



Sludge Removal Cost Analysis Using BIO ENERGIZER

Average Wastewater Lagoon Sludge Removal Costs in California

Based on data provided by Jason Meadors and Asabi Goodman of Boyle Engineering, Bakersfield, CA, the following are costs for dredging and hauling sludge from wastewater lagoons in central California:

- 1) Dredging Costs- between \$220 and \$337 per dry ton of dredged, pressed and stacked (piled) sludge. Average cost per dry to excavate sludge and pile on site: **\$278.5** 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: **\$62.5**
- 3) Total Average Cost for Sludge Removal and Disposal of sludge from wastewater lagoons in central California: **\$341** per dry ton

Dry Tons of Sludge Removed by Adding BIO ENERGIZER

10 acres x 43,560 ft²/acre x 2.170 ft x 7.48 gallons/ft³ x 8.34 lbs/gallon x .043 /2000 =

1,268 dry tons removed

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

1,268 dry tons x \$341 = **\$432,388**

Cost of BIO ENERGIZER Used to date

BIO ENERGIZER was introduced directly to Pond # 2 in December, 2003. Pond # 2 realized 24 inches of sludge reduction in 12 months or about 2 inches of sludge reduction per month.

From 9/25/2003 to 9/24/2004 the City of Lemoore 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**