



### **What is Nualgi Ponds?**

Nualgi is a liquid additive containing 12 essential nutrients on a nano silica base to restore balance, improve water quality, and control nuisance algae in your pond. Nano silica is both a nutrient and a carrier that prevents the nutrients from reacting with each other.

Unlike traditional additives, Nualgi's nano scale (measuring 5-100 nm) nutrients remain suspended for longer duration, disperse easily across the water column and are therefore "bio-available" to marine organisms.

#### **How Does Nualgi Ponds Work?**

Upon application of Nualgi Ponds, the Nano Silica base carries 12 essential nutrients to Diatom Algae which start to multiply, consuming N and P (from left over fish food and fish waste) and robbing the nuisance algae of these nutrients. Due to the silica shell the Diatoms photo-synthesize earlier in the day as compared to nuisance algae. Diatoms release O<sub>2</sub> & consume CO<sub>2</sub>, thus increasing the dissolved oxygen levels. Higher DO levels help aerobic bacteria break down organic matter. Diatoms also happen to be the favorite food for Zooplankton and as they grow, Zooplankton population also grows exponentially in the pond. Finally, Zooplankton, a live food for marine life gets consumed by fish, thus completing the food chain.

### **What Problems Does Nualgi Ponds Solve?**

#### **Nualgi Ponds treats common problems faced by pond owners:**

- Nuisance algae
- Lack of water clarity
- Fish kill or poor fish health

### **What Does Nualgi Ponds Contain?**

Nualgi is a patented nano silica based nano nutrient formula in size range of 5-100 nm. The silica becomes both the carrier for other nutrients and the nutrient by itself. It contains the important micronutrient -iron (0.01% to 50% of Fe) and other micronutrients- Mn, Zn, Co, Cu, Mo, B, S, Ca, Mg, P, K. Due to its nano size, Nualgi is able to pervade very small spaces in the subsurface and remain suspended in water. This allows particles to travel farther than larger, macro-sized particles therefore providing easy absorption.

### **What is Nano Scale Technology?**

Nano refers to the metric prefix for  $10^{-9}$  and means one-billionth of something. Nanoscience is the study of structures made small enough to take on **new properties**. For example, nano-particles of gold appear red in color and melt at significantly lower temperatures than normal gold slabs (~300 °C as compared to 1064 °C

### **Can I Use a Filter or UV Light?**

Yes you can use a water filter. Normal filters with foam type pads work in conjunction with Nualgi Ponds. Be careful if using a UV light filter, these contribute to a loss of beneficial bacteria and other aerobic microbes in the pond and can affect the results.

### **Will Nualgi Harm my Bio Filter?**

No. Nualgi has demonstrated an amplification of bio filters due to increased dissolved oxygen levels in the pond water column leading to larger aerobic bacteria and beneficial microbe colonies

### **What is the Minimum Water Temperature Required for Nualgi to be Effective?**

Nualgi has been tested in 40 degree F waters with delayed result as biological activity slows down at such temps. Ponds in cooler temps are normally clear. It's the warmer waters that reveal problematic blooms of undesirable algae. With that said, the best temperature range to begin the use of nualgi would be 45F-50F although you could begin use at 35F.

### **Will Nualgi Work with Artificially Lined Ponds?**

Yes. It will work on all types of ponds whether lined with concrete, wood, plastic or preformed pond as well as earth bottoms.

### **When Should I Start Seeing the Effects of Using Nualgi Ponds?**

For particularly bad cases of algae, results might be visible within hours and the pond may appear to get worse before it gets better in extreme cases. Take a deep breath, a few pictures for reference, and if you still don't notice the effects at least a week later please contact us.

### **What if Nualgi Ponds Doesn't Seem to be Working?**

Every pond is different and occasionally it can take some time to see noticeable changes. Possible reasons for Nualgi not working in your pond could include over feeding of livestock or dosing of other nutrients. If you don't see a significant change in water clarity and algae control in 4-6 weeks after starting the weekly Nualgi dose, Contact [nualgi.ponds@gmail.com](mailto:nualgi.ponds@gmail.com) to seek troubleshooting support from our expert.

### **What is the Impact of Nualgi Ponds on Methane (ch4) Emissions?**

Diatoms increase the Dissolved Oxygen level of water uniformly across the storage area and thereby convert Anaerobic conditions to Aerobic conditions, thus reducing Methane emissions. Aerobic conditions promote growth of methanotroph bacteria which consumes methane.

### **Will Nualgi Ponds Reduce the Odor of my Pond?**

The emission of hydrogen sulfide and others related odors are stopped when the Diatoms create aerobic conditions. Diatoms increase the dissolved oxygen level of water and therefore convert anaerobic conditions to aerobic conditions.

### **Why Grow 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 zooplankton is live food for fish. Blue Green Algae are not good for zooplankton or fish. Fewer diatoms die and decompose in the water as compared to Blue Green Algae. Excess diatoms sink to the bottom of the pond unlike other algae that form a layer on top of the water, thus cutting off light and reducing photosynthesis.

### **Dosing**

How Often Should I Use Nualgi Ponds?

Nualgi Pond should be dosed every 7 days.

### **How Much Should I Dose in my Pond or Lake?**

1 ml per 1000 gallons diluted in 100 ml of water.

### **What is the Dosing Process and How Long Does it Take?**

Physically remove dead leaves, debris and any algae that you can scoop out before starting the Nualgi dose. Extract the appropriate dose and dilute it 10 times in water. Pour the mixture directly into your pond while walking around the periphery. Diatoms are most active immediately after sunrise. Therefore dosing Nualgi in the morning is recommended.

### **Can Nualgi Ponds Be Used on other Plant Life Around my Water Garden?**

Nualgi Ponds enhances the color and growth of your water garden due to enhanced water quality and availability of micro nutrients.

### **Can Other Nutrients or Nutrient Balancing Products Be Used with Nualgi Ponds?**

You may continue to apply currently used additives with Nualgi. Once your water is clear and nuisance algae has died out, you may experiment reducing dosage of such additives.

### **What Happens if I Overdose my Pond?**

Nualgi overdose will result in excessive diatoms in your pond. Diatoms not consumed by zooplankton will settle to the bottom of your pond. Overdosing will not lead to a significant negative reaction but is simply a waste of the product.

# Safety

## Is Nualgi Ponds Toxic?

No. Nualgi is made with Nano Silica which is amorphous silica of 100 nano meters or smaller. Crystalline silica of 1 micron (1000 nano meters) or more may be carcinogenic.

## Is Nualgi Ponds Safe for Koi and Other Fish?

Yes. Nualgi is made with all fish in mind. From Koi to Trout, Nualgi Ponds is beneficial to all aspects of your water garden. This includes amphibians, invertebrates, bivalves and crustaceans.

## Is Nualgi Harmful if Consumed?

Nualgi is non-toxic and not harmful if ingested. If you or a child did consume the formula and is having any issues, please consult your primary physician. If it gets in your eyes, rinse and wash with water immediately.

APPLICATION REFERENCE TABLE	
Gallons In Pond	Max Amount
100	0.1 ml
500	0.5 ml
1,000	1 ml
5,000	5 ml
10,000	10 ml

Buy Nualgi

Cascade Pond Supply

<http://www.cascade-pond-supply.com>