

# SCAVENGER VESSEL

## TECHNICAL SPECIFICATIONS

### Technical data

LOA:	40 ft.
Beam:	8 ft.
Height (from water line):	10 ft.
Optional retractable Bimini Top	5 ft.
Width at bow, when jaws are open:	16 ft.
Draft:	4 ft.
Freeboard:	2 ft.
Gross weight:	12.5 tons
Main power plant:	marine diesel engine
Water canon pump:	1,250 U.S.G.P.M. at 100 psi
Fuel tank capacity:	120 - 150 US gal
Crew required:	1 operator
Oxygen Injection:	up to 600,000 l.p.h.
Decontamination rate:	up to 20,000 g.p.m.

### Boat Performance

Normal cruising speed:	6 knots
Maximum cruising speed:	8 knots
Working speed:	1-3 knots
Rotates in place:	360 degrees
Hours of operation between refueling:	35 hours

# Water Management Technologies Presents: THE SCAVENGER VESSELS



The Scavenger Vessel is the most effective de-pollution vessel available in the world today.

### Water Management Technologies, Inc.™

Water Management Technologies, Inc.™ holds the patent to the OxyPlus™ System, an advanced process that treats and revitalizes waterways by directly aerating the water with a combination of ozone and oxygen.

The 40-foot Scavenger Vessel is constructed from COR-TEN™ steel and built in accordance with internationally recognized marine vessel standards. It stands 10 feet tall from the water line, has 8-foot beam and weighs 12.5 tons. It is equipped with an opening bow and ballasting system and can be operated by one crewmember. The Scavenger Vessel can be easily transported by truck, train or ship.

## Your Solution to CLEAN WATER

A Revolutionary Approach to Water Regeneration

www.scavengervessel.com

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# Restoring Health and Clarity to Waterways

The contamination of our waterways by biological and chemical waste, floating debris and runoff is a growing concern worldwide. As a result of human activity, raw sewage, large amounts of nutrients like nitrogen, phosphorus and hydrocarbons are introduced into the water. These, in turn, allow harmful bacteria like E.coli, viruses, algae and insects to breed.

The Scavenger Vessel™ is the **most effective** pollution control and water maintenance vessel available in the world today. It was designed by U.S. based Water Management Technologies™ to clean and rejuvenate waterways **"In Situ"** such as lakes, rivers, harbors, and industrial waste water in order to promote healthy and safe environments.

The Scavenger Vessel™ with its Patented OxyPlus™ decontamination system improves water quality by reducing and eliminating bacteria and viruses, raising D.O. (Dissolved Oxygen) levels, controlling algae growth, improving water clarity and eliminating odors. A multi-purpose vessel, the Scavenger Vessel™ not only decontaminates and re-oxygenates water; its unique design also allows it to collect floating debris simultaneously, creating safe, healthy and more attractive public waterways.

## The Scavenger Vessel's OxyPlus™ Decontamination system has the following **BENEFITS:**

### IMPAIRED WATERS

- High bacteria levels
- Low Dissolved Oxygen Levels
- Elevated BOD or COD levels
- Unbalanced nutrients
- High algae count

### AREAS OF IMPACT

- Waterways / Canals
- Rivers
- Lakes
- Ports
- Harbors
- Agricultural reservoirs

### BIOLOGICAL

- Kills bacteria, parasites and microbes
- Destroys fecal coliforms
- Neutralizes viruses
- Raises DO levels in water
- Improves water quality overall

### PHYSICAL

- Improves water clarity by reducing turbidity and removing color
- Eliminates odors caused by sulfur, nitrogen, and organic materials
- Controls algae growth by removing algae food sources
- Eliminate the plume of nutrients left by surface debris removal

### CHEMICAL

- Reduces BOD and COD
- Oxidizes some pesticides, insecticides, herbicides and fungicides that are washed into the watershed

### OUR CUSTOMERS

- Government agencies
- Municipalities
- Private Industries
- Environmental Restoration entities
- Agriculture

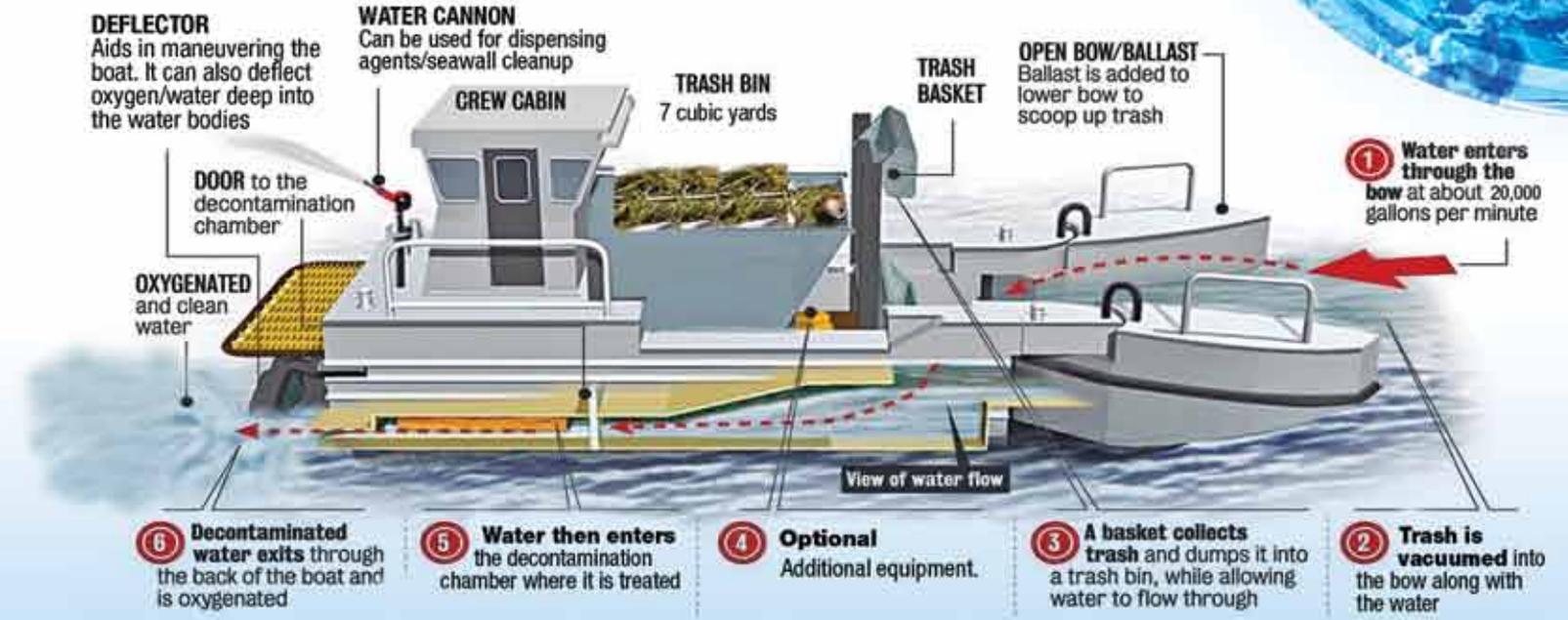


# CLEANING THE WATER

How the Scavenger Vessel's onboard OxyPlus™ water treatment system works:

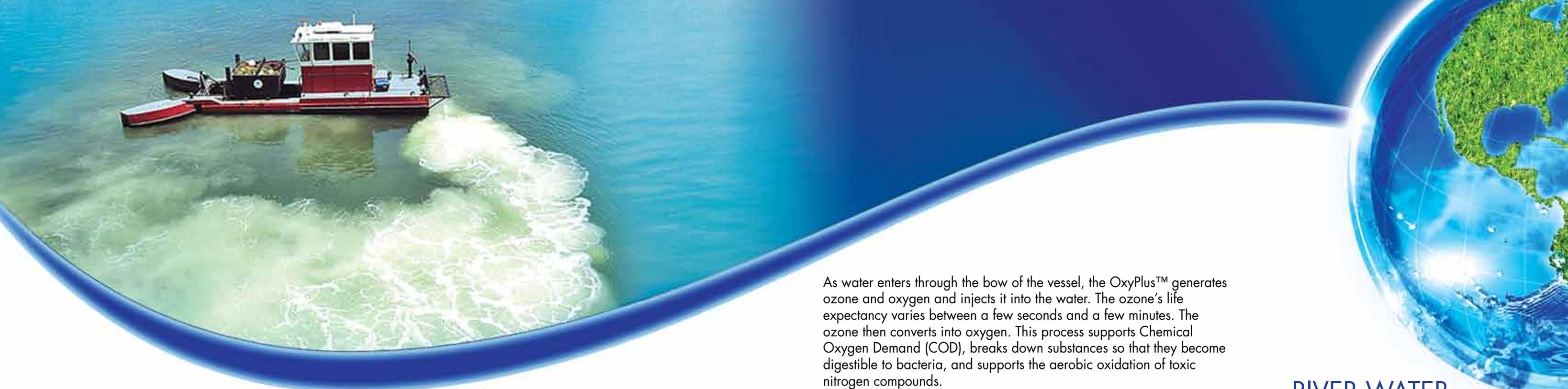
## How It Works

The key to the Scavenger Vessel is the advanced Patented OxyPlus™ water decontamination system that treats and revitalizes waterways by aerating the water with a combination of ozone and oxygen. In full operation mode, the vessel scoops up floating debris, destroys bacteria, and injects life-supporting oxygen in the water. This process restores the overall health in the water. The Scavenger Vessel in operation mode can decontaminate at a rate of up to 20,000 gallons of water per minute and inject up to 600,000 liters of oxygen per hour.



SOURCE: Water Management Technologies;

GRAPHIC/LYNN OCCHIUZZO



# Proven Technology

## OxyPlus™ Water Decontamination System

At the heart of the Scavenger Vessel is the OxyPlus™ advanced water decontamination system. When oxygen is injected into polluted water, the enrichment contributes directly to reducing contaminants suspended in the water. With the addition of ozone to the aeration process a very powerful yet environmentally safe disinfection occurs in the body of water being treated by the Scavenger Vessel™.

Ozone has been applied with great success in municipal sewer treatment processes worldwide because of its ability to disinfect water without leaving the harmful by-products left by chlorine. In fact, ozone has been found to be more than 100 times more powerful than chlorine in destroying E.coli bacteria.

As water enters through the bow of the vessel, the OxyPlus™ generates ozone and oxygen and injects it into the water. The ozone's life expectancy varies between a few seconds and a few minutes. The ozone then converts into oxygen. This process supports Chemical Oxygen Demand (COD), breaks down substances so that they become digestible to bacteria, and supports the aerobic oxidation of toxic nitrogen compounds.

By altering the surface charge, ozone enables suspended particles to coagulate and be easily removed. In addition to algae and improving water clarity, ozone effectively oxidizes some pesticides and some algae therefore improving water clarity. Lastly, it increases the dissolved oxygen content in the water, which has a rejuvenating effect. The Scavenger Vessel's decontamination rate is 1.2 million gallons of water per hour with an hourly oxygen injection rate of up to 600,000 liters. This increases the dissolved oxygen levels in the water, and reduces the number of toxins in the water.

**Nova Southeastern University's Oceanographic Center says:** "The Scavenger vessel's OxyPlus™ technology can significantly improve water quality. A single pass through the vessel's systems can **reduce up to 98% of bacteria** and coliform in the water, and reduce algae counts by half".

## RIVER WATER



Before and after water samples treated with our OxyPlus™ System.



## Debris Collector

The Scavenger Vessel features a retractable stainless steel trash basket, which is mounted on the front of the vessel. It picks up debris floating on the surface of the water, up to a depth of 2.5 ft. The basket's design, which resembles a comb or grate, is engineered to virtually eliminate any water turbulence during the suction operation. The weight capacity of this basket is approximately 2,500 lbs. The basket is emptied into a containment bin by means of a hydraulic system, which is operated from the main cabin. Continuous debris collection is ensured by a secondary grill that is automatically activated to keep debris from entering the channel while the basket is being emptied into the bin.

The containment bin has a capacity of 7 cubic yards and can effectively be emptied due to its bottom double folding doors activated by a lever.



## PICKING UP THE TRASH

As trash and water are funneled into the bow, a basket catches the debris and empties it into a large on-board containment bin.



## WATER IS FUNNELED INTO THE BOW

Vacuum water flow up to 20,000 gpm. Vacuum effect. The vessel does not have to run after debris.





## Effective Maneuverability

The Scavenger Vessel can make a 360-degree turn, in place, with the bow open and in recuperation mode. This maneuver can be done without interrupting the decontamination process, using the special rear deflector that is attached to the stern of the vessel. The Scavenger Vessel never has to interrupt its recovery systems.

## Transport

The Scavenger Vessel can be easily transported anywhere in the world.

## Water Cannon

The multipurpose water cannon on the Scavenger Vessel Can:

- Clean hard-to-reach areas, seawalls, or rocky shorelines;
- Be used as a dispenser for dispersing agents
- Fight Fires
- Be used as an auxiliary means of propulsion

Powered by an independent marine diesel engine, the water cannon is capable of developing a flow of 1250 gallons of water per minute, at a pressure of 100 psi.

