**Sludge Removal Cost Analysis Using BIO ENERGIZER®**

**Report**

Location: Wastewater Lagoons in Bakersfield, CA

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### Average Wastewater Lagoon Sludge Removal Costs in California

*Based on data provided by a City in CA, the following are costs for dredging and hauling sludge from wastewater lagoons in California:

1) Dredging Costs between $220 and $337 per dry ton of dredged, pressed and stacked (piled) sludge. Average cost per dry ton to excavate sludge and pile on site: **$278.50** per dry ton

2) Trucking and Tipping Fees for hauling and land filling range between $50 and $75 per dry ton. Average cost to haul and land fill: **$62.50** per dry ton

3) Total Average Cost for Sludge Removal and Disposal of sludge from wastewater lagoons in central California: **$341** per dry ton

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**Dry Tons of Sludge Removed by Adding BIO ENERGIZER®**

10 acres × 43,560 ft²/acre × 2.170 ft × 7.48 gallons/ft³ × 8.34 lbs/gallon × 0.043 /2000 = **1,268 dry tons removed**

**Cost of 1,268 dry tons of sludge removed by dredging and hauling**

1,268 dry tons × $341 = **$432,388**

**Cost of BIO ENERGIZER® Used to date**

BIO ENERGIZER® was introduced directly to Pond # 2 in December. Pond # 2 realized 24 inches of sludge reduction in 12 months or about 2 inches of sludge reduction per month.

In one year a City in California purchased **$111,000** worth of BIO ENERGIZER®

Cost to remove **1,268 tons** of sludge using BIO ENERGIZER®: **$111,000**

**Savings in Sludge Removal Costs by Using BIO ENERGIZER®:**

$432,388 - 111,000 = **$321,388**
**Probiotic Solutions® Product Information**

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 motivate the existing microbial community to greater metabolic capacity and efficiency. BIO ENERGIZER® is not a bacterium nor an inoculum.

For many years, wastewater operators have continued to use BIO ENERGIZER® to cut their sludge hauling costs.

**Operators Using BIO ENERGIZER® Report:**

1) **Increases in BOD removal efficiency.** BIO ENERGIZER® improves treatment plant removal efficiency to increase plant treatment capacity and more easily meet effluent requirements.

2) **The elimination of expensive dredging costs.** BIO ENERGIZER® converts sludge into gases and water, reducing sludge accumulations. No draining, drying, excavating, or inconvenient down time.

3) **The reduction of odors and aeration costs.** BIO ENERGIZER® enhances aerobic and facultative biological eco-systems to reduce the production of objectionable and offensive odors. BIO ENERGIZER® also increases the dissolved oxygen levels which decreases the need for aeration.

BIO ENERGIZER® enhances endogenous respiration for faster and more complete oxidation of sludge into carbon dioxide and water.

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**Our Probiotic Solutions® Products are Highly Efficient and Effective Due to Our Unique Delivery System**

**Call Toll Free Today for Your Free Quote and System Evaluation.**

1 (800) 961-1220