

EBS Process Technology

Costs and Benefits

PERSPECTIVE

A municipality with 10,000-person population using 100 gallons per person per day will produce 1.0 million gallons of wastewater per day.

The customized efficacy design using a single EBS-Di unit with an average total cost to the municipality is \$6,000 per month translates to **\$0.02 per person per day**. A cost less than a single can of a soft drink or one bottle of filtered drinking water per month.



IMPROVEMENTS FOR END-USER FACILITY

Changing the microbiology in both the sewer system and the wastewater treatment (WWTP) process to EBS formulation is proven to Save Operational Cost Expense (OPEX) from:

- Stopping sewer and WWTP odors
- Eliminating and clearing sewer blockages and overflows from FOG (fats, oils & grease); low flow clogs of paper and waste added to sewer; and reducing pump wear and power costs due to restricted lines.
- Reducing WWTP aeration electrical energy input by up to 65%
- Reducing the processing and disposal costs for Biosolids (sludge) by 80% to 100%
- Improving effluent water quality beyond NPDES-EPA permit requirements

Changing the microbiology in both the sewer system and the WWTP process to EBS formulation is proven to Avoid Capital Cost Expense (CAPEX) from:

- Prolonging sewer and infrastructure life by eliminating corrosive hydrogen sulfide gas, a major source of wastewater odors.
- Increasing WWTP treatment capacity by two to three times because the EBS microbial formulation is much more efficient. It performs with and without oxygen, preferring very low oxygen levels compared to traditional, indigenous microbiology.
- The EBS formulation dominates the microbiome quickly by multiplying faster than other active microbes by a factor of more than two (2); rapidly adjusting to food and nutrients available while consuming other microbes including fecal coliform and E-coli. This reduces retention times required for treatment and increases treatment efficiencies dramatically; lowering the cost per volume of wastewater treated.

OPERATIONAL AND CAPITAL BENEFITS

When combined, these attributes reduce the need for additional WWTP capacity upgrades for many years to come, thereby avoiding large CAPEX.



The savings in OPEX are always larger than the monthly service fee. A cost of two cents per day is a very affordable solution without considering the savings!



The savings from avoided or deferred CAPEX for the short term and in the long term are extensive when considering present and future value of replacement or upgrades.



The reduction in Greenhouse Gases from OPEX savings and CAPEX avoidance is extremely difficult to calculate when considering all the attributable variables. However, when calculated, the Carbon Credits available will have an intrinsic value and, in the near future, a strong marketable value.

