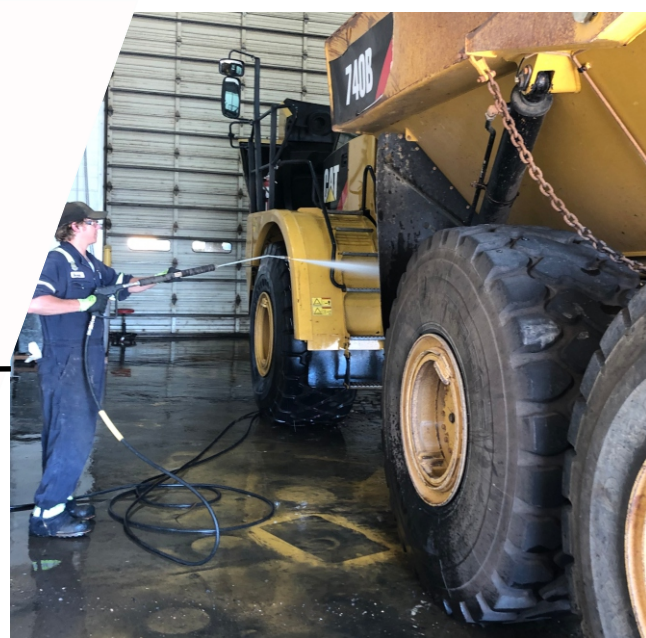




Equipment Rental Wastewater



Treating Wastewater from Washing Construction Rental Equipment

The Challenge

Pressure washing and water blasting contaminants off of construction equipment is necessary when equipment comes back from use in the field for servicing and routine maintenance of the equipment. The equipment can be laden with significant amounts of mud and oil & grease. It is extremely important to have a properly designed wash pad and water collection system to manage the volume of solids and oil & grease.

It is not uncommon for a large Bulldozer to have a yard or more of mud on it when returned from use in the field. When washing the diesel engine, significant amount of oil & grease are removed and enter the water being used to wash with. This water must be cleaned so it can either be recycled for reuse or discharged to sanitary sewer in compliance with discharge requirements.

The Solution

The Living Water Environmental V-CAT system is designed to break the emulsion of mud and oil & grease, thicken the solids and float the contaminants for automatic removal from the water.

The V-CAT system does not require any messy filters and treats both mud and oil & grease with one very simple process. LWE also excels at design of water collection design so it is easy to remove the accumulated mud and oil & grease. In heavy mud applications, LWE has design the best drive-down pit system on the market and in light solids applications, our baffled water collection system performs great for separation of light solids and oil & grease.



20 Gallon Per Minute V-CAT Recycle System



Pape Material Handling

We have tried many different types of wash water treatment technologies over the years and have found the LWE system to be one of the best technologies we have implemented. We've found the service and technical support to be the best in the business. The LWE wash water treatment system consistently provides clear, odor-free water for reuse.

If you are considering purchasing a wash water treatment system or need assistance with wash rack design, be sure to contact Living Water Environmental. **Doug Pennington – Environmental Manager**



Shipyard Wastewater



Treating Wastewater from Washing Marine Vessels and Bilge Water

The Challenge

Pressure washing the bottom of boats and ships, removes marine debris and anti-fouling paint. The water used in the washing process will literally turn to the color of the paint that is on the boat because the paint is soft and a small portion will be removed during cleaning process.

The anti-fouling paint is a copper based paint, so the wash water will be contaminated with significant amounts of copper. Copper cannot be released into the environment since it is deadly to aquatic life, so the wash water must be collected and treated to remove the paint, copper and marine debris.

Bilge water that is collected in the engine compartment must be removed when ship is docked. Bilge water may have high content of oil and other hydrocarbons. The oil and hydrocarbon must be removed prior to discharge to sanitary sewer.

The Solution

The Living Water Environmental M-CAT system is designed to clean marine based wash water and bilge water. We also have designed chemistry to remove heavy metals from water. The system simply breaks the emulsion of paint and oil & grease, thickens the coagulated contaminants and floats the contaminants to the surface of the water.

Independent Lab Data from Shipyard After Treatment

Contaminant	Raw	Treated Water	Reduction %
TSS	325 mg/L	8 mg/L	97.5%
Copper	17 mg/L	0.12 mg/L	99.3%
Zinc	13 mg/L	0.34 mg/L	97.4%
Oil & Grease	38.7 mg/L	ND <5 mg/L	>87.0%

