

ClearBlu

ENVIRONMENTAL

Sludge Remediation

The buildup of sludge in a treatment lagoon is a common problem for many facilities. Excessive sludge buildup can cause multiple issues for a treatment lagoon including bad odors as well as drastically reducing retention time in the lagoon. Reduced retention time translates to decreased treatment ability, which potentially puts facilities at risk of not meeting discharge requirements and putting them in violation. Traditional methods of dealing with sludge involve mechanical removal of the solids,

which is both costly and disruptive to normal facility operations. While an unlined pond can use heavy equipment to scoop sludge from the bottom, lined ponds require more expensive specialty vacuum equipment to suck the sludge from the bottom to avoid damaging the liner. Both lined and unlined ponds must be drained for the desludging to occur, which renders the lagoon unusable for the duration of the process. Hauling the sludge right away after it is removed from the pond is incredibly costly because it is very wet. For the most cost-effective hauling option, the sludge must be spread on the ground and allowed to dry before it can be collected again and hauled away. From start to finish, this process is lengthy, disruptive, and expensive.



Specialty sludge sucking equipment mechanically removes solids from a pond.



Heavy equipment scoops sludge out of an almost completely drained pond.

An alternative approach for dealing with accumulated solids in a lagoon is through sludge remediation rather than removal. ClearBlu Environmental's microbubble aeration technology can be deployed in treatment lagoons, and when combined with a specialized microbial blend and pH neutral body of water, the highly aerated environment provides the perfect conditions for rapid aerobic digestion to occur. By actually digesting through organic material, the need for mechanical removal becomes unnecessary. The remediation occurs without disruption of facility operations.

The difference in sludge building ponds versus how ClearBlu Environmental approaches sludge remediation and treatment is in the way aeration is executed. A sludge building pond is facultative, or aerobic in the top 18-24” of water and anaerobic underneath. The theory is that the aerobic cap acts as odor control and the larger anaerobic region is intended to accomplish treatment. In reality, the anaerobic process is too slow to digest the incoming organic load in real time, and thus sludge is accumulated. With microbubble technology, the entire body of water is aerated, allowing for fast acting aerobic bacteria to thrive throughout the pond, even down to the sludge layer. Aerobic bacteria will continue digesting through existing organic solids for as long as they are supplied with ample oxygen and a pH neutral body of water. The surface aerators that we deploy draw ambient air and through a shearing action produce a very fine bubble. These bubbles are so small that the surface tension of the water overcomes the buoyancy of the bubble, and thus they diffuse throughout the body of water, all the way down to the sludge layer.

Our Sludge Remediation process can help your facility regain valuable retention time in your pond without the disruptive process of draining, drying, and hauling the sludge. A simple lab analysis on a sludge sample from your lagoon will tell us what percentage of the solids are organic, and thus can be digested. ClearBlu Environmental offers a variety of procurement options for your organization. Capital purchase, leasing, or our rental program offers you the flexibility to acquire your company’s waste water solution. The rental program is unique in that we only charge for what is digested. Through years of data collection and case studies, we have proven our ability to digest up to 98% of existing sludge and have helped customers avoid expensive and time-consuming dredging operations.



For more information:

Call: 800-347-6844
Email: info@clrblu.com
Website: www.clrblu.com