

BIO-SEDIMENT REDUCTION™

“Your Key to a Clean Lake!”

Sludge and Muck — where does it come from?

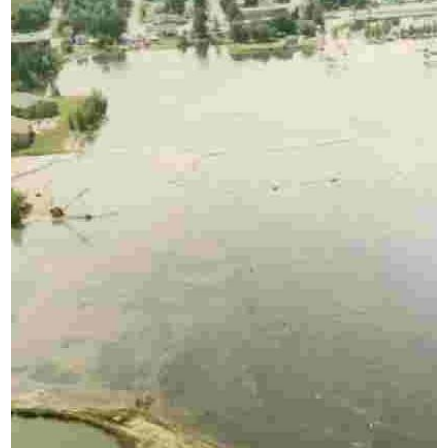
Muck and sludge are organic sediments from dead and decaying aquatic weeds and algae as well as leaves, branches, grass, dead fish and water fowl droppings that sink to the bottom of the lake. With the passage of time, sludge and muck increases the sediment layer in lakes and ponds.

Weeds and Algae Growth – caused by Muck and Sludge?

Aquatic environments naturally provide favorable conditions for plant growth. Just one acre of algae, for example, can add 30 lbs of nitrogen to a lake each year. During seasonal die-off, weeds and algae sink to the bottom adding to muck and sludge. Decomposition releases nitrogen and phosphorous back into the water.

How does Nature Clean up Muck and Sludge?

Nature cleans up muck in two ways. Flowing water eliminates muck by moving nutrient matter elsewhere, usually depositing it into a lake. Streams re-oxygenate themselves continuously to support aerobic micro-organisms that need oxygen and digest organic matter without releasing nutrients back into the water. Aerobic microbes are then consumed by zooplankton. These microscopic animals also require oxygen to survive and eat other micro-organisms. Zooplankton in turn are consumed by higher forms of aquatic life including snails, mussels, crabs, fish, birds and mammals. That is how streams stay clean.



Algae covered lake

However lakes and ponds have less moving water and less reoxygenation to clean themselves. Dead weeds and algae continually add to the sediment layer of black smelly muck. Nutrients recycle back year after year similar to the way farmers use crop residue to provide nutrients for next year's growth. Without help, lakes can become eutrophic as they continue to fill up with weeds, algae, muck and sludge.

What is *Bio-Sediment Reduction™* (BSR™)?

Bio-Sediment Reduction™ (BSR™) is the process of re-oxygenating a lake or pond to stimulate and sustain naturally occurring aerobic microbial activity. With adequate oxygen and circulation, aerobic micro-organisms digest sludge and muck from the sediment layer. To accomplish this, oxygen from the surface must be transported down and carried across the sediment layer thus providing aerobic microbes with oxygen required to complete their environmental duties. This is the beginning of *Bio-Sediment Reduction™*.

Bio-Sediment Reduction™ mimics lake turnover which occurs naturally in spring and fall or whenever the wind blows sufficiently. You will be astounded by the tremendous cleaning power of nature when lake turn-over and re-oxygenation is maintained continuously, instead of only a few times a month.

As muck and sediment are reduced, lakes and ponds return to normal. The water becomes clearer, with fewer nutrients for weed and algae growth. As sunlight penetrates the clear water, more diverse native species return. The ecosystem is restored. The lake recovers its health.

What does *Bio-Sediment Reduction™* do for your Lake?

Bio-Sediment Reduction™ is a safe, natural, non-intrusive and permanent solution to lake problems. BSR™ digests muck and sludge and slows weed and algae growth. BSR™ offers a reliable, low cost alternative to dredging, weed cutting and draw-downs. Lake use is not interrupted. The benefits are many and the negatives are none. What could be better than that?

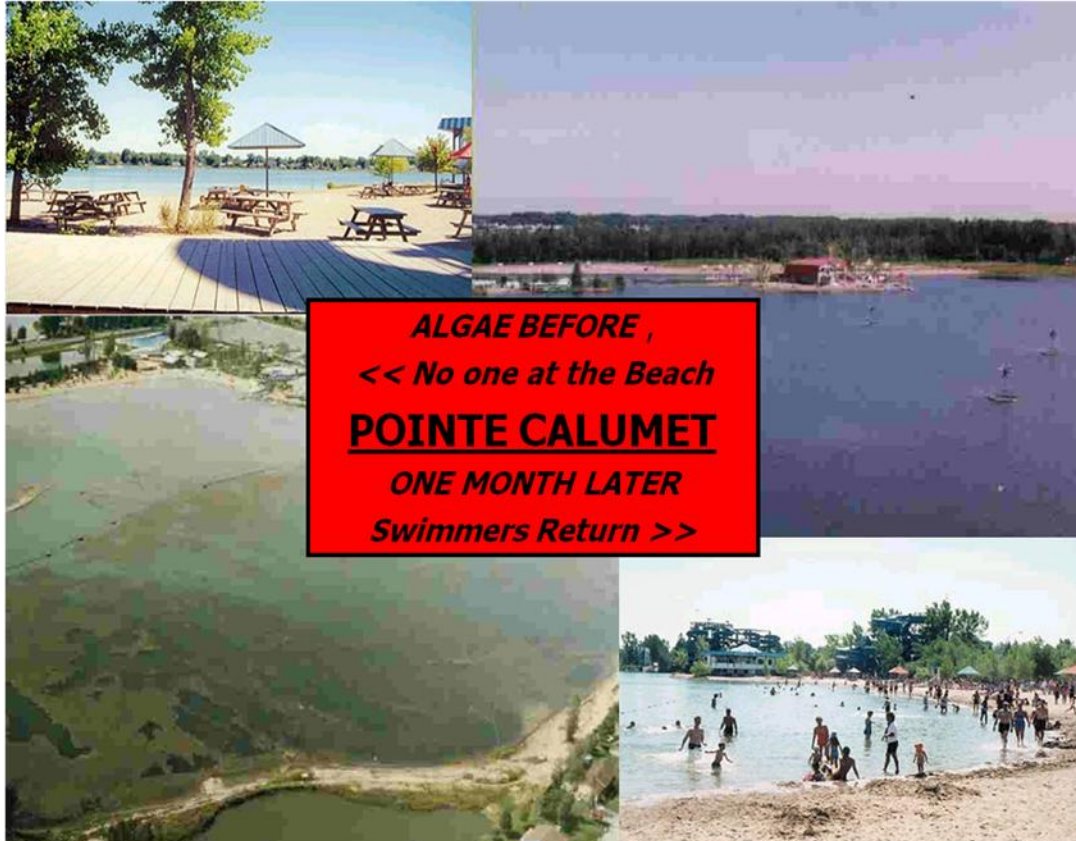
***Bio-Sediment Reduction™ is a “Win-Win” Situation
for Lake Users and for the Environment!***

The Expert Company in Wisconsin call (715) 823-3080, in South Dakota call (605) 838-0103.

Bio-Sediment Reduction™

“The Key to Fixing Lake Problems - Permanently!”

Without Bio-Sediment Reduction™ lakes collect muck, algae, weeds and pathogens!
In 1998 the Health Department shut down the beach at Pointe Calumet, Quebec!



One month later, Bio-Sediment Reduction™ eliminated algae, e-coli and other problems.

Benefits of Bio-Sediment Reduction™

- A healthier lake with clear water, more fish, fewer weeds and less algae
- Environmentally neutral and safe – no herbicides or other chemicals
- Natural microbes digest organic sediment – muck and sludge are not moved to another location
- Expected cost can be less than 10% of mechanical or hydraulic dredging
- Does not disturb the ecology or cause turbidity
- Avoids building ramps, operating noisy equipment, traffic, watery mess and flies
- Does not change shoreline or disturb the bottom – draw downs are unnecessary
- Permitting is not usually required. Engineering costs are eliminated
- Dissolved Oxygen (DO) levels increase – BOD and COD demands are satisfied
- Eliminates e-coli and other pathogens that harbor in stagnant waters

**Bio-Sediment Reduction™ provides Natural and Affordable,
Permanent Solutions for Lake Problems.**

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