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EBS
An Employee-Owned Company
Comprehensive Wastewater Solutions

ISSUE 7

CLEAN THOUGHTS

Wastewater Consultants Like No Other

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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

VS

RECYCLED FIBERS

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

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>>> HOW FIBER AFFECTS TREATMENT SYSTEMS & COMPLIANCE

MECHANICAL ISSUES

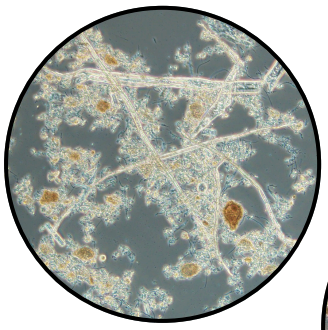
- CLOGS SCREENS, FILTERS, AND PUMPS
- HIGHER MAINTENANCE
- CONTRIBUTES TO EQUIPMENT WEAR & TEAR
- OPERATIONAL INEFFICIENCIES

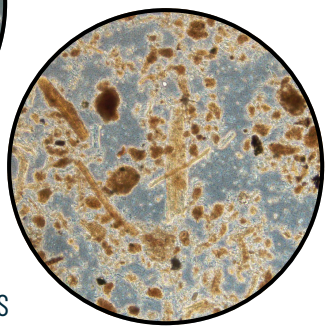
EFFLUENT QUALITY RISKS

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

BIOLOGICAL TREATMENT CHALLENGES

- HIGH ORGANIC LOADS OVERWHELM TREATMENT SYSTEMS
- LIGNIN & WOOD COMPOUNDS REDUCE MICROBIAL EFFICIENCY





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 (FREQUENT 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:

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(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

OR

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 LIMITS
- **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!

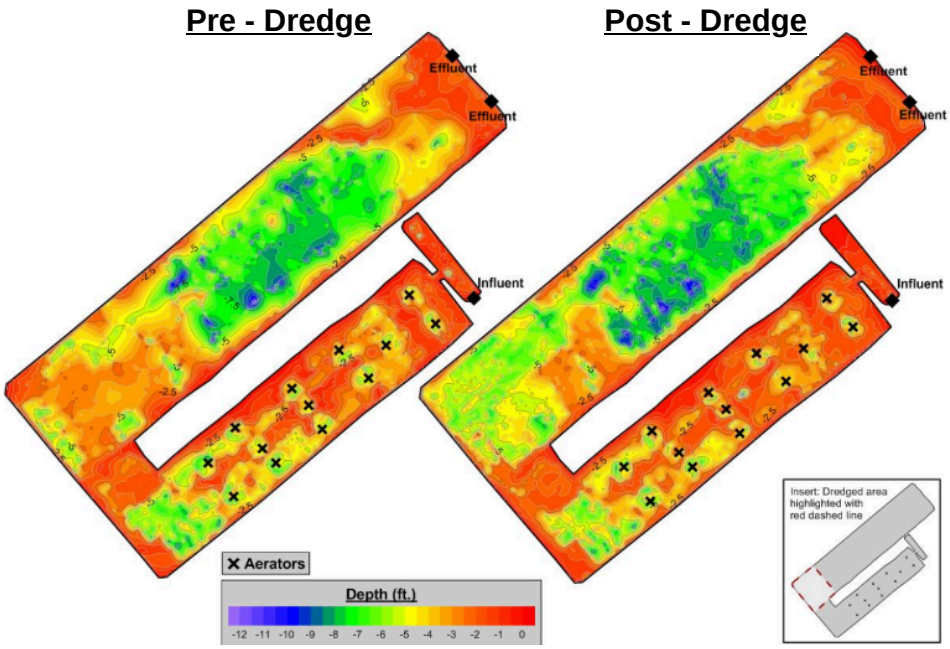
STAY ON TOP BY MEASURING WHAT'S BELOW

>>> 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

1. **Current Water Volume:** Assess the actual water volume in your system.
2. **Available Treatment Volume:** Determine the theoretical volume available for treatment.
3. **Sludge Accumulation Monitoring:** Track changes in sludge accumulation over time to ensure your system remains effective.
4. **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.

Mark Your Calendar

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 ★★★