



Vessel Wash Wastewater Treatment System Profile

Facility Information

Dillon's Creek Marina

243 Lake Avenue

Island Heights, NJ 08732

Contact: Brian Hall

Telephone: 732-270-8541

Fax: 732-270-3454

E-mail: dillonscreek@comcast.net

Dillon's Creek Marina is a large, full-service marina that prepares approximately 200 boats annually for winter storage. Boats stored for the winter range from 16'-50' in length with an average length of 32'. Use of the vessel wash wastewater treatment system typically begins in April and ends in December. However, the majority of the washing takes place between November and December. Approximately 50% of the hulls washed are painted with a soft paint (ablativ) and the remaining 50% are typically painted with a hard paint (uniepox).

Treatment System Information

Dillon's Creek Marina uses a closed-loop vessel wash wastewater treatment system that treats and then recycles the wastewater. An asphalt pad captures the wash wastewater and pre-treatment begins within a catch basin that consists of a two-chambered cement tank; the main section is 300 gallons and flows into a 175 gallon section. The catch basin is located near the bulkhead end of the pad. The smaller section contains a pump raised approximately 1.5" from the bottom which transfers the wastewater to the treatment system located in a heated shed. A metal plate covers the catch basin when not in use and redirects storm water to the surface water when not washing vessels. Stormwater enters an existing settling pit prior to discharge to the surface water. An 8' x 12' shed heated with a portable electric oil heater houses additional pretreatment and treatment equipment. Inside the shed the water is pumped through the treatment system.

Continued on reverse

Dillon's Creek Marina considered two different electrocoagulation units from separate manufacturers, ultimately choosing OilTrap EP5-SD electrocoagulation system installed by the manufacturer. Dillon's Creek Marina's goal is acquiring permission to discharge the treated water into the sanitary sewer for disposal; however, the system is capable of recycling the water. The system can treat an estimated 5 gallons of waste wash water per minute.

Pros and Cons of System

High cost for pre-treatment and treatment system. Requires approximately 10' x 15' dedicated storage space that must be heated. Design provides sufficient pre-treatment to remove solid matter. Hull wash wastewater is treated to a sufficient level for recycling, but may not meet requirements for discharge to a sanitary sewer line without additional upgrades. Approval is pending upon final test results.

Estimated Cost

Pre-treatment (Pads, filters, screens, tanks, catch basin, etc.):

Approximately \$7500 to cover the cost of modifying an existing asphalt pad with piping, screens and catch basin. An additional \$4,500 for the shed, electric and other miscellaneous items. Approximately \$22,000 for the purchase of a manufactured wash wastewater electrocoagulation treatment unit. Cost will vary depending on model and manufacturer, and pretreatment needs.

Treatment System: cost of chemicals, replaceable electric element and other materials is not available at this time.

Maintenance (Labor, filters, etc.)

Annual maintenance cost can not be determined at this time.

This fact sheet is the result of work sponsored by New Jersey Sea Grant with funds from the National Oceanic and Atmospheric Administration (NOAA) Office of Sea Grant, U.S. Department of Commerce, under NOAA grant number #NA06OAR417086 and New Jersey Marine Sciences Consortium/New Jersey Sea Grant with funds appropriated by the State of New Jersey. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of New Jersey Sea Grant or the U.S Department of Commerce. NJSG-08-697.



Najarian
Associates

Engineers • Planners • Scientists • Surveyors