

APPENDIX E

**APPROVED PROPRIETARY
STORMWATER TREATMENT TECHNOLOGIES**

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APPROVED PROPRIETARY STORMWATER TREATMENT TECHNOLOGIES

City of Eugene

List Currently Approved as of November, 2013

OVERVIEW

This document is a list of proprietary stormwater treatment technologies (devices) approved for use to meet the pollution reduction requirements of the City of Eugene Stormwater Management Manual.

USE LEVEL DESIGNATIONS

Approved proprietary stormwater treatment technologies are those devices approved to meet the target treatment goal of **Basic Treatment or Pre Treatment** at the **General Use Level Designation (GULD)** as defined by the 2011 Washington State Department of Ecology Technology Assessment Protocol – Ecology (TAPE). Devices shall be sized using the treatment flow rates defined below. The sizing the requirements are based upon flow rates identified in each proprietary stormwater treatment technologies GULD decision from the Washington State DOE.

SUBMISSION OF ALTERNATE TECHNOLOGIES

Manufacturers or designers wishing to submit proprietary stormwater treatment technologies for approval shall submit those technologies to the Washington State Department of Ecology. The City of Eugene does not test pollution reduction treatment technologies. Proprietary manufactured stormwater treatment technologies are approved for use within the City of Eugene based on Washington Department of Ecology (WashDOE) General Use Level Designation (GULD). Please see the Washington Department of Ecology website for more information on submission guidelines for new technologies:

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

APPROVED TECHNOLOGIES FOR USE ON PRIVATE SYSTEMS

All units shall be sized using the Presumptive Method. Devices shall be sized using the treatment flows rates for each model below. Bypass flow rates shall be per the manufacturer's specifications.

Americast Filterra® System

Filterra® stormwater treatment systems shall be sized using a filter hydraulic conductivity of 35.46 inches per hour.

Aqua Shield Aqua-Swirl®

Aqua-Swirl® stormwater treatment systems shall be sized per manufactures maximum water quality design flow rates.

BaySaver Technologies, Inc. BayFilter®

- BayFilter Cartridge (BFC) is limited to 30 GPM (0.067 CFS) per cartridge (43 sf filter area)
- Enhanced Media Cartridge (EMC) is limited to 45 GPM (0.1 CFS) per cartridge for 30-inch diameter cartridges (90 sf filter area) and 75 GPM (0.17 CFS) per cartridge for 39 inch diameter cartridges (150 sf filter area).
- Media combinations or the BayFilter cartridges are limited to Silica Sand, Perlite, Zeolite and Activated Alumina.

Contech Engineered Solutions Media Filtration System (MFS)

- Filter media shall be Perlite
- The 12 inch filter cartridge is limited to a maximum water quality flow rate of 4.9 GPM per cartridge
- The 22 inch tall cartridge is limited to a maximum water quality flow rate of 9.0 GPM per cartridge

Contech Engineered Solutions Stormfilter using ZPG media

- The 12 inch filter cartridge is limited to a maximum water quality flow rate of 5.0 GPM per cartridge
- The 18 inch filter cartridge is limited to a maximum water quality flow rate of 7.5 GPM per cartridge
- The 27 inch filter cartridge is limited to a maximum water quality flow rate of 11.3 GPM per cartridge

Contech Engineered Solutions CDS® Stormwater Treatment System

CDS® stormwater treatment systems shall be sized per manufactures maximum water quality design flow rates.

Hydro International Downstream Defender

Downstream Defender® stormwater treatment systems shall be sized per manufactures Maximum Treatment flow Rates for 50 microns (MFTR-50).

Imbrium Stormceptor®

Stormceptor STC® stormwater treatment systems shall be sized in accordance with the following Table.

Imbrium Stormceptor®	
Model	Maximum Water quality treatment flow rate (CFS)
STC 450i	0.32
STC 900	0.64
STC 1200	0.64
STC 1800	0.64
STC 2400	1.06
STC 3600	1.06
STC 4800	1.77
STC 6000	1.77
STC 7200	2.48
STC 11000	3.53
STC 13000	3.53
STC 16000	4.95

Kristar Enterprises Flogard Perk Filter®

- Filter media shall be zeolite-perlite-carbon (ZPC) filter media as specified by Kristar
- The 12 inch filter cartridge is limited to a maximum water quality flow rate of 6.8 GPM per cartridge
- The 18 inch tall cartridge is limited to a maximum water quality flow rate of 10.2 GPM per cartridge

Royal Environmental Systems ecoStrom/ecoStorm plus Treatment Train

The ecostrom *plus* system must be used in conjunction with an upstream ecoStrom unit as a treatment train. ecoStrom *plus* units shall use the standard concrete filter. ecoStrom *plus* units shall be sized at a maximum water quality design flow rate of 180 GPM (0.40 CFS) per 5 foot diameter filter (19.63 square foot surface area)

The upstream ecoStrom unit shall be sized in accordance with the following Table.

Royal Environmental System ecoStorm		
Model	Diameter	Maximum Water quality treatment flow rate GPM (CFS)
0.5	4	377 (0.84)
0.75	5	588 (1.31)
1	6	848 (1.89)
1.5	7	1,153 (2.57)
2	8	1,508 (3.36)
3	10	2,356 (5.25)
4	12	3,393 (7.57)

APPROVED TECHNOLOGIES FOR USE IN THE PUBLIC RIGHT-OF-WAY

All units shall be sized using the Presumptive Method. Devices shall be sized using the minimum water quality treatment flows rates for each model below. All bypass flow rates shall be per the manufacturer's specifications.

Aquashield Aqua-Swirl®

Aqua-Swirl stormwater treatment systems shall be sized per manufactures maximum water quality design flow rates.

Contech CDS® System

CDS® stormwater treatment systems shall be sized per manufactures maximum water quality design flow rates.

Hydro International Downstream Defender®

Downstream Defender® stormwater treatment systems shall be sized per manufactures Maximum Treatment flow Rates for 50 microns (MFTR-50).

Imbrium Systems Stormceptor STC®

Stormceptor STC® stormwater treatment systems shall be sized in accordance with the following Table.

Imbrium Stormceptor®	
Model	Maximum Water quality treatment flow rate (CFS)
STC 450i	0.32
STC 900	0.64
STC 1200	0.64
STC 1800	0.64
STC 2400	1.06
STC 3600	1.06
STC 4800	1.77
STC 6000	1.77
STC 7200	2.48
STC 11000	3.53
STC 13000	3.53
STC 16000	4.95