

January 21, 2022

Mr. Jeff Coomer  
Consolidated Treatment Systems, Inc.  
1501 Commerce Center Drive  
Franklin, OH 45005

**RE: Product Registration Renewal #4 – Notice of Conditional Proprietary Treatment Product Listing**

Description: Sewage Treatment System, Suspended Growth with Filtration Process  
Manufacturer: Consolidated Treatment Systems  
Product Name: Multi-Flo® (with and without disinfection)  
Model Numbers: Multi-Flo FTB-0.5, Multi-Flo FTB-0.6, Multi-Flo FTB-0.75, Multi-Flo FTB-1.0, and Multi-Flo FTB-1.5 (Max Design Flow 500, 600, 750, 1000, and 1500 GPD per unit)  
Product Listing: Category A (residential sewage)

Dear Mr. Coomer:

Thank you for your application for product renewal for Consolidated Treatment Systems Multi-Flo Model Series. This renewal is conditional based on the results of a comprehensive review of Consolidated Treatment Systems' manuals submitted for initial registration of the product. This registration letter may be discontinued at any time between now and the expiration listed below if the MPCA cannot obtain manuals that meet the recommendations from the Technical Advisory Panel to remain in compliance with Minn. R. 7083.4040 Item H.

In accordance with Minn. R. Ch. 7080 through 7083, the MPCA has reviewed Consolidated Treatment System's submitted materials requesting registration for Category A (residential) treatment product listing of the Multi-Flo Model Series in this application. Based on the submitted documentation, the MPCA finds that the Multi-Flo Model Series is eligible to be registered per Minn. R. Ch. 7083.4030 as meeting the following treatment levels:

- **Treatment Level A** (cBOD<sub>5</sub> of 15 mg/L, TSS of 15 mg/L, and fecal coliform of 1,000 colonies per 100 ml) with disinfection
- **Treatment Level A2** (cBOD<sub>5</sub> of 15 mg/L, TSS of 15 mg/L) without disinfection
- **Treatment Level B** (cBOD<sub>5</sub> of 25 mg/L, TSS of 30 mg/L, and fecal coliform of 10,000 colonies per 100 ml) with disinfection
- **Treatment Level B2** (cBOD<sub>5</sub> of 25 mg/L, TSS of 30 mg/L) without disinfection
- **Treatment Level C** (cBOD<sub>5</sub> of 125 mg/L, TSS of 60 mg/L and Oil & Grease of 25 mg/L) without disinfection

The Multi-Flo Model Series is registered with a design rated capacity of 500, 600, 750, 1000, and 1500 gallons per day per unit, as shown in Table 1 and Table 2.

Subject to this determination, the Multi-Flo Model Series, including the Multi-Flo FTB-0.5, Multi-Flo FTB-0.6, Multi-Flo FTB-0.75, Multi-Flo FTB-1.0, and Multi-Flo FTB-1.5 will be placed on the List of Registered Subsurface Sewage Treatment System (SSTS) Products. The product information listed in this Notice of Proprietary Product Listing will be maintained on the MPCA website and may not be altered or misrepresented by the manufacturer or any other person without permission by the MPCA.

**Table 1. Multi-Flo Model Series with Salcor Ultraviolet (UV) Disinfection**

<b>Product Name Model</b>	<b>Treatment Process</b>	<b>Design Flow (gpd)</b>	<b>BOD<sub>5</sub> Removed (lbs/day)</b>	<b>Highest Treatment Level</b>	<b>Important Product Use Information</b>
Multi-Flo with one (1) Salcor 3G UV Disinfection Unit Model FTB-0.5	Suspended Growth and Filtration	500	3.6	A	<ul style="list-style-type: none"> <li>• Notice of Product Listing <ul style="list-style-type: none"> <li>○ MPCA Letter</li> <li>○ Conditions of Registration</li> <li>○ Expiration Date</li> </ul> </li> <li>• Multi-Flo Manual <ul style="list-style-type: none"> <li>○ Submitted Drawings</li> <li>○ Known Limitations</li> <li>○ Installation</li> <li>○ Operation &amp; Maintenance</li> <li>○ Owners Information</li> <li>○ Regulators Checklist</li> <li>○ Service Contract</li> </ul> </li> <li>• Management Plan for Multi-Flo</li> <li>• Management Plan for Salcor UV Disinfection</li> <li>• Operating Permit Template</li> </ul>
Multi-Flo with one (1) Salcor 3G UV Disinfection Units Model FTB-0.6	Suspended Growth and Filtration	600	3.6	A	
Multi-Flo with two (2) Salcor 3G UV Disinfection Units Model FTB-0.75	Suspended Growth and Filtration	750	3.6	A	
Multi-Flo with two (2) Salcor 3G UV Disinfection Units Model FTB-1.0	Suspended Growth and Filtration	1000	7.2	A	
Multi-Flo with three (3) Salcor 3G UV Disinfection Units Model FTB-1.5	Suspended Growth and Filtration	1500	10.8	A	

**Table 2. Multi-Flo Model Series**

Product Name Model	Treatment Process	Design Flow (gpd)	BOD <sub>5</sub> Removed (lbs/day)	Highest Treatment Level	Important Product Use Information
Multi-Flo Model FTB-0.5	Suspended Growth and Filtration	500	3.6	A2	<ul style="list-style-type: none"> <li>● Notice of Product Listing <ul style="list-style-type: none"> <li>○ MPCA Letter</li> <li>○ Conditions of Registration</li> <li>○ Expiration Date</li> </ul> </li> <li>● Multi-Flo Manual <ul style="list-style-type: none"> <li>○ Submitted Drawings</li> <li>○ Known Limitations</li> <li>○ Installation</li> <li>○ Operation &amp; Maintenance</li> <li>○ Owners Information</li> <li>○ Regulators Checklist</li> <li>○ Service Contract</li> </ul> </li> <li>● Management Plan for Multi-Flo</li> <li>● Operating Permit Template</li> </ul>
Multi-Flo Model FTB-0.6	Suspended Growth and Filtration	600	3.6	A2	
Multi-Flo Model FTB-0.75	Suspended Growth and Filtration	750	3.6	A2	
Multi-Flo Model FTB-1.0	Suspended Growth and Filtration	1000	7.2	A2	
Multi-Flo Model FTB-1.5	Suspended Growth and Filtration	1500	10.8	A2	

The registration of the products in Minnesota is contingent upon compliance with the following conditions:

1. Products must be used in compliance with MPCA rules and the plans and design specifications provided. Any deviation from the plans and specifications shall not be permitted unless authorized by National Sanitation Foundation (NSF) and, in writing, by the MPCA for registered use.
2. The manufacturer shall have readily accessible information, specific to a product's registered use in Minnesota, for designers, installers, service providers, regulators, and interested parties for the following items: a) product manual, b) design instructions, c) installation instructions, d) operation and maintenance requirements, e) homeowner instructions, and f) list of manufacturer-certified service providers, if any, as required by Minn. R. Ch. 7083.4040 (H).
3. The design flows for the registered Multi-Flo Model Series are as follows:
  - 500 gallons per day for the Multi-Flo FTB-0.5
  - 600 gallons per day for the Multi-Flo FTB-0.6
  - 750 gallons per day for the Multi-Flo FTB-0.75
  - 1000 gallons per day for the Multi-Flo FTB-1.0
  - 1500 gallons per day for the Multi-Flo FTB-1.5
4. Septic/trash tank capacity for dwellings shall meet the manufacturer's size requirement consistent with National Sanitation Foundation (NSF) testing and as specified in the Application for Registration. The tank(s) shall be designed to withstand the pressures to which it will be subject to. The tank(s) and all pipe penetrations, risers, and other connections to the tank shall be watertight.

5. Each system must be delivered with an installation manual and owner's manual for the Multi-Flo Model Series (Multi-Flo FTB-0.5, Multi-Flo FTB-0.6, Multi-Flo FTB-0.75, Multi-Flo FTB-1.0, and Multi-Flo FTB-1.5) and for the Salcor 3G UV disinfection unit(s) used in the system. Each component must be installed in accordance with the manufacturer's installation manual.
6. Consolidated Treatment Systems, along with the Intermediate Designer/Advanced Designer and Installer, are responsible to ensure that proper flow splitting devices are used in splitting flows to Salcor 3G UV disinfection units. Flow splitting devices must meet the following criteria: a) designed specifically and reliably to split wastewater flows; b) accessible for on-going operation and maintenance; c) monitored to determine flow rates; d) adjustable after construction should settlement occur; and e) have infinite or continuous adjustment features.
7. For the Multi-Flo Model Series (Multi-Flo FTB-0.5, Multi-Flo FTB-0.6, Multi-Flo FTB-0.75, Multi-Flo FTB-1.0, and Multi-Flo FTB-1.5), each Multi-Flo Treatment System shall be equipped with a sufficient number of Salcor 3G UV disinfection units to achieve Treatment Level A and Treatment Level B as follows: (1) Multi-Flo FTB-0.5 will require the use of one Salcor 3G UV disinfection unit; (2) Multi-Flo FTB 0.6 will require the use of one Salcor 3G UV disinfection unit; (3) Multi-Flo FTB 0.75 will require the use of two Salcor 3G UV disinfection units in parallel; and (4) Multi-Flo FTB 1.0 will require the use of two Salcor 3G UV disinfection units in parallel, and Multi-Flo FTB 1.5 will require the use of three Salcor 3G UV disinfection units in parallel. Flow to each Salcor UV disinfection unit shall not exceed the rated capacity to ensure adequate disinfection prior to soil dispersal.
8. All systems shall be designed and operated with (a) suitable alarm device(s) should either or both the Multi-Flo Model Series (Multi-Flo FTB-0.5, Multi-Flo FTB-0.6, Multi-Flo FTB-0.75, Multi-Flo FTB-1.0, and Multi-Flo FTB-1.5) or the Salcor 3G UV disinfection unit(s) malfunction.
9. This treatment product is a Minnesota-registered product for Type IV systems. For Treatment Levels A, A2, B, B2 and C, effluent loading rates to the soil, method of distribution, and vertical separation requirements shall meet the minimum requirements contained in Minn. R. Ch. 7080.2150 thru 7080.2350. The effluent, following treatment in the Multi-Flo Model Series, is required to be uniformly distributed to the soil for final treatment and dispersal.
10. Systems may only be designated as Type IV systems when designed and installed per the drawings submitted as part of the Application for Product Registration, dated November 4, 2009, and subsequent documents submitted prior to this registration.
11. As a Type IV system, the system must be constructed and operated under the required local permits.
12. The level of maintenance required for Multi-Flo Model Series and Salcor 3G UV disinfection components shall be as specified in the products Operation and Maintenance Manual. This includes, but is not limited to, maintenance every six months. Both the Multi-Flo Model Series and Salcor 3G UV disinfection units shall be serviced at six month intervals. The Salcor UV lamp shall be replaced at least once every two (2) years to ensure proper disinfection or more often as needed, to achieve the required fecal coliform bacteria treatment level.
13. For systems registered as meeting the requirements for Treatment Levels A and B, testing for fecal coliform bacteria is required per the local operating permits when reduced vertical soil separation is employed.

14. As specified in Owner's Manual, limitations of the product are identified, including the backwash from water softeners and other unsuitable wastes, must not be discharged into the system. The manufacturer is responsible to provide a listing of other known limitations, made available on the company's website or other means.
15. Training shall be provided to MPCA-licensed Subsurface Sewage Treatment System practitioners before designing, installing, or providing service to Multi-Flo Model Series (Multi-Flo FTB-0.5, Multi-Flo FTB-0.6, Multi-Flo FTB-0.75, Multi-Flo FTB-1.0, and Multi-Flo FTB-1.5) treatment systems and to Salcor 3G UV disinfection devices registered for use in Minnesota.
16. During the period of product registration and as part of the renewal process, systems using registered treatment products are subject to an audit by the MPCA.

**Please be advised that this registration expires December 31, 2024.** Manufacturers desiring to continue product registration beyond this date must obtain MPCA renewal according to the requirements in Minn. R. Ch. 7083.4040 (E). If the product has changed or is retested according to the protocol required for registration, renewal shall be based on the most recent test results. If the MPCA finds the product has changed in any way that may affect performance, it may not be renewed and must meet the requirements for initial registration.

The MPCA is in no way endorsing these products or any advertising, and is not responsible for any situation which may result from its use or misuse. The MPCA is not liable for any product failure and these statements are not intended and cannot be relied upon to establish any substantive or procedural rights with the state of Minnesota or the MPCA, either express or implied, that can be enforced in litigation or any administrative proceeding.

If you have any questions, please contact Katie Dowling at 651-757-2301 or by email at [katie.dowling@state.mn.us](mailto:katie.dowling@state.mn.us).

Sincerely,

*Katie Dowling*

*This document has been electronically signed.*

Katie Dowling  
Environmental Specialist  
Municipal Division

KD:lm

cc: File