

CO2 ???

# Nualgi Lakes

## Sustainable Solution ☺ to Pollution ☹

Phyco-remediation of Lakes, Rivers, Estuaries, Oceans, etc.

### The Problem

Lakes, rivers, estuaries, backwaters and even oceans are becoming more and more polluted due to influx of sewage and fertilizer runoff. Most of the fresh water in the world is held in lakes and reservoirs.

### The Solution

**Nualgi Lakes** is a simple and effective solution to treat sewage and eutrophied water bodies.

### What is Nualgi?

**Nualgi Lakes** contains micronutrients required by Diatom Algae in nano size. (5 to 100 nano meters)  
It contains Si, Fe, Mn, Ca, Mg, Zn, Cu, B, S, Mo, etc.,

### How does it work?

**Nualgi Lakes** causes a bloom of Diatom Algae.

Diatom Algae are aquatic plants that absorb carbon dioxide and release oxygen during photosynthesis.

Higher oxygen levels in water enable aerobic bacteria to grow and these breakdown organics in the water.

Thus Nualgi and Diatoms are a substitute for electric powered Aerators used in pond and lake restoration.

### Why Diatom Algae?

Diatoms have a silica body, unlike other algae such as Green Algae and Blue Green Algae which have cellulose bodies.

Diatoms are consumed by zooplankton and these by fishes.

Thus the organics exit the water in the form of fish biomass.

### Oxygen

1 liter of Nualgi results in release of at least 200 to 1000 kgs of Oxygen.

### Food

1 liter of **Nualgi** causes bloom of 200 to 1000 kgs of Diatoms.

### Nitrogen and Phosphorus

1 liter of Nualgi results in consumption of 16 to 80 kgs of N and 2 to 11 kgs of P.

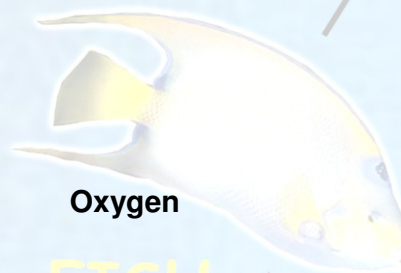
### Bioremediation

**Nualgi Lakes** can clean up organic pollution in open drains, ponds (natural or artificial), lakes, rivers, estuaries and oceans. Green algae and Water Hyacinth will stop growing and Blue Green Algae will die off and Dinoflagellates will be controlled. Some heavy metals may get oxidized.

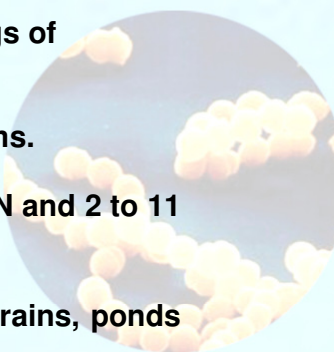
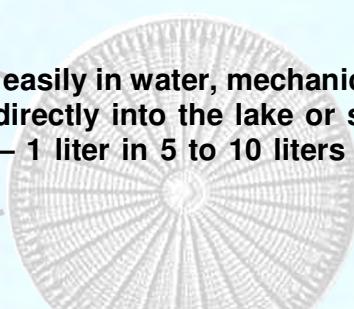
1 liter of **Nualgi Lakes** is to be used in about 2 million to 50 million litres of water.

### Application process

Nualgi mixes very easily in water, mechanical mixing is not required. It can be poured directly into the lake or sewage or mixed in a small quantity of water – 1 liter in 5 to 10 liters and this can be mixed into the lake.



ZOOPLANKTON



SEWAGE

AEROBIC BACTERIA

OXYGEN

ALGAE

NUTRIENTS

N&P

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## Toxicity

Nualgi has been tested to be non toxic as per APHA (2012) and OECD (1992).

## Impact on Fish

Nualgi is invented for use in Aquaculture and is safe for all fish, shrimp, etc.

It is tested by State Fisheries Department in India in 2005 and they are regular customers since then.

## Impact on People

Nualgi has no adverse impact on people.

It can be handled with bare hands.

Consumption of a small quantity does not cause any side effect.

## Side effects

There are no side effects and Nualgi does not have any adverse impact on other organisms in the water.

Beneficial bacteria, Zooplankton, Fish, etc., grow in an healthy manner in ponds and lakes dosed with Nualgi.

## Precautions to be taken.

Over dosing may cause excess bloom of Diatoms, water will turn brown and this may be harmful to fish.

Therefore care should be taken not to overdose.

## Advantages of Nualgi

It is simple to use, economical, safe and very flexible.

There is no capital cost, use can be started and stopped as required.

Dosage can be increased or decreased based on the condition of the water.

Polluted lakes are generally green with Blue Green Algae this will become clear in a few weeks time.

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