

## >>> ISSUE 7 <<< CLEAN THOUGHTS

Wastewater Consultants Like No Other



### IN THIS ISSUE

- >>> FIBER IN WASTEWATER:

  SMALL PROBLEM, BIG CONSEQUENCES
  PG.1 & 2
- >>> STAY ON TOP BY MEASURING WHAT'S BELOW PG.4
- >>> NUTRIENT IMBALANCES & YOUR ASB SYSTEM PG.3
- >>> UPCOMING EVENTS PG.5

## FIBER IN WASTEWATER: A SMALL PROBLEM WITH BIG CONSEQUENCES

Fiber quality plays a critical role in wastewater treatment. Even with upstream optimization, some fiber loss is inevitable. Understanding fiber sources and best practices for managing fiber quality can help mills optimize operations and minimize environmental impact.



Virgin fibers are longer, stronger, and more easily degraded, making them more efficient for manufacturing. Recycled fibers, on the other hand, are shorter and more contaminated due to previous usage, which makes them harder to degrade in wastewater treatment.

FEATURE	VIRGIN	RECYCLED
FIBER LENGTH	LONGER, STRONGER	SHORTER, DEGRADED
STRUCTURE	UNIFORM, SMOOTH	IRREGULAR, BROKEN
CONTAMINANTS	MINIMAL	HIGHER – INK, COATINGS, ETC.
DEGRADABILITY	HIGH	LOWER

### >>> HOW FIBER AFFECTS TREATMENT SYSTEMS & **COMPLIANCE**



#### **MECHANICAL ISSUES**

- CLOGS SCREENS, FILTERS, AND PUMPS
- HIGHER MAINTENANCE
- CONTRIBUTES TO EQUIPMENT WEAR & TEAR
- OPERATIONAL INEFFICIENCIES



### **EFFLUENT OUALITY RISKS**

- INCREASED SUSPENDED SOLIDS
- DISCHARGE PERMIT VIOLATIONS
- HIGH COD/BOD LOADS
- MORE AERATION & CHEMICAL TREATMENT NEEDED





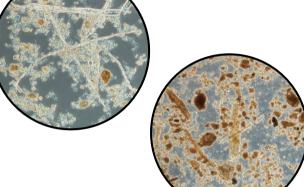
### HIGHER OPERATIONAL COSTS

- MORE ENERGY FOR AERATION & PUMPING
- INCREASED DOWNTIME & MAINTENANCE COSTS



### **ENVIRONMENTAL CONSEQUENCES**

- FIBER-RICH EFFLUENT CAN LEAD TO SEDIMENTATION & OXYGEN DEPLETION IN WATER BODIES
- EXCESSIVE FIBER ACCUMULATION IN SLUDGE INCREASES DOWNSTREAM MANAGEMENT COSTS (FREOUENT DREDGING AND HIGHER HANDLING EXPENSES)





### >>> BEST PRACTICES FOR MANAGING FIBER IN WASTEWATER



### **SOURCE CONTROL**

- IMPROVE FIBER RECOVERY SYSTEMS (E.G., SAVE-ALLS, ADVANCED SCREENS).
- MONITOR & ADJUST PROCESSES TO REDUCE FIBER LOSS.



### **EFFLUENT PRE-TREATMENT**

- ENHANCE SCREENING & CLARIFICATION BEFORE BIOLOGICAL TREATMENT.
- CONSIDER DISSOLVED AIR FLOTATION (DAF) FOR BETTER FIBER SEPARATION.

FOR MORE INSIGHTS ON WASTEWATER TREATMENT OPTIMIZATION, CONTACT US AT:

INFO@EBSBIOWIZARD.COM (985) 674-0660

### **NUTRIENT IMBALANCES & YOUR ASB SYSTEM**



### HIGH RESIDUALS

**CAUSES: SHORT RETENTION TIMES** 

OVERFEEDING

SLUDGE ACCUMULATION

BENTHIC FEEDBACK

**IMPACTS:** EUTROPHICATION

COMPLIANCE ISSUES

WASTED RESOURCES





### LOW RESIDUALS

**CAUSES: INSUFFICENT SUPPLEMENTATION** 

HIGH ORGANIC LOADS

IMPACTS: POOR MICROBIAL HEALTH

SYSTEM FAILURE RISK



### **BALANCING IN THE MIDDLE - EQUILIBRIUM**

OPTIMIZED NUTRIENT DOSING PROPER AERATION & SLUDGE MANAGEMENT STABLE MICROBIAL HEALTH

### **PROACTIVE MANAGEMENT**



MONITOR REGULARLY



TRAIN OPERATORS & ENVIRONMENTAL STAFF



PARTNER WITH EXPERTS

### **KEY BENEFITS**



PERMIT COMPLIANCE - STAY WITHIN DISCHARGE



COST EFFICIENCY - AVOID OVERUSE OF **NUTRIENTS** 



BACTERIA HEALTH - OPTIMIZE MICROBIAL ACTIVITY



**ENVIRONMENTAL PROTECTION - PREVENT** ALGAE AND SLUDGE ISSUES

ENSURE YOUR SYSTEM RUNS AT PEAK EFFICIENCY LET EBS HELP WITH ADVANCED NUTRIENT CONTROL SOLUTIONS!

# STAY ON TOP BY MEASURING WHAT'S BELOW

### >>> WHY DEPTH SURVEYS MATTER FOR YOUR ASB SYSTEM

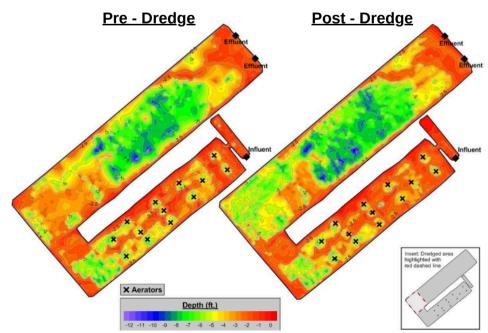
Understanding the health of your wastewater treatment system is crucial for staying compliant, operating efficiently, and avoiding costly fines. This not only improves operational performance but also increases the profitability of your plant.

### >>> WHAT DEPTH SURVEYS PROVIDE

- Current Water Volume: Assess the actual water volume in your system.
- Available Treatment Volume: Determine the theoretical volume available for treatment.



- Sludge Accumulation Monitoring: Track changes in sludge accumulation over time to ensure your system remains effective.
- **Post-Project Comparison:** Compare depth and volume measurements before and after capital projects like dredging or aeration reconfiguration.



Regular depth surveys = Better management, compliance, and cost savings.





**2025 TRAINING EVENTS** 

APRIL 8-10TH -- SPRING ASB/AST SEMINARS: MANDEVILLE, LA

JULY 16-17TH -- ASB/AST WORKSHOP: SAVANNAH, GA

JULY (TBD) -- CPI/REFINING WORKSHOP: LAKE CHARLES, LA

OCTOBER 7-9TH -- AST SEMINAR: MANDEVILLE, LA

### LEARNING THAT LASTS: HEAR FROM OUR TRAINEES

"Fantastic Course! I gained a lot of knowledge to bring back to our stakeholders to assist in developing a rehabilitation plan for our ASB. All of the EBS team has been fantastic and consummate professionals. Thank you!"

Environmental Manager, Pulp & Paper



"This is one of the best training courses I have ever attended. The topics were interesting and engaging. The instructors did a great job encouraging discussions and I felt comfortable asking questions. I will recommend this course to everyone!"

Process Engineer, Renewable Diesel

