Barscreens



Manatee Co. SEWRF

The **DUPERON® FlexRake®** is a proven mechanical barscreen with installations in major wastewater facilities throughout the United States.

It is available with typical bar spacing ranging from 1/4"—4". The unique, heavy duty **FlexLink®** construction eliminates the need for lower sprockets and bearings and is capable of lifting up to 1,000 lbs. Multiple barscreen rakes can be provided every

21" for high-volume debris applications. Rakes provide full penetration efficiently cleaning three sides of the barscreen; i.e., the surface and the entire depth of the spacing between both sides of the bars.

The **FlexRake®** is available in 304, 316 and 316 L construction with enclosures for odor control. Enclosures are provided with full service hatches for inspection and O&M access.

The **FlexRake®** is standard with two speed VFD operation which can be run manually or automatically using feedback from level sensors.

**DUPERON®** provides a full complement of equipment from the **FlexRake®** to conveyors for screenings and washer compactors. When choosing **DUPERON®**, you benefit from over 20 years of industry experience along with a 5-Year-Warranty.

## EVOQUA WATER TECHNOLOGIES—Chemical Scrubbers & ZABOCS Biofilters

**Evoqua Water Technologies** provides a full range of odor control systems from biofilters to carbon adsorption systems, as well as chemical scrubbers.

When it comes to total odor treatment, **Evoqua Water Technologies' LO/PRO®** scrubber is proven solution.

**LO/PRO®**s are available with performance ranges covering air flows up to 30,000 cfm.

They are available in 2 and 3 stage designs. Application of

these models is dependent upon the VOCs present in the air flow and the level of treatment desired.

**LO/PRO®** scrubbers provide 99.5% H<sub>2</sub>S & NH<sub>3</sub> destruction and handle H<sub>2</sub>S and organic odors. They are ideal for dewatering and sludge drying odors.

The premier advantage to the operation of a **LO/PRO®** scrubber is the benefit of 50% lower chemical usage.

The **ZABOCS** biofilter is a

2-stage biofilter. It provides biological reduction of H<sub>2</sub>S in stage one with an internal second stage provided to polish off residual reduced organic sulfides using carbon adsorption.

Standard **ZABOCS** models handle air flows ranging from 50 to 5000 cfm. They provide high efficiency odor removal and are compact and low profile. They are perfect for lift station applications and smaller treatment plant applications.



## HALLSTEN CORPORATION —Aluminum Tank Covers

**HALLSTEN CORPORATION** manufacturers custom engineered, flat aluminum cover systems for wastewater treatment plant process tankage.

These covers are designed as a walking surface for human access by plant personnel.

**HALLSTEN** tank covers are substantially air tight and are typically installed in conjunction with a centralized odor control system.

**HALLSTEN CORPORATION** provides and installs these covers using certified plant personnel to ensure proper installation and compliance with local hurricane wind load standards in Florida.

Prior to fabrication of the cover system, survey crews are dispatched from the factory to obtain the actual field dimensions for the cover system. These field dimensions are used when the cover is

released to production. **HALLSTEN CORPORATION** provides a factory crew to install the covers and is ultimately responsible for the integrity of the cover dimensions as well as the fit of the covers on the tankage.

**HALLSTEN CORPORATION** offers extensive and established experience in the State of Florida with installations and references throughout the state.



## AMWELL® Clarifiers, Skimmers, and Telescoping Valves

**AMWELL®** (established in 1868) manufacturers a full line of circular clarifiers. If you are looking for a suction type clarifier or a pier-supported solids contact clarifier, **AMWELL®** has your solution.

**AMWELL®** manufacturers single or double-sweep scrapers and standard or spiral flights.

A complete line of rectangular

chain and flight clarifiers are also available along with manual or gear operated slotted pipe surface skimmers.

If you need decanting capability within your sludge digesters to assist in sludge thickening, **AMWELL®** manufacturers rack & pinion or non-rising stem telescoping valves.

With **AMWELL®** you can

count on generations of experience and American-Made products.

**AMWELL®** offers circular and rectangular clarifiers, gear drives, grit removal systems, scum skimmers and telescoping valves.

Please give us a call and let us assist you with finding the right solution for your particular application.





Visit us on the web at:  
[www.equipmentplusinc.com](http://www.equipmentplusinc.com)

**Equipment Plus Solutions, Inc.**

P.O. Box 2908  
Bellevue, FL 34421-2908

Ph: 352.237.1869  
Fax: 877.792.8356

We value your consideration of  
**EQUIPMENT PLUS SOLUTIONS, INC.**  
and welcome the opportunity to be of service to you.

Please take a moment and visit our web site.  
You'll find direct links to the companies we represent  
as well as information and links to our offices.

We stand ready to assist you—we're just a phone call  
or an email away.

## DUPERON® STORMWATER TRASHRAKES

The **DUPERON® FlexRake®** is engineered to be strong to handle the rigors of Florida's stormwater debris removal applications.

This is a proven and reliable screening system with over 500 installations. Over 95 of these installations are within the *South Florida Water Management District*.

With the **FlexRake®** technology, there are no lower sprockets, tracks, or bearings under the water to lubricate or repair eliminating the need for underwater repair or maintenance.

The entire width of the screen is cleaned approximately every two minutes, minimizing potential for head loss.

The front-cleaning front return design of the **DUPERON® FlexRake®** eliminates

carryover making it ideal for stormwater and flood control applications. The **DUPERON® FlexRake®** is available from 2 feet to 12 feet wide and up to 100 feet long with a 1,000 lb. lifting capacity.

The **FR** and **FRHD FlexRake®** models are specially engineered for open channel applications where debris size and velocity may be unpredictable. They have proven their versatility over the years by handling everything from general refuse, aquatic vegetation, tree limbs, lumber, tires, oil drums, and even automobile frames.

The low operating speed, as well as the ability of the rake to flex and pivot around objects, ensures minimal impact on the ecosystems into which it is placed. The **FlexRake®** is certified as Manatee-Safe in sensitive Florida installations.

