



**PRESBY ENVIRONMENTAL, INC.**  
800-473-5298      www.presbyenvironmental.com

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## TECHNICAL BULLETIN

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### Significant Differences between Enviro-Septic® and GEO-flow

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**Abstract:** *GEO-flow pipes manufactured by ADS are not interchangeable, equivalent or acceptable substitutions for use in an Enviro-Septic® System design. There are important functional differences, and Enviro-Septic® design criteria are product specific. Enviro-Septic® has been thoroughly tested, while GEO-flow's treatment capabilities have not been documented.*

#### Differences you can see:

There are important physical differences between Presby Environmental's Enviro-Septic® pipes and the GEO-flow product from ADS. (These differences are also summarized on the attached chart.) The primary difference in the design of the two products is the intermediary layer between the corrugated pipe and the geo-textile fabric; GEO-flow uses a grid material, and the Enviro-Septic® System uses a dense mat of coarse, randomly-oriented plastic fibers. While the GEO-flow grid serves only to keep the fabric from pressing against the pipe, the Enviro-Septic® fibers serve this purpose while at the same time providing increased surface area for bacterial activity, ensuring sufficient oxygen supply and protecting the bacterial treatment surface that forms on the inside of the fabric. The dense mat of plastic fibers also acts like a filter, stripping out solids from wastewater as it passes through, protecting the bacterial surface from clogging. Enviro-Septic® also has skimmer tabs, which maximize retention of solids within the pipe, protecting the fiber mat and geo-textile fabric from clogging.

In addition, there are other design enhancements which the Enviro-Septic® pipe has that GEO-flow does not: the pipe's specially designed ridges also create additional surface area, which works to cool the effluent; this cooling enhances separation of greases and solids, enabling the Enviro-Septic® system to retain them inside the pipe and fibers, preventing them from reaching the bacterial treatment surface and protecting the underlying soil from clogging.

#### Differences you can't see:

As a result of its unique product features, the Enviro-Septic® system actually treats the wastewater before it makes contact with the soil, creating a combined treatment and dispersal system. We support these claims by subjecting our system to testing, and ADS certainly has the resources to do the same with the GEO-flow product if they choose to. According to their own literature, GEO-flow is an "...alternative to the stone and pipe components of a conventional effluent disposal system" (emphasis added). GEO-flow has never offered any test data or provided any details of expected effluent quality from their system. Since there is no data, any "comparison" of the two products' functionality is completely subjective and speculative. In contrast, Enviro-Septic® has been subjected to repeated, rigorous test protocols in order to prove how well it treats wastewater. These tests consistently prove that Enviro-Septic® works significantly

better than conventional systems and, in fact, works better than many expensive, complicated mechanical treatment devices.

### **Differences in the two products' design criteria and State Approvals:**

While GEO-flow and Enviro-Septic® are both approved for use in the states of New Hampshire, Maine and Massachusetts, their approvals and design/installation criteria are **not** identical, and the products should not be considered “interchangeable.” For instance:

- Enviro-Septic® is approved for Multi-Level™ use (in NH and ME); GEO-flow is not approved for use in more than one level in any state.
- In the state of NH, Enviro-Septic® is the **only** product approved for installation with as little as 30 inches to SHWT.
- Enviro-Septic® can be installed under traffic-bearing surfaces; according to their manuals, GEO-flow cannot.

There are numerous other discrepancies between the two products' approvals and design/installation criteria, such as where set-backs are measured from, sizing, observation port requirements, etc. In Massachusetts, training and certification is required for each product; Enviro-Septic® certification does not qualify someone to install GEO-flow, and vice versa.

### **Here's the back-story:**

To provide some historical perspective, Enviro-Septic® was invented by David Presby specifically to solve what he found to be deficiencies in the GEO-flow product (and other large diameter gravelless pipe such as SB2) based on many years of experience in the field and as a former GEO-flow distributor. The resulting “differences” between GEO-flow and Enviro-Septic® were significant and substantial enough to earn Presby a US Patent which was upheld in spite of GEO-flow's litigation claiming patent infringement. Perhaps the best evidence that Enviro-Septic® offers superior performance is the market predominance it has been able to achieve: by GEO-flow's own account, Enviro-Septic® has earned “75% of the market for all on-site residential leach field products including traditional systems” in New Hampshire in spite of the fact that GEO-flow costs slightly less.

Confusion about this issue has primarily been created by GEO-flow's unsupported claims that their product is “functionally equivalent” to Enviro-Septic®. Since GEO-flow has no test data of their own, they have gone so far as to present Enviro-Septic® test data to support their applications for state approvals. GEO-flow sales reps have reportedly been telling dealers and customers that there has been some sort of a “ruling” from the state approving authorities indicating the products are “interchangeable.” In an effort to clear up any misconceptions, NH DES Commissioner Thomas Burack recently sent a letter to Presby Environment and to ADS which stated that “the Department has not made any official finding relating to the functional equivalency of the two products.”

On many occasions during the past several years, when we are contacted by a system owner experiencing malfunctions, investigation reveals that GEO-flow has been substituted for Enviro-Septic® without the system owner's knowledge or consent. Needless to say, consumers don't appreciate being duped. All interested parties deserve to understand the differences in the two products in order to make an informed decision about which product to use based on facts, not unsupported marketing claims. One thing we can assure you of is our commitment to ongoing testing and to free, professional technical support to anyone designing, installing, using or troubleshooting an Enviro-Septic® system. ADS focuses their resources instead on a GEO-flow sales force armed with little more than misappropriated Enviro-Septic® test results and unsupported claims of product equivalency.

**Conclusion:** Our purpose is to educate designers, installers and customers about the important differences between the two products so that professionals and consumers can make a fully informed decision when selecting their septic system components. If you have any questions or concerns about the differences between Enviro-Septic® and GEO-flow which we have not answered here, please contact us and we will do our best to provide additional information.

Prepared by,

**Presby Environmental, Inc.**  
143 Airport Road  
Whitefield, NH 03598  
(800) 473-5298  
[info@presbyeco.com](mailto:info@presbyeco.com)  
[www.presbyenvironmental.com](http://www.presbyenvironmental.com)

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**SUMMARY OF SIGNIFICANT DIFFERENCES BETWEEN  
ENVIRO-SEPTIC® AND GEO-FLOW®**

<b>ENVIRO-SEPTIC®</b>	<b>GEO-FLOW®</b>	<b>SIGNIFICANCE</b>
Treatment System, effluent treated before dispersed to soil	Disposal System, relies on the soil to provide treatment	Enviro-Septic® discharges treated effluent, reducing the possibility of groundwater contamination
Layer of coarse, randomly oriented fibers between pipe and fabric	Rigid grid between pipe and fabric	Enviro-Septic®'s random fibers strip finer suspended solids, protecting the bacterial surface, providing surface area for bacterial activity and facilitating aeration.
Skimmer Tabs	No skimmer tabs	Enviro-Septic® system retains grease and solids inside pipe, protecting the bacterial treatment surface and preventing clogging of underlying soils.
Bendable to 90 degrees	Rigid and non-bendable	Enviro-Septic® provides greater design flexibility for unusually shaped systems
Geotextile fabric is stitched to hold it in place around pipe	Fabric attached to pipe with plastic straps	Enviro-Septic® components stay securely in place, preventing shifting of fabric that could cause discharge of untreated effluent or allow soil materials to enter the pipes.
Can be installed under traffic-bearing surfaces	Not intended for use below traffic-bearing paved or unpaved surfaces	Greater design flexibility with Enviro-Septic®
Substantial Scientific Test Data	No publicly available test data	Enviro-Septic®'s treatment capabilities confirmed by test results; effluent quality exceeds NSF-40, US EPA recommendations, and BNQ Advanced Secondary criteria.
Approved for Multi-Level applications	Not approved for Multi-Level applications	Enviro-Septic® offers greater design flexibility for difficult sites
Exceptional Quality Control Routine Audits by BNQ	Numerous different manufacturing facilities, variance in materials	Enviro-Septic® product consistently of the highest quality
Free, professional technical support, documentation, training & certification	Minimal technical support; minimal design and installation instructions	Reflects PEI's commitment to providing designers and installers with the resources necessary to maximize Enviro-Septic® product's effectiveness and reliability
Separation Distance to SHWT in NH is 30 inches	Separation Distance to SHWT in NH is 36 inches	Enviro-Septic® has a long history of successful use in New Hampshire. Our ITA approval is based on an excellent track record of performance in the field and documented test results.