Bio Energizer® Reduces Sludge at Small N.M. Municipal Facility

Case Study

Location: New Mexico Small Municipal Wastewater Treatment Facility
Huma® Environmental Product: Bio Energizer®

Problem

A small town in New Mexico (pop. 1,300) had a municipal wastewater system with a flow rate of 50,000 gallons per day. The system included a series of three lagoons that tapered to a depth of 13 feet. Pond 1 had an average sludge depth of 1.9 feet, Pond 2 averaged 3.5 feet, and Pond 3 averaged 2.7 feet. The system was in need of reducing the sludge in its lagoon wastewater system to meet state requirements. Dredging costs were more than the town could afford, and an alternative method for dealing with sludge accumulation issues was needed.

Solution

A 6-month test (later extended to 300 days) was developed in which **Bio Energizer®** was administered to make nutrients more available to wastewater microorganisms, thereby stimulating natural sludge reduction. The test initially involved treating Pond 1 at a dosage of 7 ppm; however, during the treatment period the system operator determined that it would be very beneficial to treat both Pond 1 and Pond 2, as the lagoon system had historically utilized Pond 2 more than Pond 1. The dosing amount was split between the two ponds, so that 2 ppm was administered to Pond 1 and 3 ppm was administered to Pond 2. After 6 Months 1 ppm was administered to Pond 3 to facilitate greater sludge reduction. Sludge-judging occurred monthly and sludge levels were tracked at 9 collection points across 3 cross-sections to follow the reduction of sludge in each system.

Resolution

At 10 months the average sludge depths of the ponds were found to have continually reduced: Pond 1 from an average depth of 1.9 feet to 1.6 feet, a 12% reduction; Pond 2 from an average depth of 3.5 feet to 2.3 feet, a 36% reduction; and Pond 3 from an average depth of 2.7 feet to 2.1 feet, a 24% reduction. The cumulative effect was demonstrated when the focus of treatment changed from Pond 1 to Pond 2 and Pond 3. Based on the progressive reduction of 300 days, it is estimated that there will be a continuation of sludge reduction with continued use of the product. By reducing the accumulated solids in its lagoons, the town is regaining lost capacity to better handle the incoming flow and meet its permit requirements without dredging.

Product Information

Bio Energizer® is a formulation of nutrients, organic acids, natural biological stimulants, and energy systems that balance the natural microbial ecosystem to increase bio-oxidation capacity in lagoon systems. **Bio Energizer®** is a broad-spectrum bio-activator containing over 30 essential microbial growth-promoting ingredients. By design, **Bio Energizer®** is a balanced formulation of vitamins, trace nutrients, enzymes, organic acids, and biostimulants that stimulate the existing microbial community to greater metabolic capacity and efficiency. **Bio Energizer®** is neither a bacterium nor an inoculum. *For more information, go to www.huma.us.*

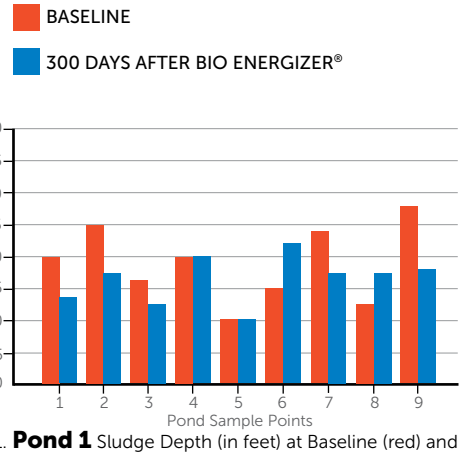

Figure 1. **Pond 1** Sludge Depth (in feet) at Baseline (red) and 300 Days (blue), 9 Sample Points

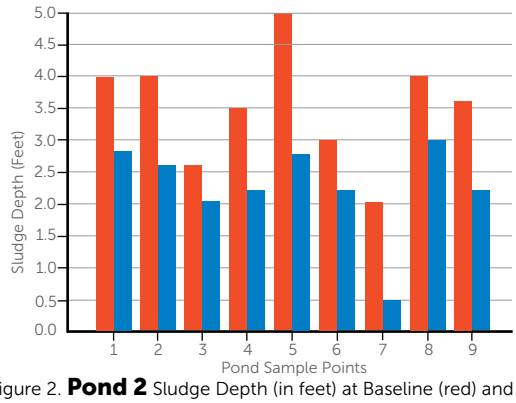

Figure 2. **Pond 2** Sludge Depth (in feet) at Baseline (red) and 300 Days (blue), 9 Sample Points

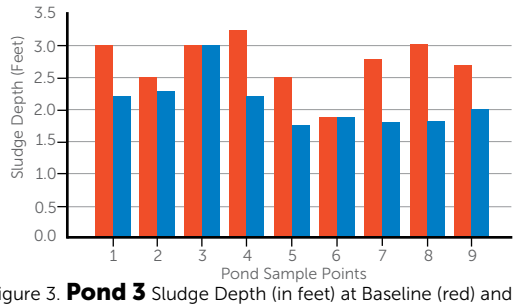

Figure 3. **Pond 3** Sludge Depth (in feet) at Baseline (red) and 300 Days (blue), 9 Sample Points

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