



InvisiBubble

BUBBLE CURTAIN

InvisiBubble

A majestic bubble arrier that can purify water, deflect debris or sediments, quarantine hydrocarbures and preserve fauna

— COMBATING EUTROPHICATION —



SUPER POWERS

PREVENTATIVE

- With aeration, the body of water is de-stratified and oxygen becomes available to aerobic bacteria in the sediment
- Increases oxygen levels in the water (Avoids stratification, less odour and stagnant water)
- Limits excessive nutrient loads in the water (less plants and algae)

LOW-IMPACT

- Ecosystem balance
- Do not disturb boat and wildlife passage
- No visual or noise impact
- Allows bio-dredging: consumption of organic sediments by oxygenated bacteria, thus returning to a depth close to the non-organic stratum

TIRELESS

- Activation on demand and extremely short
- Flexible, with perfect shape memory
- Resistant to UV, chemicals, salinity and temperature variations



PLACE OF ACTION

I am the best underwater



ENEMIES

Plants and algae
Odour and stagnant water
Sedimentation

contact@searial-cleaners.com
<https://searial-cleaners.com/>



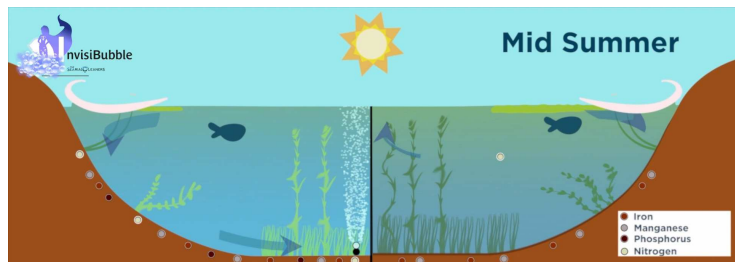
@thesearialcleaners

NOVA NAUTIC – Z.I. Rue des Bouleaux – 01460 Port – France



PORALU
MARINE

WHY AERATE A POND ?

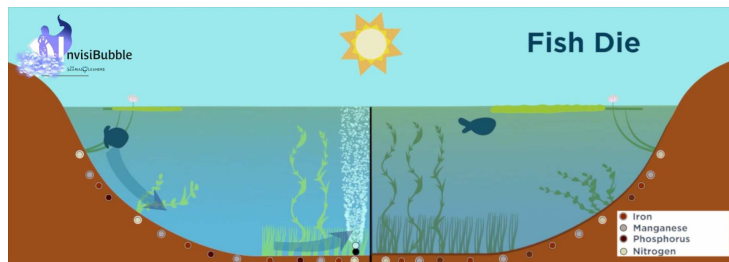


Bottom aeration and the wind keep the pond well-mixed.

Low levels of plankton in the water allows the light to filter through, encouraging rooted aquatic plants to grow.

Sun heated water on the surface does not mix with denser, colder water below.

Warm water layer is only a few feet deep.

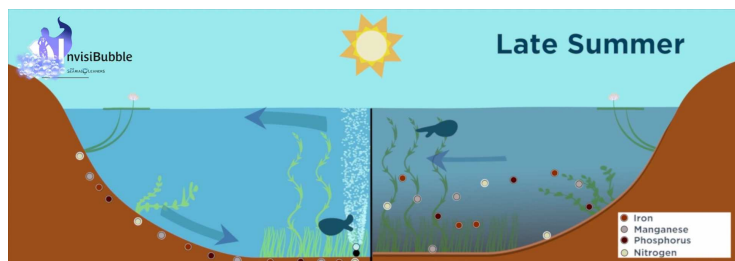


Mechanical bottom aeration with Bubble Tubing® keeps fish healthy and breathing oxygen.

Nutrients are kept inert due to the presence of oxygen.

Wind-less days provide almost no oxygen to the water body.

Without proper mixing, oxygen depletes and fish suffocate.

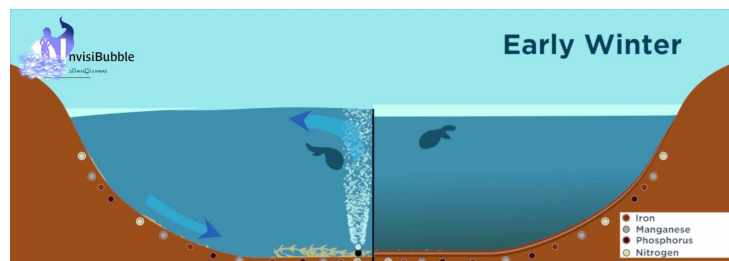


Oxygen used in decomposition is rapidly replaced by the Bubble Tubing® aeration.

Water quality remains good.

Absence of oxygen solubilizes nutrients (nitrogen & phosphorus) and metals (iron & manganese) that were trapped in the sediments.

Water quality deteriorates at the bottom.



All dead organic matter decomposes very slowly and water quality remains good.

The aerated pond remains mixed.

Algae and plant decomposition consumes oxygen and the pond slowly becomes anaerobic.

Decomposition gases accumulate under the ice.

*The Bubble Tubing® is a flexible linear diffuser developed by CanadianPond.ca Products Ltd. for 15 years. The micro-bubbles generated by this aeration tubing are a real asset in a wide range of applications.

THE SERIAL CLEANERS

Where land and water interact, we act

Mission: Clean, restore the shores and preserve our natural environment

Super powers : We collect, catch, intercept waste, clean water and land. No waste can resist us.

Places of action: Where water and land meet, you will find us: marinas, ports rivers and beaches.

www.searial-cleaners.com





InvisiBubble

BUBBLE CURTAIN

InvisiBubble

A majestic bubble barrier that can purify water, deflect debris, quarantine hydrocarbures and preserve fauna

— SEDIMENTATION MITIGATION —



SUPER POWERS

PREVENTATIVE

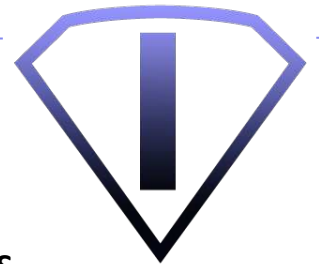
- Retention or redirection of fine materials
- Reduce erosions of critical areas
- Avoid sediments dispersion and resuspension
- Prevents water from becoming turbid

LOW-IMPACT

- Does not disturb fauna and flora
- No visual or noise impact
- Reducation of GHDs and pollutant emissions into air and water
- Reduces the costs associated with dredging

TIRELESS

- Single, double or even triple bubble barriers are easily set up
- Flexible, with perfect shape memory
- Resistant to UV, chemicals, salinity and temperature variations



PLACE OF ACTION

I work best underwater



ENEMIES

All suspended solids in water

contact@searial-cleaners.com
<https://searial-cleaners.com/>



NOVA NAUTIC – Z.I. Rue des Bouleaux – 01460 Port – France

@thesearialcleaners



PORALU
MARINE



InvisiBubble

BUBBLE CURTAIN

InvisiBubble

A majestic bubble barrier that can purify water, deflect debris, quarantine petroleum derivatives, and preserve fauna

— WASTE CONTAINMENT —



SUPER POWERS

PREVENTATIVE

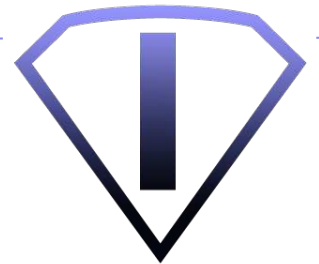
- Traps floating and submersed waste as small as 2mm, whether organic or trash
- Diverts and directs waste to a collection point
- Confines waste within a desired perimeter

LOW-IMPACT

- Does not disturb boat or wildlife environments
- No visual or noise impact
- Submersible anchoring not required
- Increases oxygen levels in the water (Less odour and stagnant water, better water quality)

TIRELESS

- Single, double or even triple bubble barriers are easily set up
- Flexible, with perfect shape memory
- Resistant to UV, chemicals, salinity and temperature variations



PLACE OF ACTION

I work best underwater



ENEMIES

Trash and organic waste
Waste from bottom to top of water

contact@searial-cleaners.com
<https://searial-cleaners.com/>

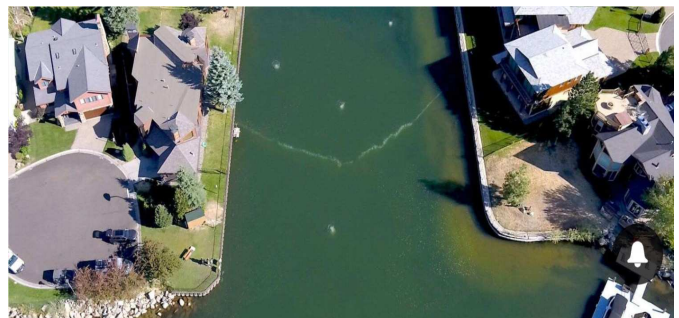


@thesearialcleaners

NOVA NAUTIC – Z.I. Rue des Bouleaux – 01460 Port – France

PORALU
MARINE

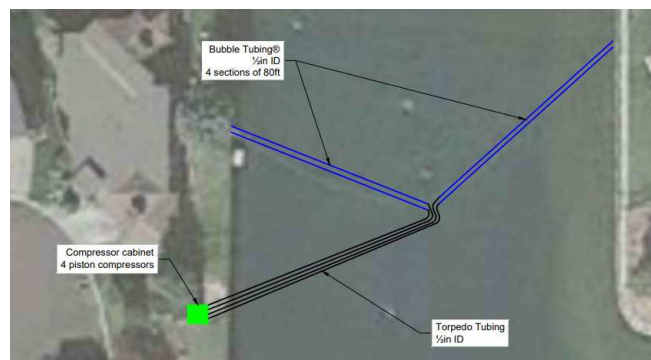
TAHOE KEYS BUBBLE CURTAIN



A 50 m bubble curtain with a “V” shape and a skimmer technologies were implemented in the spring of 2019 to to reduce the amount of invasive plant fragments that entered Lake Tahoe trough TKPOA waterways.

During the test phase, the project reduced the amount of aquatic invasive species from entering Lake Tahoe. A total of 2.6 m3 of weeds were collected in the 131 days of operation.

Following this first successful project, two other Bubble curtains have been installed in the Tahoe Keys to control the fragment dispersion on the Lake.



*The Bubble Tubing® is a flexible linear diffuser developed by CanadianPond.ca Products Ltd and used for 15 years. The micro-bubbles generated by this aeration tubing are a real asset in a wide range of applications.

THE SERIAL CLEANERS

Where land and water interact, we act

Mission: Clean, restore the shores and preserve our natural environment

Super powers : We collect, catch, intercept waste, clean water and land. No waste can resist us.

Places of action: Where water and land meet, you will find us: marinas, ports rivers and beaches.

www.searial-cleaners.com

