



Aqua-Filter™ Maintenance

Proper maintenance of the Aqua-Filter™ system is needed for the unit to operate efficiently. Typically, inspection of the Aqua-Swirl™ pretreatment chamber and the filtration chamber should be performed on a quarterly basis. Information gathered during the first year of service can be used to create a maintenance plan appropriate for the site.

Aqua-Swirl™ Pretreatment Chamber

The Aqua-Swirl™ is easily inspected from the surface. Floating debris and free oil can be observed along with the captured stormwater by removing the manhole cover. Sediment depth is determined by lowering a measuring device (e.g. stadia rod) to the top of the sediment pile.



Floatable debris in the Aqua-Swirl™

When the sediment pile is within 30 to 36 inches from the water surface, cleaning is required. Typically, a vacuum truck is used to first remove the captured floating materials from the water's surface before lowering the vac-hose into the accumulated sediment pile for its removal.

For more detail regarding the inspection and maintenance of the pretreatment chamber, please see the previous Section on the Aqua-Swirl™ Inspection and Maintenance.

Aqua-Filter™ Filtration Chamber

The filter media is also easily observed from the surface. Manhole covers are spaced over the entire filtration bed to provide easy access. AquaShield™ provides a customized manhole cover with our logo to make it easy for maintenance crews to locate the system in the field.

Initially, the filter media is light tan or white in color. When the media color turns black, it has become saturated due to pollutant loading and requires replacement. Call toll free (888) 344-9044 to order replacement filters.



A permanent ladder provides access to filter chamber

An entry riser provides direct access into the filtration chamber with a permanent ladder welded into the downstream section of the chamber. This additional access allows for the vacuuming of any standing water and an unobstructed walkway to the downstream side of the filter bed.

Replacement of the filtration media typically requires entry into the filtration chamber by one of a two-member maintenance crew. Confined space entry precautions should be taken by the maintenance crew when removing and replacing the filters.

The spent filter containers are normally retrieved from the filter chamber by a second crewmember at the surface through the multiple 30-inch risers spaced across the top of the filter bed. In addition, the filter containers can be accessed directly from within the filtration chamber via a vertical removable panel at the rear of the filter bed.

The center row of the filtration bed has been fitted with one inch thick removable fiberglass grate panels. This allows for a six-foot tall walkway down the center of the chamber, providing easy access to the full length of the filtration chamber.

Rows of removable side grates are positioned on both sides of the center row. After the center grate panel has been removed, the filter media can be lifted from these side grate panels.

After the removable sides have been loaded with replacement filter containers, the removable center grates are repositioned and locked in place. New filters are installed in a criss-cross manner to prevent short-circuiting.



Grate panels cover the filter media

Filter Media Disposal

The filter media does not allow captured contaminants to be released once absorbed into the material. This is a unique quality of the Aqua-Filter™, allowing superior performance under extreme conditions.

The spent filters and sediment generally do not require any special treatment or handling for disposal. The filtration media can be recycled as fuel material, or sent to a subtitle D landfill. AquaShield™ recommends that all materials removed during the maintenance process be handled and disposed of in accordance with local and state requirements.



Spent filter media can be recycled or sent to a landfill

An "Inspection and Maintenance Manual" is provided with each Aqua-Filter™ system for more detailed maintenance procedures. On the following page, you will find a sample Inspection Data Sheet.



Aqua-Filter™ Inspection and Maintenance Data Sheet

Inspector: _____ Date: _____
Location: _____ Time: _____

INSPECTION

General Site Condition

Visible Evidence of Spills/ Releases (oils, grease, fuels, paints, chemicals):

Visible Evidence of Heavy Sediment Deposition:

Swirl

Condition of Swirl: _____

Condition of Baffle: _____

Distance to Sediment: _____

Distance to Water: _____

Note: If sediment is less than 30 inches below water surface, sediment should be removed.

Filtration Chamber

Condition of Filter Trays: _____

Condition of Filtration Chamber: _____

Color of Filter Media: _____

Note: If filter media is dark brown to black, it should be replaced.

CONTAMINATION REMOVAL DATA (if required)

Floating Oil and Debris

Volume: _____

Description: _____

Elapsed Removal Time: _____

Sediment

Volume: _____

Description: _____

Elapsed Removal Time: _____

Filter Media

Volume: _____

Description: _____

Elapsed Removal Time: _____