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## **The Aqua Cleaner DASH BOATS**



Twin – 5” Nozzles W/“Cinch Bulk Bags”



Twin – 5” Nozzles W/“Onion Bags”

**Introduction:** Aquacleaner Environmental is the leader in suction harvesting technology with over 12 years of experience manufacturing and performing service work with our equipment. Our large-lake DASH (diver assisted suction harvesting) Boats offer the most efficient machines that we can manufacture with twin pumps that allow multiple divers to fill our filtration bags with ease. We offer you a variety of choices in size, configuration and bagging options for 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 of your waterfront problems and is not a band-aid like chemicals, bottom barriers or weed harvesters.

### **Our Qualifications:**

- We wrote the protocol with the NYSDEC in 2006 which allows for its use without a permit.
- Helped educate various other states on use of this technology
- Extracting over 500 tons of aquatic vegetation in a season certainly qualifies us to teach you how to achieve the best results
- Our staff speaks regularly on this technology at various national & state conferences like NALMS

**How It Works:** Suction Harvesting is the most effective way of removing 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 bagging options we offer. The weeds and all the solids flow into the filtration bags at rates up to 1200gpm, while 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

composted or trucked offsite. 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 plants. It leaves no remains (floaters), can operate in the tightest areas, around boats and docks and right up to your waters edge. We rarely extract a fish, but if we do, it 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.

**Shoreline** – 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 OUR DASH BOATS**

**Boat Hulls** – Having the proper hull for your machine is very important for productivity because if your boat can't support enough weight, you will be constantly running back to shore to off load. We offer our boats in either aluminum or Marlex Plastic pontoons that have buoyancy ranges of over 6000lbs in 24' or 28'. All have been through extensive field use in our service division and offer the most efficient, productive and ease of use vessels that can be manufactured.

**Pumps** – Our machines are equipped with 23Hp "V-Twin" engines that power our high pressure water pumps and include an oil cooler, electric starter and large fuel tank, for ease of use and durability. Our pumps require manual priming and will be able to be used at half throttle with 50' of hose and still provide massive suction.

**Bagging System** - Managing a 1200gpm slurry of water and vegetation requires the proper filtration system on the boat that will provide you with the best means of separation without fragments escaping but you need to also have a system that allows for simple off-loading of the spoils on shore. We offer several bagging options from a triple bagger using our "onion bags" to our large capacity "cinch bags" so that you can match your manpower and daily capacity goals.

**Surface Air** – We use a commercial grade air compressor that is powerful enough to provide air to 4 divers while maintaining a full reserve tank. It has 2 air filters and can be configured to run from its own engine or the pumps

**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.

**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.

**Turbidity curtain**- Contains turbid water & potential fragments while being compliant with states requirements

**Harvesting Capacity** – There are several criteria that must be assessed to determine the rate of progress (ROP) that you can achieve using our Aquacleaner DASH. It is important to understand the relationship between the time 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** – A.E. 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.