

## 5.4 Extended Treatment Package Systems

Revision: ~~May 21~~ August 20, 2015

Table 5-3 lists extended treatment package systems ~~certified~~ approved by DEQ for provisional use. Table 5-4 lists extended treatment package systems approved by DEQ for general use. Provisional use approval requires that manufacturers follow specific operation, maintenance, and monitoring protocols to obtain general use approval (see section 1.4.2.2.1). General use approval allows manufacturers ETPS units to be installed following specific operation and maintenance protocols (see section 1.4.2.2.2).

**Table 5-3. Extended treatment package systems ~~certified~~ approved by DEQ for provisional use.**

<u>Manufacturer and Model</u> <u>Aerobic Treatment Device (Std 40)</u>	<u>Treatment Limit (GPD)</u> <u>Gallons per day</u>	<u>Third Party Standards (TPS) or Experimental BOD<sub>5</sub> Removal</u>	<u>Total Suspended Solids Removal</u>	<u>Operation, Maintenance, and Monitoring Provider</u> <u>Trench Size</u>	<u>Certification Approval Date</u>
A-Aerobic-1, LLC A-Aerobic-1 Class I	500	<u>TPS</u> <u>Ave. 21 mg/L</u>	<u>Ave. 26 mg/L</u>	<u>Service Provider and Third Party Tester</u> <u>Intermittent sand filter drainfield</u>	10/14/02
Advanced Septic Treatment System				<u>Service Provider and Third Party Tester</u> <u>Intermittent sand filter drainfield</u>	
TRD-1000-500 Class I	500				
TRD-1000-600 Class I	600				
TRD-1000-700 Class I	700	<u>—</u>	<u>—</u>		11/3/03
TRD-1000-800 Class I	800	<u>TPS</u>			
TRD-1000-900 Class I	900				
TRD-1000-1000 Class I	1,000				
Aero-Tech Aerobic Treatment Units				<u>Service Provider and Third Party Tester</u> <u>Intermittent sand filter drainfield</u>	
AT-500 Class I	500				
AT-600 Class I	600	<u>—</u>	<u>—</u>		11/26/08
AT-750 Class I	750	<u>TPS</u>			
AT-1000 Class I	1,000				
AT-1500 Class I	1,500				

<u>Manufacturer and Model</u> <u>Aerobic Treatment Device (Std 40)</u>	<u>Treatment Limit (GPD)</u> <u>Gallons per day</u>	<u>Third Party Standards (TPS) or Experimental BOD<sub>5</sub> Removal</u>	<u>Total Suspended Solids Removal</u>	<u>Operation, Maintenance, and Monitoring Provider</u> <u>Trench Size</u>	<u>Certification Approval Date</u>
Alternative Wastewater Systems Inc.				<u>Service Provider and Third Party Tester</u>	
SYBR-AER Class I	500			<u>Intermittent sand filter drainfield</u>	11/3/03
SYBR-AER Class I	600	—	—		
SYBR-AER Class I	800	<u>TPS</u>			
SYBR-AER Class I	1,000				
SYBR-AER Class I	1,500				
American Wastewater Systems Inc.				<u>Service Provider and Third Party Tester</u>	
BEST 1 AWS-500 Class I	500			<u>Intermittent sand filter drainfield</u>	11/03/03
BEST 1 AWS-800 Class I	800	—	—		
BEST 1 AWS-1000 Class I	1000	<u>TPS</u>			
BEST 1 AWS-1200 Class I	1,200				
BEST 1 AWS-1500 Class I	1,500				
Aquapoint Bioclere 16/12/500: Class I	500	<u>Ave. 11 mg/L</u> <u>TPS</u>	<u>Ave. 13 mg/L</u>	<u>Service Provider and Third Party Tester</u> <u>Intermittent sand filter drainfield</u>	3/19/91
Aquarobic International				<u>Service Provider and Third Party Tester</u>	
Mini-Plant 54291 Concrete Filter Kit [1]: Class I	500 to 1,500 in	<u>Ave. 7 mg/L</u> <u>TPS</u>	<u>Ave. 11 mg/L</u>	<u>Intermittent sand filter drainfield</u>	11/03/03
Mini-Plant 54291 Fiberglass Class I	100 gal units				
<del>Bio-Microbics®, Inc.</del> <del>RetroFAST® 0.375: Class I</del>	375	—	—	<u>Service Provider and Third Party Tester</u> <u>Intermittent sand filter drainfield</u>	—

<u>Manufacturer and Model</u> <u>Aerobic Treatment Device (Std 40)</u>	<u>Treatment</u> <u>Limit</u> <u>(GPD)</u> <u>Gallons</u> <u>per day</u>	<u>Third Party</u> <u>Standards (TPS)</u> <u>or Experimental</u> <u>BOD<sub>5</sub> Removal</u>	<u>Total Suspended</u> <u>Solids Removal</u>	<u>Operation, Maintenance,</u> <u>and Monitoring Provider</u> <u>Trench Size</u>	<u>Certification</u> <u>Approval</u> <u>Date</u>
<u>Bio-Microbics®, Inc.</u>					
BioBarrier® MBR 0.4 Class I	400			<u>Service Provider and</u> <u>Third Party Tester</u>	
BioBarrier® MBR 0.4-N Class I	400			Intermittent sand filter drainfield	
BioBarrier® MBR 0.5 Class I	500				
BioBarrier® MBR 0.5-N Class I	500	—	—		—
BioBarrier® MBR 1.0 Class I	1,000				
BioBarrier® MBR 1.0-N Class I	1,000				
BioBarrier® MBR 1.5 Class I	1,500				
BioBarrier® MBR 1.5-N Class I	1,500				
<u>Bio-Microbics®, Inc.</u>					
MicroFAST® 0.5 Class I	500			<u>Service Provider and</u> <u>Third Party Tester</u>	
MicroFAST® 0.75 Class I	750	92%–95%	95%–97%	Intermittent sand filter drainfield	3/5/97
MicroFAST® 0.9 Class I	900	Ave. 11 mg/L	Ave. 16 mg/L		6/5/00
MicroFAST® 1.5 Class I	1,500				12/27/02
<u>Busse Innovative Systeme GmbH</u>					
MF-B-400	400	— <u>TPS</u>	—	<u>Service Provider and</u> <u>Third Party Tester</u> Intermittent sand filter drainfield	7/7/09

<u>Manufacturer and Model</u> <u>Aerobic Treatment Device (Std 40)</u>	<u>Treatment Limit (GPD)</u> <u>Gallons per day</u>	<u>Third Party Standards (TPS) or Experimental BOD<sub>5</sub> Removal</u>	<u>Total Suspended Solids Removal</u>	<u>Operation, Maintenance, and Monitoring Provider</u> <u>Trench Size</u>	<u>Certification Approval Date</u>
Clearstream Wastewater Systems				<u>Service Provider and Third Party Tester</u>	
Model 500 N/C Class I	500				
Model 600 N/C Class I	600	<del>95%–97%</del>	<del>93%–98%</del>	Intermittent sand filter drainfield	3/28/96
Model 750 N/C Class I	750	<del>Ave. 14 mg/L</del>	<del>Ave. 48 mg/L</del>		
Model 1000 N/C Class I	1,000	<u>TPS</u>			
Model 1500 N/C Class I	1,500				
Consolidated Treatment System Inc.				<u>Service Provider and Third Party Tester</u>	
Multi-Flo FTB: Class I		<del>96%–97%</del>	<del>97%–98%</del>	Intermittent sand filter drainfield	4/2/96
0.5, 0.6, 0.6-C, 0.75, 1.0, 1.5	500 to 1,500	<del>Ave. 5 mg/L</del>	<del>Ave. 6 mg/L</del>		
Nayadic M: Class I		<del>96%–97%</del>	<del>96%–98%</del>		4/2/96
6A, 8A, 1050A, 1200A, 2000A	500 to 1,500	<del>Ave. 6 mg/L</del>	<del>Ave. 7 mg/L</del>		
		<u>TPS</u>			
Delta Env. Products				<u>Service Provider and Third Party Tester</u>	
DF40-C, F, CC, CA, FF-Class I	400			Intermittent sand filter drainfield	2/3/97
DF50-C, F, CC, CA, FF-Class I	500				
DF60-C, F, CC, CA, FF-Class I	600	<del>95%–98%</del>	<del>96%–97%</del>		
DF75-C, F, CC, CA, FF-Class I	750	<del>Ave. 6 mg/L</del>	<del>Ave. 7 mg/L</del>		
DF100-C, F, CC, CA, FF-Class I	1,000	<u>TPS</u>			
DF150-C, F, CC, CA, FF-Class I	1,500				
Desoto Concrete Products				<u>Service Provider and Third Party Tester</u>	
H-Two-O Series: Class I	500	—	—	Intermittent sand filter drainfield	11/3/03
	750	<u>TPS</u>			
	1,000				
Ecological Tanks, Inc.				<u>Service Provider and Third Party Tester</u>	
AA, AS 500 Class I	500			Intermittent sand filter drainfield	11/1/97
AA, AS-650 Class I	650	<del>AA Ave. 2.0 mg/L</del>	<del>AA Ave. 2.2 mg/L</del>		
AA, AS-750 Class I	750	<del>AS Ave. 2.0 mg/L</del>	<del>AS Ave. 1.6 mg/L</del>		5/2/02
AA, AS-100 Class I	1,000	<u>TPS</u>			
AA, AS-1500 Class I	1,500				
Enviro-Flo: Class I				<u>Service Provider and Third Party Tester</u>	
E-500, E-550	500	<del>Ave. 14 mg/L</del>	<del>Ave. 15 mg/L</del>	Intermittent sand filter	12/18/02

<u>Manufacturer and Model</u> <u>Aerobic Treatment Device (Std 40)</u>	<u>Treatment Limit (GPD)</u> <u>Gallons per day</u>	<u>Third Party Standards (TPS) or Experimental BOD<sub>5</sub> Removal</u>	<u>Total Suspended Solids Removal</u>	<u>Operation, Maintenance, and Monitoring Provider</u> <u>Trench Size</u>	<u>Certification Approval Date</u>
E-550	550	<u>TPS</u>		drainfield	
E-600	600				
E-750	750				
E-1000	1,000				
H.E. McGrew, Inc. Class I Alliance 500, 750, 1000 Mighty Mac, 500, 600, 750 Cajun Aire Basic 500, 750, 1000 Cajun Aire Advanced, 500, 750, 1000	500 to 1,000	<u>96.5%</u> <u>Ave. 7 mg/L</u> <u>Ave. 13 mg/L</u> <u>TPS</u>	<u>97.2%</u> <u>Ave. 13 mg/L</u> <u>Ave. 19 mg/L</u>	<u>Service Provider and Third Party Tester</u> <u>Intermittent sand filter</u> <u>drainfield</u>	6/5/00 12/5/97 12/30/02
Hoot Aerobic Systems, Inc. Class I H 500, 600, 750, 1000 LA 500, 1000	500 to 1,000	<u>Ave. 3.2 mg/L</u> <u>TPS</u>	<u>Ave. 3.6 mg/L</u>	<u>Service Provider and Third Party Tester</u> <u>Intermittent sand filter</u> <u>drainfield</u>	2/6/01
Hydro-Action, Inc.: Class I AP-500, 600, 750, 900, 1500	500 to 1,500	<u>Ave. 9 mg/L</u> <u>TPS</u>	<u>Ave. 15 mg/L</u>	<u>Service Provider and Third Party Tester</u> <u>Intermittent sand filter</u> <u>drainfield</u>	4/2/96 3/99 8/1/03
Jet Inc.: Class I J-500, J-600 J-750, 1000, 1250, 1500	500 600 750-1,500	<u>88%-96%</u> <u>Ave. 15 mg/L</u> <u>TPS</u>	<u>91%-97%</u> <u>Ave. 12 mg/L</u>	<u>Service Provider and Third Party Tester</u> <u>Intermittent sand filter</u> <u>drainfield</u>	10/96 5/93 7/29/97
MICROSEPTEC: Class I Enviroserver, ENFG 600, 1200, 1500	600 1,200 1,500	<u>Ave. 6 mg/L</u> <u>TPS</u>	<u>Ave 8 mg/L</u>	<u>Service Provider and Third Party Tester</u> <u>Intermittent sand filter</u> <u>drainfield</u>	6/25/99
National Wastewater Systems Inc., Solar Air 500, 800, 1000, 1200	500 800 1,000 1,200	<u>Ave. 13 mg/L</u> <u>TPS</u>	<u>Ave. 19 mg/L</u>	<u>Service Provider and Third Party Tester</u> <u>Intermittent sand filter</u> <u>drainfield</u>	8/1/03
Norweco, Inc. Singular 950 series Class I	600-1,500	<u>&gt;85%</u>	<u>&gt;85%</u>	<u>Service Provider and Third Party Tester</u>	<u>4/3/96</u>

<u>Manufacturer and Model</u> <u>Aerobic Treatment Device (Std-40)</u>	<u>Treatment Limit (GPD)</u> <u>Gallons per day</u>	<u>Third Party Standards (TPS) or Experimental BOD<sub>5</sub> Removal</u>	<u>Total Suspended Solids Removal</u>	<u>Operation, Maintenance, and Monitoring Provider</u> <u>Trench Size</u>	<u>Certification Approval Date</u>
Singlair 960 series Class I	500-1,500	Ave. 6 mg/L	Ave. 10 mg/L	Intermittent sand filter drainfield	8/96
Singlair TNT	500-1,500	Ave. 4 mg/L	Ave. 9 mg/L		8/08
		<u>TPS</u>			
<u>Orengo Systems Inc.</u>				<u>Service Provider and Third Party Tester</u>	
AdvanTex AX20N	500			Intermittent sand filter drainfield	4/10/02
AdvanTex AX20-RT	500				
AdvanTex AX15-2N	800				
AdvanTex AX20-2N	1,000	Ave. 5 mg/L	Ave. 4 mg/L		3/1/10
AdvanTex AX15-3N	1,200				
AdvanTex AX20-3N	1,500				6/11/12
AdvanTex AX25-RT3N	625				
<u>Pro Flo Aerobic Systems</u>				<u>Service Provider and Third Party Tester</u>	
Pro Flo 500 TL	500	—	—	Intermittent sand filter drainfield	11/3/03
Pro Flo 750 SL	750	<u>TPS</u>			
Pro Flo 1000 TC	1,000				
<u>Rogers Treatment Systems</u>				<u>Service Provider and Third Party Tester</u>	
Mudbug 5	500			Intermittent sand filter drainfield	11/3/03
Mudbug 10	1,000	Ave. 15 mg/L	Ave. 22 mg/L		
Mudbug 15	1,500	<u>TPS</u>			
<u>Southern Manufacturing</u>				<u>Service Provider and Third Party Tester</u>	
SM-500 Class I	500			Intermittent sand filter drainfield	9/1/97
SM-600 Class I	600	98.7%	98.1%		
SM-750 Class I	750	Ave. 2.0 mg/L	Ave. 1.8 mg/L		8/28/00
SM-1000 Class I	1,000	<u>TPS</u>			
SM-1500 Class I	1,500				
<u>SeptiTech</u>				<u>Service Provider and Third Party Tester</u>	
M400/M400D	300			Intermittent sand filter drainfield	12/09
M550/M550D	400	Ave. 12 mg/L	Ave. 5 mg/L		
M750/M750D	500	<u>TPS</u>			
M1200/M1200D	1,200				
M1500/M1500D	1,500				

<u>Manufacturer and Model</u> <u>Aerobic Treatment Device (Std-40)</u>	<u>Treatment Limit (GPD)</u> <u>Gallons per day</u>	<u>Third Party Standards (TPS) or Experimental BOD<sub>5</sub> Removal</u>	<u>Total Suspended Solids Removal</u>	<u>Operation, Maintenance, and Monitoring Provider</u> <u>Trench Size</u>	<u>Certification Approval Date</u>
Zabel Environmental Technology ATS-AD-500: Class I	500	— TPS	—	<u>Service Provider and Third Party Tester</u> Intermittent sand filter drainfield	12/02 Dropped

Notes: 5-day biological oxygen demand (BOD<sub>5</sub>); milligram per liter (mg/L); average (ave.); gallons per day (GPD)

**Table 5-4. Extended treatment package systems approved by DEQ for general use.**

<u>Manufacturer and Model</u>	<u>Treatment Limit (GPD)</u>	<u>CBOD<sub>5</sub> (≤40 mg/L) and TSS (≤45 mg/L) Removal</u>	<u>Operation and Maintenance Provider</u>	<u>Approval Date</u>
<u>Bio-Microbics®, Inc.</u> <u>RetroFAST® 0.375: Class I</u>	375	Yes	<u>Service Provider</u>	—
<u>Bio-Microbics®, Inc.</u> <u>BioBarrier® MBR 0.4 Class I</u>	400			
<u>BioBarrier® MBR 0.4-N Class I</u>	400			
<u>BioBarrier® MBR 0.5 Class I</u>	500			
<u>BioBarrier® MBR 0.5-N Class I</u>	500	Yes	<u>Service Provider</u>	—
<u>BioBarrier® MBR 1.0 Class I</u>	1,000			
<u>BioBarrier® MBR 1.0-N Class I</u>	1,000			
<u>BioBarrier® MBR 1.5 Class I</u>	1,500			
<u>BioBarrier® MBR 1.5-N Class I</u>	1,500			
<u>Bio-Microbics®, Inc.</u> <u>MicroFAST® 0.5 Class I</u>	500			<u>3/5/97</u>
<u>MicroFAST® 0.75 Class I</u>	750	Yes	<u>Service Provider</u>	<u>6/5/00</u>
<u>MicroFAST® 0.9 Class I</u>	900			<u>12/27/02</u>
<u>MicroFAST® 1.5 Class I</u>	1,500			

<u>Manufacturer and Model</u>	<u>Treatment Limit (GPD)</u>	<u>CBOD<sub>5</sub> (≤40 mg/L) and TSS (≤45 mg/L) Removal</u>	<u>Operation and Maintenance Provider</u>	<u>Approval Date</u>
<u>Orengo Systems Inc.</u>				
<u>AdvanTex AX20N</u>	<u>500</u>			
<u>AdvanTex AX20-RT</u>	<u>500</u>			
<u>AdvanTex AX15-2N</u>	<u>800</u>			<u>4/10/02</u>
<u>AdvanTex AX20-2N</u>	<u>1,000</u>	<u>Yes</u>	<u>Service Provider</u>	
<u>AdvanTex AX15-3N</u>	<u>1,200</u>			<u>3/1/10</u>
<u>AdvanTex AX20-3N</u>	<u>1,500</u>			
<u>AdvanTex AX25-RT3N</u>	<u>625</u>			<u>6/11/12</u>

Notes: 5-day carbonaceous biological oxygen demand (CBOD<sub>5</sub>); total suspended solids (TSS); milligram per liter (mg/L); -average (ave.); gallons per day (GPD);