

# big fish, big discovery

**Processing**  
SOLUTIONS FOR THE PROCESS INDUSTRIES

September 2010  
A GRAND VIEW MEDIA GROUP PUBLICATION

## How Big Fish Environmental Found Clean Water

For several years, local Michigan municipalities were over-loaded with septage disposal issues and it was difficult for private pumpers to offload as land-application of septage became illegal. So John Campbell, founder of Big Fish Environmental, and a 29-year veteran of septic tank pumping, started developing a unique and efficient septage receiving and treatment plant design.

Campbell reviewed several septage receiving units from other manufacturers before choosing the Honey Monster® Septage Receiving System from JWC Environmental in Costa Mesa, Calif. "The hair removal in the auger portion of the Honey Monster resulted in virtually no downstream clogging," said Campbell. "The screening ability also made our homogenizing process more consistent per slurry load."

Campbell provides consulting for pumpers interested in developing their own business running a receiving and treatment facility. By combining proprietary equipment as part of a treatment process, Campbell was able to develop a self-contained plant that can receive septage from the local municipality, private septage haulers, and other industrial producers. They all need to address waste processing.



In 2005, the first Big Fish Environmental facility was built in Charlevoix, Mich. "We put our process to the test and were receiving an average of 20,000 GPD waste from private septage haulers, local produce processors and municipal waste including fats, oils and grease," said Campbell. "We basically took and tested all the septage waste that no one else wanted to handle."

First, septage is received from pumper trucks by the Honey Monster and then flows into a two-compartment equalization tank. As part of this process, the Honey Monster's high removal rate of inorganic solids along with the homogenization of organics proved crucial in Big Fish meeting EPA specifications for 503 exceptional quality Class A biosolids.

The Honey Monster is an easy-to-install automated system. First, septage flows through the rock trap where heavy items fall out. Rags, plastics, debris and other solids are quickly shredded by the powerful Muffin Monster® grinder. The Auger Monster® screen removes, washes and compacts the solids, putting organics back into the waste stream, decreasing volume and reducing odor. The Auger's tilt and swivel feature allows easy access for inspections.

**weftec**  
the water quality event™

13

The first compartment of the equalization tank blends air and bacteria with the septage, creating a slurry which is dewatered in the second compartment. This slurry then passes through a series of mixing tanks for further aeration, bio-filtration, mixing and lime stabilization. Big Fish continues testing to maintain the correct methodology in mixing aerobic micro organisms for treating the incoming septage.

The last step is dewatering through a screwpress, producing pathogen free Class A biosolids and discharging effluent back to the municipal treatment plant for further processing. Campbell's ultimate goal is to produce 'drinkable' water.

Part of Big Fish's development process is achieving EPA Environmental Technology Verification (ETV) which is now in final approval stages. Biosolids produced at the Charlevoix plant are approved by the State of Michigan as EQ Class A reusable biosolids and are being distributed over agricultural fields.

With testing and design streamlined, Campbell is eager to install more septage receiving facilities throughout Michigan and neighboring states.

"We have several different design packages that can be customized to fit specific applications," Campbell explained.

These low-maintenance, small-footprint septage processing plants are a cost-effective alternative to land application, and the high screening and inorganic removal benefits of the Honey Monster are key fea-

tures of the Big Fish design.

To view these products live, stop by **Booth 4329** at the WEFTEC Show.

**JWC Environmental**  
800-331-2277, [www.jwce.com](http://www.jwce.com)  
Write In 504



**Big Fish**  
ENVIRONMENTAL

[www.BigFishEnvironmental.com](http://www.BigFishEnvironmental.com)