

Reduction of Twenty Years Old Sludge © 2009

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ECOPROBIOTICS®, of the Bacta-Pur® System, are beneficial communities of natural bacteria, which have been on earth for millions of years and have been selected for their synergistic ability to biodegrade pollutants and to improve water quality. ECOPROBIOTICS® increase biodiversity. Just as people take probiotic yogurt for its' ability to assure the presence of the optimal community for digestion and immunity, ECOPROBIOTICS® improve ecosystem health. EVERY PRODUCTION of Bacta-Pur® products is analyzed and cleared for shipment ONLY after passing all performance tests and being CERTIFIED PATHOGEN FREE using techniques from the food industry. ECOPROBIOTICS® are purely natural and beneficial; they NEVER contain added chemicals such as surfactants, emulsifiers or enzymes..., nor do they contain genetically modified (GMO) or deliberately mutated organisms. ECOPROBIOTICS® are safe and beneficial. Disease causing organisms are never used, as others do or permit. All bacterial cultures in the Bacta-Pur® product are listed on the Canadian DSL.

Background

The Village of Hamel, Illinois has a population of 1000 people. The municipal sewage lagoon had an accumulation of twenty years old sludge with depths up to thirty inches. The goal of the treatment was to reduce the sludge layer to save costs of traditional disposal, which simply puts the pollution elsewhere.

Treatment Program

The program developed for this application used Bacta-Pur® XLG, which contains a community of natural beneficial microorganisms selected for their synergistic ability to produce sludge digesting enzymes and improve water quality under facultative conditions. Bacta-Pur® XLG biodegrades accumulated sludge and increases hydraulic residence time by reducing the sludge layer, and the lagoon remains in service while being treated.

The treatment started in late August 1997 and continued to mid November. Data was collected for an additional month after the end of the treatment. One ppm, based on pond volume, of Bacta-Pur® XLG was preactivated and dispersed weekly around the pond between the rows of linear aeration. Preactivation is a technique, which increases the size of the community of the beneficial microorganisms and optimizes production of exoenzymes to solubilize sludge and grease.

Initial sludge depths and removal rates were monitored by the municipal staff.

Results

Only two months of application eliminated more than eight inches of sludge, equivalent to a removal rate of one inch per week through out the entire system. Even greater removal rates were shown in the third aeration cell (see below). Excellent water quality was maintained throughout the treatment, and The Village of Hamel saved considerable money over alternative disposal method, which cost was estimated between \$70 000.00 to \$140,000.00(US).

