



ENVIRONMENTAL SERVICES CITY OF PORTLAND

working for clean rivers



Approved Manufactured Stormwater Treatment Technologies

The City of Portland approved the following manufactured stormwater treatment technologies under the submission and review requirements of the *Stormwater Management Manual (SWMM)*. Designers may use these technologies to meet Portland's water quality treatment standard under the Performance Approach, as outlined in the manual. The listed technologies have been through Washington's Department of Ecology (DOE) Technology Assessment Protocol (TAPE)¹ and achieved General Use Level Designation (GULD) for Basic Treatment/TSS removal. On the basis of that designation and associated performance data, Portland reviewed and approved the technologies for compliance with its own water quality treatment standard. The City of Portland list includes conditions of approval such as allowable uses and configuration specifications.

Designers should determine which technology best fits their site conditions, project goals, and long-term maintenance requirements. Not all technologies will be appropriate for every site or project.

For reference, DOE TAPE categorizes each technology by treatment type², which describes its effectiveness at removing specific pollutants. The treatment types are defined below:

- **Basic Treatment:** *Intended to achieve a goal of 80% removal of total suspended solids for an influent concentration range of 100 mg/L to 200 mg/L. For influent concentrations less than 100 mg/L, the effluent goal is 20 mg/L total suspended solids. For influent concentrations greater than 200 mg/L, a higher treatment goal is intended.*
- **Phosphorous Treatment:** *Intended to achieve a goal of 50% total phosphorus removal for an influent concentration range of 0.1 to 0.5 mg/L as well as achieving basic treatment.*
- **Enhanced Treatment:** *Intended to achieve a higher level of treatment than basic treatment. Enhanced treatment is targeted at removing dissolved metals.*
- **Pretreatment:** *Intended to achieve 50% removal of fine (50 micron-mean size) and 80% removal of coarse (125-micron-mean size) total suspended solids for influent concentrations greater than 100 mg/L, but less than 200 mg/L. For influent concentrations less than 100 mg/L, the facilities are intended to achieve effluent goals of 50 mg/L of fine and 20 mg/L of coarse total suspended solids.*
- **Oil Treatment:** *Intended to achieve the goals of no ongoing or recurring visible sheen and a daily average total petroleum hydrocarbon concentration no greater than 10 mg/L with a maximum of 15 mg/L for discrete (grab) samples.*

¹ <http://www.ecy.wa.gov/programs/wq/stormwater/newtech/index.html>

² <http://www.ecy.wa.gov/programs/wq/stormwater/newtech/technologies.html>

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Manufacturer	Device Name	DOE Treatment Type ³	Approval Expiration	Conditions
CONTECH Engineered Solutions, LLC	Filtterra Bioretention Systems	Basic Treatment Enhanced Treatment Phosphorus Treatment Oil Treatment	7/9/2018	See Conditions of Approval.
CONTECH Engineered Solutions, LLC	StormFilter (using ZPG Filter Media)	Basic Treatment	10/10/2020	See Conditions of Approval Also, see below for “Phase-in of the new sizing standard for the Contech StormFilter”
Modular Wetland Systems	MWS Linear	Basic Treatment Enhanced Treatment Phosphorus Treatment	6/21/2019	See Conditions of Approval.
Oldcastle Stormwater Solutions	PerkFilter™ Media Filtration Device (using ZPC Filter Media)	Basic Treatment Phosphorus Treatment	11/28/2019	See Conditions of Approval

October 10, 2017. Phase-in of the new sizing standard for the Contech StormFilter

- BES will require all projects/all permits to incorporate the new sizing standard starting January 1st, 2018.
- Projects approved to use the old sizing standard will be vested in that standard if the “in date” on the permit is prior to January 1st, 2018.
- A prior Early Assistance/Pre-Application Conference alone does not vest a project in the old sizing standard.

³ The Portland SWMM regulates only for TSS removal, which is met by the WA DOE basic treatment standard. Other treatment types for which a device has received a WA DOE designation(s) are included for reference only.