

New Patented Technology to Protect and Improve Water Quality in Lakes

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Abstract

New technology, called the Surface Water Protection System (SWPS)¹, developed by Eco Boom, Inc. of New York, can be an effective tool to help solve pollution problems associated with stormwater runoff. A certain fabric geotextile mat, when fabricated and deployed to specifications, can control Biodegradable Organic Materials (BOM) and cause the depletion of most microorganisms, releasing odorless gas. The fabric filter material has small openings in sufficient number to permit passage of a predetermined volume of water per unit of time, but small enough to block particulate biodegradable organic matter of 20 microns or larger. The SWPS filter curtain prevents passage of the particulate matter and non-organic turbidity-causing particles. As a result of the increased microbial density, the microorganisms or bacteria decompose and consume the BOM. The quality of the water, as it subsequently passes through the filter curtain and enters the main body of water, is nearly devoid of the microorganisms and particulates. This rapid rate of consumption does not occur naturally in large bodies of water due to the lack of microbial density. When there is no discharge into the sedimentation basin, the water is calm except for any wind-induced wave motion. Following a rain event, colloids will be in suspension. It is theorized these minute particles will have Brownian motion due to thermal variations. The colloids will collide and coagulate with an increase in mass, and aggregate. These aggregates subsequently fall out of the water column and become sediment, which also fails to pass through the filter curtain.

¹ Patent issued 2-12-2002 “Method and Apparatus to Improve Water Quality in Substantially Enclosed Bodies of Water” by Raymond Bauer.

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