

Eco-Safe Red Tide and Algae Control

How it Works

Eco-Safe Red Tide and Algae Control has a two stage mode of action that is effective in controlling the algae that cause Red Tide and other Harmful Algae Blooms (HAB's).

As a direct control, Eco-Safe Red Tide and Algae Control can effectively be sprayed or otherwise distributed into bodies of water with a high algae content. The strong colloidal action of the all natural, non toxic formulation will penetrate the very thin cellulose cell wall of algae and shred it. This thin cellulose cell wall is the only thing that protects algae from the outside environment and elements. Once this wall is shredded or breached, the algae falls apart and dies.

As a mitigation control to help Red Tide and other HBA's, the Eco-Safe Red Tide and Algae Control solution can be sprayed onto waters to help break up organic compounds and chemicals that accumulate in the water. Algae feed on many of these organic chemicals as a natural bioremediation that is part of the normal "Circle of Life". The problem occurs when excessive amounts of these organic chemicals either runoff or are directly discharged into the water supply from agricultural and industrial operations. The chemicals become concentrated and turn the water into a liquid fertilizer that the algae feed upon.

Most algae have a life cycle similar to most land based plants. They are either in a "seed" stage, dormant or growing very slowly in colder, low light winter / off season conditions. When warmer temperatures come with the additional sunlight they go through rapid growth and reproductive stages. The same is true with algae, they have off seasons (even in the tropics). However, when water temperatures increase, hours of daylight are extended and water conditions become right, algae can multiply very quickly. With the addition of a liquid chemical fertilizer slurry of organic chemicals in the water, the algae populations can explode and become so high that the water can become toxic and the sheer numbers of algae can physically clog water intake pipes and filtration screens on factories and desalination plants. This is the process that leads to "Red Tide" and other HBA's.

The algae can also become so plentiful in the upper layers of water that they effectively block sunlight from traveling further down to other plant and animal life that depends on the light to maintain life functions. Without the natural life, the plant life and animal life either dies or moves to another area with more light.

Red Tides are just one of many HBA's that occur around the globe. Red Tides only occur in salt or brackish water and in warmer waters. There are many other forms of HBA's that occur in colder ocean climates and in freshwater lakes and ponds that are problematic as well.

United States based National Oceanic and Atmospheric Administration (NOAA), a global authority on marine biology, said that red tide or "harmful algal blooms, HABs, occur when colonies of algae—simple plants that live in the sea and freshwater—grow out of control while producing toxic or harmful effects on people, fish, shellfish, marine mammals, and birds. The human illnesses caused by HABs, though rare, can be debilitating or even fatal."

Red tide, said NOAA, is caused by "microscopic algae that produce toxins that kill fish and make shellfish dangerous to eat. The toxins may also make the surrounding air difficult to breathe. As the name suggests, the bloom of algae often turns the water red. But not all algal blooms are harmful. Most blooms, in fact, are beneficial because the tiny plants are food for animals in the ocean. In fact, they are the major source of energy that fuels the ocean food web."