



Policy 25 List A - Sizing Guidelines

The following BMP's are approvable for use in the City of Knoxville. Each BMP may be approved to operate up to the flow rates listed below under normal conditions. The Engineering Director may require additional BMP's to be used in special circumstances (e.g. underground detention). The SPAP flow rate does not imply that the BMP will be acceptable at every site. Site characteristics will determine if a BMP is acceptable to be used. Please contact the Engineering Department for more detailed information pertaining to each listed BMP. This list is limited to the manufacturers who applied for approval based on the requirements stated in Policy 25 of the Land Development Manual.

AquaShield

AquaSwirl

Model	SPAP Flow (cfs)*	First Flush Flow (cfs)	Bypass - 10yr flow (cfs)
AS-2	1.09	0.29	+
AS-3	1.85	0.56	+
AS-4	3.16	1.1	+
AS-5	4.37	1.6	+
AS-6	6.3	2.6	+
AS-7	8.57	3.8	+
AS-8	11.2	5.3	+
AS-9	14.17	7.2	+
AS-10	17.5	9.3	+
AS-12	25.2	14.7	+

+ Defined by diameter & slope of outlet pipe

* may not be acceptable at every site.

AquaFilter

Model (# of rows)	SPAP Flow (cfs)*	First Flush Flow (cfs)	Bypass - 10yr flow (cfs)
1	0.44	0.44	**
2	0.88	0.88	**
3	1.32	1.32	**
4	1.76	1.76	**
5	2.2	2.2	**
6	2.64	2.64	**
7	3.08	3.08	**
8	3.52	3.52	**
9	3.96	3.96	**
10	4.4	4.4	**
11	4.84	4.84	**
12	5.28	5.28	**
13	5.72	5.72	**
14	6.16	6.16	**
15	6.6	6.6	**
16	7.04	7.04	**

* may not be acceptable at every site.

** Must be used offline



Baysaver

BaySeparator

Model	SPAP Flow (cfs)*	First Flush Flow (cfs)	Bypass -10yr flow (cfs)
.5K	0.8	0.30	6.8
1K	1.1	0.41	7.6
3K	3.3	1.2	23
5K	6.8	2.5	48
10K	12.3	4.6	83

* may not be acceptable at every site.

Contech

CDS

Model	SPAP Flow (cfs)*	First Flush Flow (cfs)	Bypass -10yr flow (cfs)
CDS 2015-4-C	0.7	0.63	10
CDS 2015-5-C	0.7	0.63	14
CDS 2020-5-C	1.1	0.99	14
CDS 2025-5-C	1.6	1.4	14
CDS 3020-6-C	2	1.8	20
CDS 3025-6-C	2.4	2.2	20
CDS 3030-6-C	3	2.7	20
CDS 3035-6-C	3.8	3.4	20
CDS 4030-8-C	4.5	4.1	30
CDS 4040-8-C	6	5.4	30
CDS 4045-8-C	7.5	6.8	30
CDS 5640-10-C	9	8.1	50
CDS 5653-10-C	14	12.6	50
CDS 5668-10-C	19	17.1	50
CDS 5678-10-C	25	22.5	50
CDS 3020-6-D	2	1.8	**
CDS 3030-6-D	3	2.7	**
CDS 3035-6-D	3.8	3.4	**
CDS 4030-8-D	4.5	4.1	**
CDS 4040-8-D	6	5.4	**
CDS 4045-8-D	7.5	6.8	**
CDS 5640-8-D	9	8.1	**
CDS 5653-8-D	14	12.6	**
CDS 5668-8-D	19	17.1	**
CDS 5678-8-D	25	22.5	**
CDS 10060-DV	30	27.0	**
CDS 10080-DV	50	45.0	**
CDS 100100-DV	64	57.6	**
CDS 150134-DC	148	133.2	**
CDS 200164-DC	270	243.0	**
CDS 240160-DC	300	270.0	**

* may not be acceptable at every site.

** Must be used offline



CrystalStream Technologies

CrystalClean Separator

Model	SPAP Flow (cfs)*	First Flush Flow (cfs)	Bypass - 10yr flow (cfs)**
646	1.4	0.5	8.4
846	1.9	0.7	11.2
856	2.3	0.9	14.0
866	2.8	1.1	18.9
956	2.6	1.0	17.5
1056	2.9	1.1	21.0
1246	2.8	1.1	16.8
1266	4.2	1.6	33.6
1686	7.4	2.8	44.8
1856	5.2	2.0	32.2
2056	5.8	2.2	35.0
2466	8.4	3.2	50.4

* may not be acceptable at every site.

** with piped internal bypass option

Hydro International

Downstream Defender

Model	SPAP Flow (cfs)*	First Flush Flow (cfs)	Bypass - 10yr flow (cfs)
4	1.1	0.55	3
6	3.8	1.5	8
8	9	3.1	15
10	17.5	5.4	25

* may not be acceptable at every site.

First Defense

Model	SPAP Flow (cfs)*	First Flush Flow (cfs)	Bypass - 10yr flow (cfs)
4ft	0.7	0.33	6.0
6ft	2.2	0.91	18

* may not be acceptable at every site.

UpFlow Filter

Model	SPAP Flow (cfs)*	First Flush Flow (cfs)	Bypass - 10yr flow (cfs)
1 Ring	0.33	0.33	6
2 Ring	0.66	0.66	12
3 Ring	1	1	18

* may not be acceptable at every site.



Kristar

Flowgard Dual Vortex

Model	SPAP Flow (cfs)*	First Flush Flow (cfs)	Bypass - 10yr flow (cfs)
DVS-36	0.5	0.22	4
DVS-48	1.25	0.45	9
DVS-60	2.5	0.79	16
DVS-72	4.25	1.2	27
DVS-84	6.5	1.8	40
DVS-96	9.5	2.6	57
DVS-120	16.8	4.5	99
DVS-144	26.4	7.0	154

* may not be acceptable at every site.

Flowgard Perk Filter

Cartridge Size	SPAP Flow per Cartridge (cfs)*	First Flush Flow per Cartridge (cfs)	Bypass - 10yr flow (cfs)
12"	0.026	0.026	#
18"	0.04	0.04	#

* may not be acceptable at every site.

based on vault size and number of cartridges

Suntree

NSBB

Model	SPAP Flow (cfs)*	First Flush Flow (cfs)	Bypass - 10yr flow (cfs)
2x4x60	1	0.4	2
3x8x84	3	1.3	5
4x8x84	8	1.8	12
6x12x84	24	4.0	46
8x16x96	40	7.1	75

* may not be acceptable at every site.