

5.5 Composting Toilets

Revision: October 5, 2004

Table 5-5 lists composting toilets currently certified by DEQ.

Table 5-5. Composting toilets certified by DEQ.

Recycle/Reuse and Water Conservation Devices (NSF STD 41)	Treatment System	Model	Notes	Certification Date
Advanced Composting Systems	Composting toilets	ACS 200	CSA certified	8/94
BIOLET INTL	Composting toilets	BioLet XL	—	6/92
Biological Mediation Systems, Inc.	Composting toilets	Devap 2000	Not certified by NSF	12/95
Clivus Multrum, Inc.	Composting toilets	08 / 08 M-12 / M-15 M-18 / M-22 M-25 / M-28 M-32 / M-35	—	2/98
Composting Toilet Systems	Composting toilets	CTS-410 CTS 710, CTS 1010, CTS 904	—	6/93
EcoTech Batch Composting Toilet, Carousel	Composting toilets	Model 80 A	—	12/97
Sancor Industries, LTD	Composting toilets	Waterless self-contained Waterless remote	CSA certified	7/94
Sun-Mar Corp.	Composting toilets	Sun-Mar- Excel	—	6/93

Notes: National Sanitary Foundation (NSF); CSA International Group (CSA)

5.6 Incinerating Toilets

Revision: December 30, 2010

Table 5-6 shows incinerating toilets currently certified by DEQ.

Table 5-6. Incinerating toilets certified by DEQ.

Incinerating Toilets	Model	Notes	Certification Date
SWSLOO, Inc. 2005 FM 1704 Elgin, TX 78621-5522 Phone: (866) 797-3566 (ELOO) E-mail: info@swsloo.com Website: www.swsloo.com	THE ENVIRO LOO® 2010 Standard THE ENVIRO LOO® 2040 Standard	Solar and Wind Evaporative Toilet	2010
Global Inventive Industries, Inc. P.O. Box 3752 Costa Mesa, CA 92628 1-800-ECOJOHN (714-568-1077) GII, Inc. 17150 Newhope St. Ste. 707 Fountain Valley, CA 92708	ECOJOHN SR	Gas-fired	2007
Research Products/Blankenship Incinolet (800) 527-5551	CF (120v) TR (208v, 240v) RV (120v) WB (120v 208v, 240v)	120 V or 240 V Marine	2001
Storburn (519) 442-4731	60K	Gas-fired	1993

5.7 Gravelless Trench Components

Revision: May 21, 2015

Table 5-7 shows the components of gravelless trenches, along with their certification date. Table 5-8 provides trench and product width-to-rating correlation.

Table 5-7. Gravelless trench components.

Gravelless Drainfield Systems	Chambers, Bundled or Large Diameter Pipe	Model	Sizing Factor (%)	Rating (ft ² /ft)	Unit Dimensions	Certification Date
Advanced Drainage Systems	Lg. dia. pipe	SB-2 (Ø8 in.)	25	1.33	20 ft rolls	9/82
		SB-2 (Ø10 in.)	25	1.33	20 ft rolls	
Eljen Corporation	Bundled module	HB ^{b, e}	25	4.00	36 x 24 x 7 in.	6/09
GSF Geotextile Sand Filter		Type B. ^{b, f}	25	4.00	36 x 48 x 7 in.	6/09
Infiltrator Water Technologies, LLC Advanced Drainage Systems ^a Bio-Diffuser Chambers ^a Hancor ^a	Chamber	Quick4 Standard	25	4.00	34 x 48 x 12 in.	7/05
		Quick4 Plus Standard	25	4.00	34 x 48 x 12 in.	6/09
		Quick4 Plus Standard LP	25	4.00	34 x 48 x 8 in.	6/09
		Quick4 Equalizer 36	25	2.67	22.8 x 48 x 10 in.	7/05
		Arc 36	25	4.00	34.5 x 60 x 13 in.	1/06
		Arc 36 LP	25	4.00	33.5 x 60 x 8 in.	12/14
		Standard 1100BD	25	4.00	34 x 76 x 11 in.	12/92
		High capacity 1400BD	25	4.00	34 x 76 x 14 in.	12/92
	EPS pipe	EZflow 1201P ^d and 1201P-GEO ^{c, d}	25	1.33	Ø12 x 60 in. Ø 12 x 120 in.	2/04
		EZflow 1202H ^e and 1202H-GEO ^{c, e}	25	2.67	Ø 24 x 60 in. Ø 12 x 120 in.	2/04
		EZ flow 1203H ^f and 1203H-GEO ^{c, f}	25	4.00	Ø 24 x 60 in. Ø 12 x 120 in.	10/07

Gravelless Drainfield Systems	Chambers, Bundled or Large Diameter Pipe	Model	Sizing Factor (%)	Rating (ft ² /ft)	Unit Dimensions	Certification Date
Plastic Tubing Industries, Inc. Multi-Pipe Rock Replacement Distribution System	Bundled pipe	9-pipe system	25	1.33	10 ft lengths	5/98
		11-pipe system	25	1.33	10 ft lengths	5/98
		13-pipe system	25	1.33	10 ft lengths	5/98
Prinsco, Inc.	Lg. dia. pipe	Goldline GLP (Ø8 in.)	25	1.33	10 and 20 ft lengths	12/95
		Goldline GLP (Ø10 in.)	25	1.33	10 and 20 ft lengths	

Note: Expanded polystyrene (EPS)

- a. Infiltrator Water Technologies, LLC. acquired the Arc, Hancor, and Bio-Diffuser product lines from Advanced Drainage Systems, Inc. Product markings may change to reflect new ownership.
- b. GSF system design includes 12 inches of modified ASTM C-33 sand at trench bottom.
- c. Geo suffix indicates product contains geotextile fabric inside the mesh. Geotextile should be oriented on top to limit soil intrusion.
- d. In 1-foot wide trench
- e. In 2-foot wide trench
- f. In 3-foot wide trench

Table 5-8. Trench and product width-to-rating correlation.(The measured width of the product must be at least 90% of the design trench width.)

Trench Width (inches)(feet)	Product Measured Width must be at least (inches)	Rating = Design Trench Width divided by 0.75 ft ² /lineal foot
36 (3.0)	32.4	4.00
30 (2.5)	27.0	3.33
24 (2.0)	21.6	2.67
18 (1.5)	16.2	2.00
12 (1.0)	10.8	1.33

5.8 Pump Vaults

Revision: February 6, 2014

Table 5-9 shows septic tank pump vaults certified by DEQ.

Table 5-9. Septic tank pump vaults certified by DEQ.

Pump Vault Manufacturer	Model #	Unit Dimensions	Certification Date	NSF Certification
Concentric Systems	PF-1645 series	16 in. dia. pump filter x 45, 50, 55, 60 in. tall	10/7/97	
	PF1445-FI series	14 in. dia. pump filter x 45, 50, 55, 60 in. tall	10/7/97	
	EF210, EF210-D	10 in. diameter case, 2 parallel EF210 filters	10/7/97	
Northwest Cascade, Inc.	Disk/Screen Effluent Filter	50 x 18 in. adjust filter stand length, six 1/8 in. screens	6/5/00	
		40 x 18 in. adjust filter stand length, six 1/8 in. screens	6/5/00	
Orenco Systems, Inc. 814 Airway Avenue Sutherlin, OR 97479 (800) 348-9843	PVU Series	Biotube pump vault	6/12/02	
	SV Series	Screened pump vault	12/13/99	
	OSI 12000	12 in. diameter x 48 in. tall	3/87	
Zabel Wastewater Systems	FPV-100	15 in. diameter filter pump vault, 36 or 48 in. tall (dosing chamber only)	5/19/98	
Zoeller Pump Co.	P/N 170-0101	Filter and pump chamber 15-3/8 in. dia. x 34 in. tall	10/31/02	
	P/N 170-0126	Filter and pump chamber 17-9/16 in. dia. x 55-3/4 in. tall, field fitted for openings Does not include packages with pumps rated at >30 GPM.	10/31/02	

5.9 Septic Tank Effluent Filters

Revision: July 28, 2008

Table 5-10 shows septic tank effluent filters currently certified by DEQ.

Table 5-10. Septic tank effluent filters certified by DEQ.

Effluent Filter	Model #	Unit Dimensions	Septic Tank Liquid Depth	Approval Date	NSF Certification
Bio Weir Filters, Inc. 3 Milton Ave. Newnan, GA 30263 (770) 301-6603	D/F SC/9	—	—	—	11/3/03
Bowco Industries 5486 S.E. International Way Portland, OR 97222 (888) 232-9991	EF-235	Total overall height 27.5 in. Filter height 25 in. Total overall diameter 4.35 in. Filter diameter 4.00 in.	Fits 4 in SDR-35 or Schedule 40 outlet tees Flow rate up to 1,500 GPD	7/28/08	6/2/04
Norweco 220 Republic Street Norwalk, OH 44857-1196 (419) 668-4471	BK 2000	Separate settling/retention basin, 2 ft o.d. x 6 ft 4-1/2 in.	Not applicable	10/18/99	5/6/02
Northwest Cascade, Inc. 16207 Meridian Puyallup, WA 98373 (800) 444-2371	Effluent Filter	24 x 18 in.	Adjust filter stand length	6/5/00	—
Orenco Systems, Inc. 814 Airway Avenue Sutherlin, OR 97479 (800) 348-9843	FT Series FT j Series FT i Series	Biotube Effluent Filters Biotube (jr) Effluent Filters 4 in. dia x 18 in. Biotube Insert Effluent Filters	Order-to-fit tank Up to 45 in. Fits in existing baffle	12/13/99 12/13/99 12/13/99	—

Effluent Filter	Model #	Unit Dimensions	Septic Tank Liquid Depth	Approval Date	NSF Certification
Polylock, Inc. 173 Church Street Yalesville, CT 06492 (800) 234-3119	PL-122 PL-68	4.25 x 4.25 x 12.5 in. (depth) 4.2 x 14.4 in. (depth)	Up to 31.25 in. Fits in existing baffle	10/21/99	6/6/00 12/9/03
Premier Tech 2000 ITEE 1 Avenue Premier Rivière-Du-Loup, Quebec G5R 6C1 Canada (418) 867-8883	EFT-80	—	—	—	11/03/03
Tuf-Tite Inc. 500 Capital Drive Lake Zurich, IL 60047 (800) 382-7009	EF-4 / EF-4 Combo EF-6 / EF-6 Combo	4 in. diameter for vented tees (1/16 in. filtration) 6 in. diameter x 14 in. high (1/16 in. filtration)	Fits in existing baffle 35 in. liquid depth. Flow rate up to 1,500 gallons per day	8/22/02 7/23/12	5/6/02 9/03
Zabel Wastewater Systems 6244 Old LaGrange Road Crestwood, KY 40014 (800) 221-5742	A100 A300 A1800	11.4 in. diameter x 16 in. high (residential, 1/16 in.) 11.4 in. diameter x 16 in. high (commercial, 1/32 in.) 4 in. diameter for vented tees (1/16 in. filtration)	Variable adjusts w/extension Variable adjusts w/extension Fits existing baffled tank	4/21/88 5/19/98 3/24/94	6/6/00 6/6/00 6/6/00
Zoeller Pump Co. 3649 Cane Run Road Louisville, KY 40211 (502) 778-2731	P/N 170-0078	4 in. diameter for vented tees (1/16 in. filtration)	Fits in existing baffle	8/22/02	5/6/02

Note: gallons per day (GPD)

5.10 Pipe Materials for Specified Uses

Revision: April 18, 2013

Table 5-11 shows pipe materials for specified uses.

Table 5-11. Pipe materials for specified uses.

Pipe Material and Specification ^{a,b}		Function			
		Tank to Dosing Chamber	Tanks to Drainfield ^{c,d}	Gravity Drainfield ^{c,d}	Pressure Distribution System
ABS Sch. 40 ^e	ASTM D2661	X	X	X	X
	ASTM F628	X	X	X	X
PVC Sch. 40	ASTM F891-10	X	X	X	X
	ASTM D3034 ^f	X	X	X	
PVC	ASTM D2729			X	
	ASTM D2241	X	X	X	X
	AWWA C900	X	X	X	X
	ASTM D2665	X	X	X	
	ASTM D1785	X	X	X	X
PE	AWWA C906	X	X	X	X
	ASTM F810 ^g		X	X	
	ASTM F405 ^h			X	

Notes: polyvinyl chloride (PVC); acrylonitrile-butadiene-styrene (ABS); polyethylene (PE); American Society for Testing and Materials (ASTM); American Water Works Association (AWWA)

a. Or equivalent materials as specified by ASTM or AWWA.

b. See State of Idaho Division of Building Safety, Plumbing Bureau for requirements regarding approved building sewer lines between the structure and septic tank.

c. Specified in section 3.2.2 of the *Technical Guidance Manual for Individual and Subsurface Sewage Disposal Systems* (TGM).

d. Must use ASTM D3034 or equivalent as specified in section 3.2.3 of the TGM. ASTM D3033 piping was previously approved for use spanning the tank to dosing chamber, tank to drainfield, and in the drainfield.

e. ABS schedule 40 or piping material of equal or greater strength. Required by IDAPA 58.01.03.007.21.a.

f. Excavation must be compacted with fill material to 90% standard proctor density, with a minimum of 12 inches of cover material. Required by IDAPA 58.01.03.007.02.b.

g. Smooth wall high-density polyethylene (HDPE), white suitable for effluent and drainfield piping.

h. Corrugated HDPE, black with stripe, flexible, suitable for drainfield piping.

5.11 Vault Toilets

Revision: May 29, 2014

See Table 5-12 for a list of vault toilets.

Table 5-12. Vault toilets.

Vault Manufacturer	Vault Volume (gallons)	Vault Description	Effective date (month/day/year)
CXT Precast Concrete Products, Inc. 3808 N. Sullivan Rd., Bldg. 7 Spokane, WA 99216	1,000	Concrete, one-piece, vault toilet tank, building structure integral with vault lid	5/30/02
Missoula Concrete Construction 8012 Deschamps Ln. Missoula, MT 59808 (406) 549-9682	1,000	Concrete, one-piece, vault toilet tank, building structure integral with vault lid	7/11/02
Park and Restroom Structures, Inc. P.O. Box 13280 Spokane Valley, WA 99213-3280	1,200	Concrete, one-piece, vault toilet tank, building structure integral with vault lid	6/1/09

5.12 Drainfield Remediation Components

Revision: May 21, 2015

Table 5-13 provides a list of drainfield remediation components.

Table 5-13. Drainfield remediation components.

Manufacturer and Distributor	Model and Remediation Type	Certification	Installation	Requirements
Bio-Microbics® www.biomicrobics.com	RetroFAST®—PR™ —0.150 —0.250 —0.375 Aerobic	NSF®/ANSI Standard #40 Verification letter	—Complex installer —Factory authorized	—Manufacturer’s checklist —Warranty —Operation and maintenance instructions
Alternative Wastewater Systems, LLC 15780 Racetrack Dr., Caldwell, Idaho 83706 (208) 453-9230 www.alternativewastewater.com				
Knight Treatment Systems, Inc. www.knighttreatmentsystems.com	White Knight™ WK-40 WK-78 Microbial Inoculation Generator (MIG)	—Section 4.7 Experimental Systems (TGM) —Idaho Professional Engineer	—Complex installer —Factory authorized	—Manufacturer’s checklist —Warranty —Operation and maintenance instructions
Wachusett Environmental Lew Reed, PE P.O. Box 129, Holden, Massachusetts 01520 (774) 535-1274 (866) 307- 4282 (fax)				
Infiltrator® Water Technologies, LLC www.aquaworx.com	Aquaworx Remediator™ Aerobic Bacteria Generator (ABG)	—IAPMO IGC 180-2003 —Licensing agreement through Pirana™	—Complex installer —Factory authorized	—Manufacturer’s checklist —Warranty —Operation and maintenance instructions
Mathew S. Gibbs P.O. Box 1275, Sandpoint, Idaho 83864 (800) 221-4436 (860) 577-7001 (fax) mgibbs@infiltratorsystems.net				
SludgeHammer® Group Ltd. www.sludgehammer.net	SludgeHammer® —S-46 —S-86 Aerobic Bacteria Generator (ABG)	—IAPMO IGC 180-2003 —Section 4.7 Experimental Systems (TGM) —Idaho Professional Engineer	—Complex installer —Factory authorized	—Manufacturer’s checklist —No warranty —Operation and maintenance instructions
Ken Morse Northwest Distributor P.O. Box 1771, Olympia, WA 98507 (360) 923-1080 Ken@netseptic.com				