

Miami River Case Study

Putting a Fresh Face on the Miami River

Scavenger 2000™ Water Decontamination Vessel Goes Beyond Debris Collection and Improves Water Quality

Background

The Miami River is the historical heart of greater Miami and has been since the city was founded at the river's mouth. "Miami" is said to come from an Indian word meaning "sweet water." With the settlement of European traders, the river became the lifeblood of Miami's trade. Today, the river remains an economically critical artery of commerce and recreation, running 5.5 miles from Miami International Airport to Biscayne Bay. The Miami River's 32 private terminals handle more than \$4 billion in cargo a year, making it Florida's fifth largest seaport.

The Challenge

As Miami emerged as an urban center during the boom of the 1920's, the area's population exploded, and storm water and untreated sewage flowed into the river and Biscayne Bay. During World War II, the river became a manufacturing center for PT boats for the U.S. Navy and the river was further polluted by industrialization.

In the second half of this century, saltwater intrusion, disposal of trash and unwanted items into the river, chemical and oil seepage from the airport and hospitals, along with oil spills have further damaged this once pristine waterway.

In January 1998, the Miami River Study Commission issued a "call to action" urging a community-wide effort to clean up the river and bring it back to a cleaner state. The Miami River Commission (MRC) in conjunction with the City of Miami soon started to fulfill its mission, by uniting disparate interest groups along the river to act with common cause to restore the river, revive it as a public destination and attraction, and promote its role as a principal focus of trade and commerce. In one of its earliest attempts to improve the condition of the river, the MRC and City of Miami entered into an agreement in 2002 with a small entrepreneurial company for a demonstration project featuring the company's innovative new water decontamination vessel – the Scavenger2000™.

Part of the Solution

Following the enormous success of the Scavenger 2000 Pilot project, the City of Miami and MRC entered into a new service contract with Water Management Technologies in 2003 to use its one-of-a kind vessel, The Scavenger2000™ Decontamination Vessel, to continue cleaning the Miami River. This contract has been renewed over the years and is still in effect today. The Scavenger2000™ is part of the TMDL (Total Maximum Daily Load) program that permits the City of Miami to attain the mandated water quality standards regulated by the EPA (Environmental Protection Agency) of the United States.

The key to the Scavenger2000™ is an advanced water decontamination system that disinfects and revitalizes waters, ports and beach areas by directly aerating the water through their patented Oxy-Plus decontamination system. The Scavenger2000™ improves water quality by oxidizing and eliminating bacteria such as E-Coli, viruses, controlling algae growth, improving water clarity and eliminating odors all while raising DO levels and reducing BOD levels. A multi-purpose vessel, the Scavenger2000™ not only cleans and re-oxygenates water, its unique design also provides maximum maneuverability for bulk waste and debris collection, allowing it to navigate along rivers and shorelines picking up storm water debris and trash.

Results

Since 2003, the vessel has been scooping debris, oxidizing bacteria, and infusing oxygen as it patrols the water. From 2003 to today, tonnage of trash was removed, billions of gallons of water disinfected and billions of liters of oxygen introduced into area waters. In addition it has improved land values on the Miami River by cleaning up the Bayside water.

The Scavenger2000™ has proved to be successful and economical in cleaning up the Miami River and City of Miami Waterways.

Today thousands of Miami residents enjoy recreational activities on the river and in its surrounding parks.

For more information visit www.scavenger2000.com