

# BRINGING WASTEWATER KNOWLEDGE AND EXPERIENCE TO YOUR PLANT



THE SYSTEM



THE BIOLOGY



THE RESULTS

P.O. Box 1936 Mandeville, LA 70470 985.674.0660 Fax: 985.674.3483 www.ebsbiowizard.com Biological wastewater systems require consistent monitoring and good process control strategies. The biological population has needs that must be maintained in order for it to effectively reduce BOD levels and generate a quality biomass that settles rapidly and dewaters readily. But these needs are often not considered or fully understood, resulting in a biological system that does not perform with optimum efficiency or at full capacity.

The first step in addressing system deficiencies is developing and implementing a sound plan for the testing and monitoring of key parameters, which are incorporated in an effective process control strategy. Remember, you cannot control what you do not measure. Sometimes, simply monitoring and control strategies alone do not accomplish the desired result. In those cases, application of chemical and biological additives, such as macronutrients and bioaugmentation cultures can bridge the performance gap resulting in improved compliance and/or cost savings.

EBS is a wastewater consulting and training company that provides unique solutions to a variety of operational and training challenges facing industrial wastewater professionals. We strictly deal with wastewater treatment. We focus on understanding and addressing the entire system and its biology in order to provide results. Our goal is to not only help you stay within compliance but to reduce your total cost of environmental compliance, whether you are looking at current or future situations.

EBS provides a variety of services such as:

- On-site consulting services
- Wastewater training
- Wastewater laboratory services
- Nutrient, biological products & specialized biological feed systems

## **ON-SITE CONSULTING SERVICES**

EBS has provided specialized on-site support to industrial wastewater treatment systems since 1997. Ranging from on-going monitoring and technical support to emergency support during upsets and system failures, EBS brings a wealth of knowledge and expertise to you when you need it. From tracer studies to depth surveys to upset remediation, we can help you maintain compliance without breaking your budget.

## WASTEWATER TRAINING

EBS training programs are developed and presented by Mike Foster, Principal Consultant. Mike is a licensed wastewater operator and holds a Certified Environmental Trainer (CET) designation in wastewater from the National Environmental Trainers Association. We offer a variety of training formats including workshops and seminars, customized on-site training, and online wastewater courses. Several of our courses are pre-approved for wastewater operator certification CEUs.

#### EBS LABORATORY SERVICES

*Microbiology Assessments.* The microscope is a powerful tool with microscopic examinations being a critical component of a wastewater system monitoring program. Observations by trained personnel can recognize problems and trends before they become crises. EBS offers several levels of microscopic analyses such as wastewater microscopy, filamentous identification, and polysaccharide determination. Each is accompanied by a complete report with comments and recommendations. With e-mail, we can return your results to you the same or next day. Our still photography and video capabilities allow us to fully document our observations and can serve as valuable training tools for your personnel. We can also provide microscope training for your technicians and operators at your site or ours.



*Process Monitoring.* We conduct all the basic wet chemistry tests needed for routine monitoring of a biological wastewater system such as ammonia, phosphorus, chemical oxygen demand (COD), oxygen uptake



#### NUTRIENT & BIOLOGICAL PRODUCTS

phosphorus, chemical oxygen demand (COD), oxygen uptake testing (DOUR and SOUR), biochemical oxygen demand (BOD), total and volatile suspended solids (TSS/VSS), pH, TKN, organic nitrogen, nitrite, and nitrate. These tests are used to verify the results of our treatability studies and to support numerous clients who rely on EBS as an important "second set of eyes."

*Treatability Studies.* Respirometry is an important tool in evaluating biological processes. We are on the cutting edge in the use of respirometry to optimize nutrient applications. Furthermore, our 16-cell respirometer is used to conduct biodegradability studies, nitrification testing, toxicity/inhibition screenings, and performance comparisons of commercial biological additives.

*Nutrients.* Determining the proper mix of nitrogen and phosphorus that your plant requires can dramatically affect the biological population in a positive way, thus enhancing BOD reduction and liquid/solids separation. Using respirometry, EBS determines the optimum formulation and dosage with our MacroGro<sup>TM</sup> nutrient blends to meet your biological population's needs.

*Biological Products.* EBS BioStar<sup>TM</sup> R is a broad spectrum, high viable count bacterial formulation specifically developed for the CPI and refining industries. MicroStar<sup>TM</sup> is an enhanced formulation that is fortified with proprietary enzymes and micronutrients to enhance biodegradation and floc formation. Both products can be fed with our patented feed systems that create logarithmic growth of the bacteria before they are ever added to the wastewater system. That's more bang for the buck.

*Bioaugmentation Feed Systems.* EBS is a technology leader in the concept of applied bioaugmentation with over fifteen years



experience in on-site bacteria cultivation. We offer three sizes of on-site grow-up units designed to maximize the amount of bacteria applied to your system at the lowest possible cost. Instead of dollars per pound for "bugs in a bag," these systems deliver active bacteria directly to your application for pennies per pound of bacteria. Our patented application systems and products specifically formulated for on-site cultivation assure you of the best chance of success when using bioaugmentation cultures.