Aquacleaner

"Leaders in the field of Waterfront Restoration Technology"
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The Aqua Cleaner Suction Harvester

Introduction: Aquacleaner Environmental is the leader in suction harvesting technology with over 10 years, and 1000's of hours of experience in the water working with a wide variety of different plants and bottoms. This invaluable experience has guided us to build the most efficient and productive machines available anywhere in the world. We offer you a variety of choices in size, configuration and options of our machines that will work best for your individual needs as well as a comprehensive training program to maximize your productivity. Suction Harvesting offers a true form of remediation for all your invasive aquatic plant problems and is not a band-aid like chemicals, bottom barriers or weed harvesters.

How It Works: Suction Harvesting is the most effective way of removing invasive aquatic vegetation because a diver uproots the targeted plants and their rooting system plus the years past decomposing plants and feeds them into a vacuum hose that conveys them to the surface. There, they are separated from the water and captured in one of several options depending on which machine you acquire from us. Our Aquacleaner machines are available in a home, commercial and industrial model that have a variety of Bagging Configurations that allows for the separation of water from the invasive aquatic plants and debris.

The invasive aquatic vegetation and all the solids flow into the filtration bag at rates up to 2500gpm, where they are separated and the water passes back to the source. When bags are full they can be placed on a variety of different sized refuge barges that can be later taken to shore and uploaded, trucked offsite and composted. We have seen re-growth as little as 10% next season and as much as 50% after one application, however continued use can lead to the eradication of unwanted invasive aquatic vegetation plants. It leaves no remains (floaters), can operate in the tightest areas right up to your waters edge. We can suction up a fish that passes through the hose without going through a motor, and is returned into the water, so we're "fish friendly" with no noticeable fish kills. Suction Harvesting also allows for plant selectivity so that you can remove only the invasive aquatic vegetation and not the native.

Shoreline Reclamation – the shoreline of your water body is the most important area because it is where a bulk of the ecosystem is supported. Fish spawn in the shallow portions of your water and from there

the rest of the marine life flourishes. Frogs, turtles, and birds all feed off the shallow water and close proximity to the land surrounding the water so keeping this area open allows the ecosystem to survive and develop. Suction Harvesting can also be used for the removal of accumulated leaves, sticks and debris, which is an important part of any water body remediation, and is also powerful enough to remove zebra mussels from the bottom of your waterway.

STATS AND FACTS ABOUT THE AQUACLEANERS S.H.

Models – We are have three different models of the Aquacleaner machines that all have been through extensive field use in our service division and offer the most efficient, productive and easy to use Suction Harvesters created.

Home: This model is designed for individual or groups of waterfront homeowners who share common aquatic vegetation problems. It is very portable and easy to use and store.
Single engine, 4" suction line, air compressor, duel bagging system, on a 4' x 8' floating barge

Commercial: The machine that began it all in our service division is the perfect balance between productivity and portability. Twin engine, 5" or 6" suction line, air compressor, duel bagging system, on a 5' x 10' floating barge

Options – We offer a variety of options that can aid in the use and add productivity to your daily suction harvesting operations, and will be happy to custom build your accessories based on a better understanding of your individual water bodies issues.
Pump Engine Size – Larger engines can aid in the productivity of your machines as well as the length it will work.
Air compressor- a larger air compressor will allow two divers airs at deeper depths.
Refuge barge- this will allow you to stay in the water longer by giving you a place to store your bagged vegetation.
Suction hose – A longer hose will allow you to reach a larger circumference and get into deeper water.
Bagging configuration- offers you options that match your manpower and daily capacity goals.
Turbidity curtain- Contains turbid water & potential fragments while being compliant with states requirements

Industrial: The most aggressive suction harvester ever produced that offers a wide range of options designed to meet your lake management needs.
Motorized 28' Aluminum pontoon boat, 4 Pump engines, twin 5" suction lines, air compressor, and 3 filtration and bagging configurations.
Options: Boat Engine size, Pump engine size, Pontoon Boat size, Additional Hulls (increases buoyancy), Spuds (anchoring system), Turbidity Curtain outriggers, Pontoon Boat Refuge Barge with/without conveyer belt.

Capacity – There are several criteria that must be assed to determine the rate of progress (ROP) that you can achieve using our Aquacleaner S.H. It is important to understand the relationship between the times spent in any one spot versus the quantity of vegetation removed. Working the bottom more extensively takes more time but also may yield better results long term relative to the re growth. ROP varies from 200sq/hr to 600sq/hr

Type of plant: Rooting System dictates how fast we can remove this year's plant. Your goal is to get last years plants out as well which are beneath this years plants.
The type of bottom – Soft, silted in bottoms will make plant removal and it's rooting system easier to extract. Hard bottoms like clay or sand will require more suction to get to the rooting system of the plant.
The density of the plant both in how many plants are in a given box as well as how tall they are. More Biomass requires more time to go through a given area.
The Depth of the water is important because deeper water work will slow your rate of progress due to the logistics of moving around while under water and the size of the plants involved.
Define The Other Types of debris in the area to be cleaned. Leafs, stick rocks, zebra mussels, and larger timber must be gone through as part of a shoreline remediation and to maximize your use of the waterfront.

Training – U.W.S. offers a comprehensive training program with delivery of your machine as well as options for long-term use. We will assist in all aspects of your program including manpower, supplies, and insurance.

Regulatory Compliancy – Suction Harvesting for the removal of invasive aquatic vegetation has been equated to a form of dredging because of its potential for bottom disruption and as such requires knowledge and compliancy

with your states regulatory agencies. U.W.S. will secure all necessary clearances and permits (when required) from the appropriate agencies that have jurisdiction in your water body so that you can begin your suction-harvesting program. In many states permits are not required once an operational protocol has been established for you to follow.

References – Available upon request once we learn about your application and the level of information you are seeking







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