

Attachment 1

Manufactured Treatment Device (MTD) Registration

1. **Manufactured Treatment Device Name:** The Stormwater Management StormFilter® (StormFilter)

2. **Company Name:** Contech Engineered Solutions LLC

Corporate headquarters

Mailing Address: 9025 Centre Pointe Drive
City: West Chester
State: Ohio Zip: 45069

Contact Name (to whom questions should be addressed):

For technical matters: Derek Berg

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*For Project Specific Questions Please Contact Contech's Baltimore Maryland Office:
605 Global Way, Suite 113
Linthicum, MD 21090
Ph.: 410-740-8490*

3. **Technology**

Specific size/capacity of MTD assessed (include units): *The StormFilter monitored during the Lolo Pass TAPE study consisted on a single 18" tall cartridge with Phosphosorb media.*

Range of drainage areas served by MTD (acres): *The StormFilter can treat a wide range of drainage areas. Media cartridges are housed in vaults or manholes and the appropriate number of cartridges is selected based on the water quality volume/flow for the site.*

Include sizing chart or describe sizing criteria: *The StormFilter tested at Lolo Pass with PhosphoSorb media was sized for a specific operating of 1.67gpm/ft² of filter media surface area.*

Intended application: on-line or offline: *Typically Offline*

Media used (if applicable): *PhosphoSorb*

4. Warranty Information (describe, or provide web address):

Contech provides a limited 1-year warrantee for all of its stormwater treatment solutions

5. Treatment Type

- ☐ Hydrodynamic Structure
- ☒ Filtering Structure
- ☐ Manufactured Bioretention System
- Provide Infiltration Rate (in/hr):
- ☐ Other (describe):

6. Water Quality Treatment Mechanisms (check all that apply)

- ☒ Sedimentation/settling
- ☐ Infiltration
- ☒ Filtration (specify filter media)
- ☒ Adsorption/cation exchange
- ☐ Chelating/precipitation
- ☐ Chemical treatment
- ☐ Biological uptake
- ☐ Other (describe):

7. Performance Testing and Certification (check all that apply):

Performance Claim (include removal efficiencies for treated pollutants, flow criteria, drainage area): *The StormFilter with PhosphoSorb media sized at a specific operating rate of 1.67gpm/ft² of filter media surface area achieved greater than 70% removal of total phosphorus during a long term TAPE field study.*

Specific size/Capacity of MTD assessed: *1.67gpm/ft² of media surface area.*

Has the MTD been "approved" by an established granting agency, e.g. New Jersey Department of Environmental Protection (NJDEP) , Washington State Department of Ecology, etc.

☐ No

X **Yes**; For each approval, indicate (1) the granting agency, (2) use level if awarded (3) the protocol version under which performance testing occurred (if applicable), and (4) the date of award, and attach award letter.

WADOE CULD for Phosphorus and Basic Treatment. TAPE field data submitted and GULD currently pending for both Phosphorus and Basic Treatment.

http://www.ecy.wa.gov/programs/wq/stormwater/newtech/use_designations/STORMFILTER_phosphosorbCONTECHcult.pdf

Was an established testing protocol followed?

☐ **No**

X **Yes**, (1) Provide name of testing protocol followed, (2) list any protocol deviations:

Testing was performed per the TAPE field protocol. Full report attached.

8. MTD History:

How long has this specific model/design been on the market? *>15years*

List no more than three locations where the assessed model size(s) has/have been installed in Virginia. If applicable, provide permitting authority. If known, provide latitude & longitude:

1. *Digital Loudoun, Loudoun County, VA – 3 SFs total installed, LARGE box culvert, 8'x11' peak diversion w/ curb inlet top, 8'x20' peak diversion*
2. *Army Navy Country Club, Arlington, VA – 8'x16' offline vault*
3. *Fairfield Inn & Suites, Chincoteague Island, VA – 8'x12' and 6'x12' linear grate vaults*

List no more than three locations where the assessed model size(s) has/have been installed outside of Virginia. If applicable, provide permitting authority. If known, provide latitude & longitude:

1. *H Street - Street Car, Washington, DC – (2) box culvert vaults*
2. *Mid Pike Plaza – Rockville, MD – 8 manhole SFs*
3. *Maya Angelou Public Charter School, Washington, DC – box culvert SF*

9. Maintenance:

What is the generic inspection and maintenance plan/procedure? (attach necessary documents): <http://www.conteches.com/products/stormwater-management/treatment/stormwater-management-stormfilter.aspx#1993310-technical-info>

Is there a maintenance track record/history that can be documented?

☐ No, no track record.

X Yes, track record exists; (provide maintenance track record, location, and sizing of three to five MTDs installed in Virginia [preferred] or elsewhere):

Maintenance records typically live with the owners of specific sites. There are numerous StormFilters in place in Virginia that have been in use for more than 10 years and have been successfully maintained multiple times.

Recognizing that maintenance is an integral function of the MTD, provide the following: amount of runoff treated, the water quality of the runoff, and what is the expected maintenance frequency for this MTD in Virginia, per year?

The StormFilter is designed with a target maintenance frequency of at least 12 months. Occasionally maintenance is required more frequently when sites produce heavy pollutant loads. Regular inspection is the best way to establish the site specific maintenance frequency.

Total life expectancy of MTD when properly operated in Virginia and, if relevant, life expectancy of media:

With regular maintenance the StormFilter is expected to remain functional for the life of the concrete housing. The refillable media cartridges typically must be swapped out every 1-2 years.

For media or amendments functioning based on cation exchange or adsorption, how long will the media last before breakthrough (indicator capacity is nearly reached) occurs?

Both column scale and full scale laboratory testing was conducted to establish the reactive capacity of the media. Long term field testing has since demonstrated that the adsorption capacity of the media remains viable for at least year in the field.

For media or amendments functioning based on cation exchange or adsorption, how has the longevity of the media or amendments been quantified prior to breakthrough (attach necessary performance data or documents)?

Both column scale and full scale laboratory testing was conducted to establish the reactive capacity of the media. Long term field testing has since demonstrated that the adsorption capacity of the media remains viable for at least year in the field.

Is the maintenance procedure and/or are materials/components proprietary?

X Yes, proprietary: *Media is proprietary.*

☐ No, not proprietary

Maintenance complexity (check all that apply):

X Confined space training required for maintenance

X Liquid pumping and transportation

Specify method:

X Solids removal and disposal

Specify method:

Other noteworthy maintenance parameter (describe):

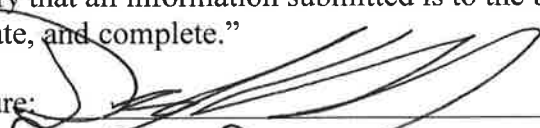
10. Comments

Include any additional explanations or comments:

11. Certification

Signed by the company president or responsible officer of the organization:

~~"I certify that all information submitted is to the best of my knowledge and belief true, accurate, and complete."~~

Signature: 

Name: Derek Berg

Title: Regional Regulatory Manager

Date: 7/29/2014

NOTE: All information submitted to the department will be made publically accessible to all interested parties. This MTD registration form will be posted on the Virginia Stormwater BMP Clearinghouse website.