

TRT-2: Cartridge Media Filter

Cartridge media filters (CMFs) are manufactured devices that consist of a series of modular filters packed with engineered media that can be contained in a catch basin, manhole, or vault that provide treatment through filtration and sedimentation. The manhole or vault may be divided into multiple chambers where the first chamber acts as a pre-settling basin for removal of coarse sediment while another chamber acts as the filter bay and houses the filter cartridges. A variety of media types are available from various manufacturers which can target pollutants of concern.



**Feasibility Screening Considerations**

- Not applicable

**Opportunity Criteria**

- Intended for use when retention and biotreatment options are infeasible.
- Recommended for drainage area with limited available surface area or where surface BMPs would restrict uses.
- For drainage areas with significant areas of non-stabilized soil, permanent soil stabilization must be achieved before cartridge media filters are installed and put on line to minimize risk of clogging.
- Depending on the number of cartridges, maintenance events can have long durations. Care should be exercised in siting these facilities so that maintenance events will not significantly disrupt businesses or traffic.

**OC-Specific Design Criteria and Considerations**

- Cartridge media filter BMP vendors should be consulted regarding design and specifications.
- Filter media should be selected to target pollutants of concern. A combination of media may be appropriate to remove a variety of pollutants.
- If CMF are integrated with a vault for equalization, the system should be designed to completely drain the vault within 96 hours of storm event or otherwise protect against standing water and mosquito breeding concerns.

**Computing Sizing Criteria for Cartridge Media Filters**

The required design flowrate should be calculated based on the [Capture Efficiency Method for Flow-based BMPs](#) (See [Appendix III.3.3](#)).

**Additional References for Design Guidance**

- Los Angeles County Stormwater BMP Design and Maintenance Manual, Chapter 9: [http://dpw.lacounty.gov/DES/design\\_manuals/StormwaterBMPDesignandMaintenance.pdf](http://dpw.lacounty.gov/DES/design_manuals/StormwaterBMPDesignandMaintenance.pdf)

- SMC LID Manual:  
[http://www.lowimpactdevelopment.org/guest75/pub/All\\_Projects/SoCal\\_LID\\_Manual/SoCalLID\\_Manual\\_FINAL\\_040910.pdf](http://www.lowimpactdevelopment.org/guest75/pub/All_Projects/SoCal_LID_Manual/SoCalLID_Manual_FINAL_040910.pdf)
- Western Washington Stormwater Management Manual, Volume V, Chapter 12:  
<http://www.ecy.wa.gov/pubs/0510033.pdf>