



## State of New Jersey

### DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Nonpoint Pollution Control  
Division of Water Quality  
401 E. State Street, P.O. Box 029  
Trenton, NJ 08625-0418  
Telephone: (609) 633-7021  
Fax: (609) 984-2147

**JON S. CORZINE**  
*Governor*

**MARK N. MAURIELLO**  
*Acting Commissioner*

February 25, 2009  
Joel Garbon, Product Manager  
Jellyfish Filter  
Imbrium Systems  
3811 S.W. Corbett Avenue  
Portland, OR 97239

Re: Interim Certification  
Jellyfish Filter by Imbrium Systems Corporation

**Issuance Date:** February 25, 2009  
**Expiration Date:** February 24, 2011

Dear Mr. Garbon:

The Stormwater Management rules at N.J.A.C. 7:8-5.5(b) and 5.7(c) allow the use of manufactured treatment devices (MTDs) for compliance with the design and performance standards at N.J.A.C. 7:8-5 if the pollutant removal rates have been verified by New Jersey Corporation for Advanced Technology (NJCAT) and have been certified by the New Jersey Department of Environmental Protection (NJDEP).

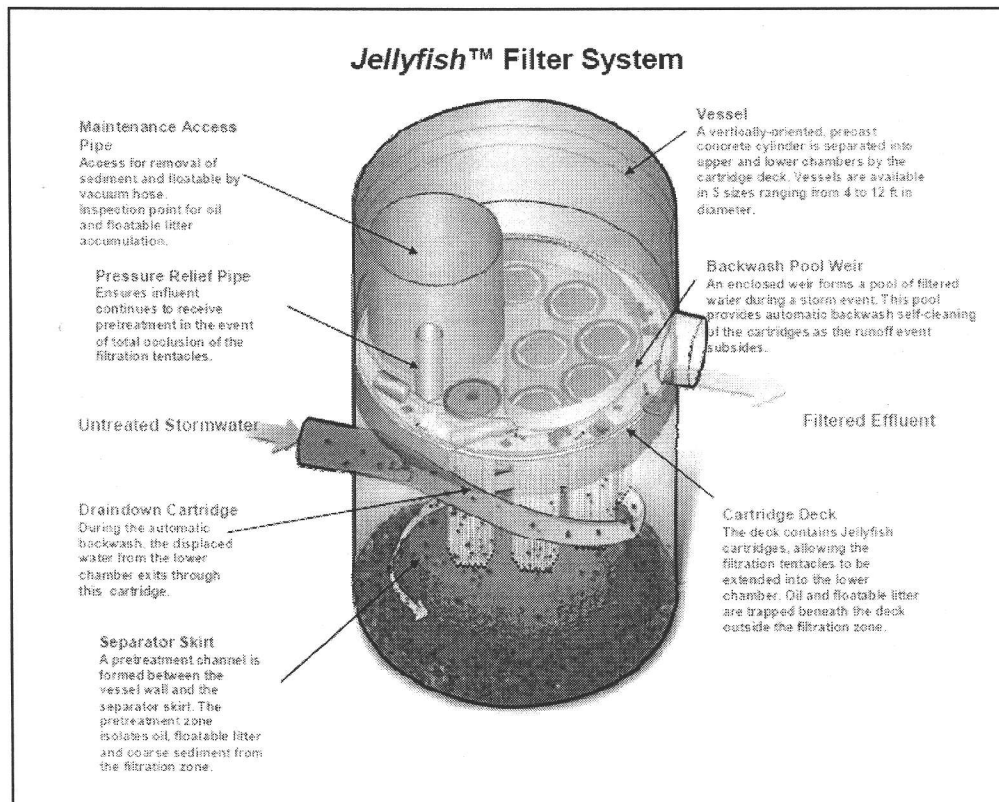
The Jellyfish filter system is configured as a subsurface manhole, rectangular vault, or catch basin structure that has been fitted with a pre-manufactured insert. The insert serves as a cartridge deck for placement of Jellyfish filter cartridges; provides a separator skirt below deck to facilitate removal of floatables and sediment; provides a large diameter pipe above deck to facilitate inspection and maintenance; and contains a backwash pool weir to facilitate self-cleaning of the filter cartridges.

The insert deck divides the structure into an upper and lower chamber. Treatment occurs in the lower chamber, which contains a permanent pool of water. Flow from the inlet pipe enters the lower chamber tangentially, with water directed around and under the separator skirt. Within the separator skirt are suspended the Jellyfish filtration tentacles. Ninety-one 54-inch long filtration tentacles are attached to each 12-inch diameter cartridge head.

Pretreated water infiltrates the filtration tentacles, flows upward, and filtered water discharges above deck into a backwash pool defined by a 6-inch high weir. During active runoff events, filtered water overflows the backwash pool onto the top of the deck and out the outlet pipe.

The invert of the outlet pipe is coincident with the top of the deck. When a runoff event subsides, water in the backwash pool drains down through the filtration tentacles to dislodge some of the accumulated sediment from the tentacles and thereby restore tentacle porosity. Water displaced from the permanent pool below deck flows to the top of the deck through the draindown cartridge(s) and out the outlet pipe. The flow rate of the standard cartridges is controlled by an orifice in each cartridge head, with the draindown cartridge(s) controlled to a much lower flow rate by an appropriately smaller orifice per site specific requirements. The system is designed to function with an 18-inch head differential from the top of the upstream diversion manhole weir to the invert of the Jellyfish filter system outlet pipe. The system will have standing water to the elevation of the outlet pipe invert at all times.

### System schematic and component functions



**The NJDEP certifies the use of the Imbrium Systems Corporation Jellyfish filter system at a TSS removal rate of 80%, subject to the following conditions:**

1. The Jellyfish system is designed according to the NJ Water Quality Design Storm in N.J.A.C. 7:8-5.5.
2. The peak inflow of the water quality design storm is limited to 0.11 cfs and the maximum inflow area per cartridge is limited to 0.17 acres of impervious area.
3. The bottom of the Jellyfish tentacles is a minimum of 2 feet above the bottom of the vault. Each cartridge must have a minimum of 26.2 cf of wet volume.
4. The Jellyfish system is certified as an off-line system only.
5. The use of the Jellyfish System cannot be used in series with a settling chamber (such as a hydrodynamic separator) or a media filter (such as a sand filter), to achieve an enhanced removal rate for total suspended solids (TSS) removal under N.J.A.C. 7:8-5.5.
6. The maintenance plan for sites using this device shall incorporate, at a minimum, the maintenance requirements for the Jellyfish system shown in Appendix A below.

This letter issues an interim certification for two years from the date of issuance. An addition extension will be considered by the Department only after the final field testing data has been received.

Additional information regarding the implementation of the Stormwater Management rules N.J.A.C. 7:8 are available at [www.njstormwater.org](http://www.njstormwater.org). If you have any questions regarding the above information, please contact Sandra Blick, Supervisor, Stormwater Management Unit, at (609) 633-7021

Sincerely,



Barry Chalofsky, P.P., Chief  
Bureau of Nonpoint Pollution Control

Enclosure

c: Rhea Weinberg Brekke, NJCAT  
Tom Micai, NJDEP  
Marybeth Brenner, NJDEP