WWETCO FlexFilter™
High-Rate Compressible Media Filter

ISO 9001 CERTIFIED

Simplified Wet Weather and Tertiary Treatment.

WesTech
Simplified CSO Treatment

Over 750 communities with combined sewer systems are challenged by heavy rains or snowmelt which can overwhelm the capacity of their local treatment facility. The result of these events is excess wastewater pollutants being discharged directly into nearby streams, rivers, or other waterbodies.

The WWETCO FlexFilter™ can provide a significant tool to combat these pollutants from combined sewer overflows (CSOs).

**WWETCO FlexFilter Advantages**

- Over 90% TSS Removal
- Gravity-Fed, Passive Design
- No Moving Parts
- Minimal Backwash
- No Startup Conditioning
- Simple to Operate
- Dual-Purpose, Dry-Weather Tertiary Treatment

Influent Channel
Dirty Water
Waste Channel

Backwash Troughs and Media Containment Plates
Compressible Media
Compression Bladder
WWETCO FlexFilter Applications

- CSO/SSO
- Storm Water Runoff
- Primary Treatment
- Tertiary Treatment
- Raw Water Pretreatment
- Industrial Water Pretreatment
- Enhanced Primary Treatment (Biological)

World’s Largest Compressible Media Filter
Springfield Ohio WWTP
100 MGD WWETCO FlexFilter

The FlexFilter will contain nearly 20,000 cubic feet of compressible media and will be used 50 to 60 times a year as part of a high-rate treatment (HRT) facility to treat CSO events. This process will extend the performance capability of the Springfield Wastewater Treatment Plant so that CSO flows will not have to be directed to bypass the facility, enhancing the environmental health of the nearby Mad River.

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Operating Data

**CSO Load Treated Discharge**
- Better than secondary treatment criteria

**Pollutant Concentration, mg/L**
- Pollutant Mass, lbs

**91% TSS Mass Reduction**
- 83% CBOD₅ Mass Reduction

**TSS**
- 37,177
- 21,231
- 3,233
- 3,565

**CBOD₅**
- 91
- 52
- 17
- 18
Dual Purpose for CSO/SSO and Tertiary Treatment

The FlexFilter delivers the functionality to handle the sporadic nature of storm events. The versatility of the filter allows it to be applied as the tertiary treatment following the secondary process during normal operation. During a storm event, a portion or all of the tertiary filter can be automatically converted into a storm flow filter. As the storm surge subsides, the filter switches back to tertiary treatment for continued use.

Superior Backwash

In addition to its ability to handle higher solids loadings, the FlexFilter™ has a backwash system with air scour and specialized backwash troughs to minimize the volume of backwash water needed.

Retrofit for Traveling Bridge Clarifiers

Aging traveling bridge clarifiers experience frequent problems such as bridge derailment, sand migration, and permanent biological fouling. Using your existing basin, the WWETCO FlexFilter is an ideal technology to upgrade your filtration process.

Pilot Program & Rental Equipment

WWETCO offers multiple pilot and rental options. Whether you need a trial of the equipment for your specific application or you are renting a filter to clean a water source, contact WesTech for additional information.

WWETCO FlexFlow™

The FlexFlow Control Valve includes a self-adjusting membrane used to attenuate the flow. The design of the valve allows the passage of a predetermined flow rate. As the remaining liquid is contained, the hydrostatic pressure is applied to the membrane, allowing for the gradual increase in flows to pass. The valve can be installed in the outlet of:

- Detention Ponds
- Storm Catchments
- Treatment Plant Inlets and Streams
- Storm Water Basin Controls

The non-clogging design of the FlexFlow Control Valve eliminates the need for routine cleaning or maintenance.

Represented by:

WesTech

Tel: 801.265.1000
westtech-inc.com
info@westtech-inc.com
Salt Lake City, Utah, USA

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