# Design and Installation Manual for the Infiltrator ATL System in Ontario

The purpose of this manual is to provide the minimum specifications for design and installation of the Infiltrator ATL (Advanced Treatment Leachfield) System in Ontario. Each revised version of this manual supersedes the previous version.

The systems presented in this document are common configurations and are provided for illustrative purposes. They are not intended to restrict the use of other configurations, which may be utilized provided the design conforms to the requirements of the Building Materials Evaluation Commission (BMEC) Authorization and the Ontario Building Code.

For more detailed design and installation information, please contact Infiltrator Water Technologies at 1-800-221-4436.

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**INTRODUCTION**

**The Infiltrator ATL System**
The Infiltrator ATL System is a patent-pending proprietary system consisting of six components.

Upon entering the Infiltrator ATL System, septic tank effluent progresses through each component as follows:

- Nominally 300 mm-diameter conduit (5 components):
  - 100 mm-diameter pipe
  - Large-diameter synthetic aggregate
  - Coarse geotextile
  - Small-diameter synthetic aggregate
  - Fine geotextile
- 230 mm-deep system sand (6th component)

**System Sand**
“System sand” is the term used to describe the coarse sand material that surrounds the Infiltrator ATL System conduits. Acceptable material for use as system sand is material which meets ASTM C33 specifications as specified in the BMEC Authorization.

The following minimum system sand dimensions are required for all Infiltrator ATL System configurations:
- 230 mm of system sand below the Infiltrator ATL conduit rows;
- 300 mm system sand extension on both ends of the Infiltrator ATL conduit rows; and
- 300 mm of system sand adjacent to each Infiltrator ATL conduit row; and
- 300 mm of system sand between each Infiltrator ATL conduit row.

There is no requirement for any minimum amount of system sand on top of the Infiltrator ATL conduit rows.

Notes:
1. Infiltrator conduit rows must be evenly spaced over the Infiltrator ATL system sand area. See Section 4.3.3 of the BMEC Authorization.
2. The ATL System must include a minimum of 230mm of system sand below, and 300mm of system sand adjacent to (on both sides of) each ATL conduit row. If the width of the absorption bed allows for void areas between the rows of ATL conduit rows/system sand, septic sand or system sand may be used to fill these voids. Acceptable use for septic sand is sand with a percolation rate of $6 < T < 10$ min/cm. See cross section and plan view drawings on pages 8-10.
Infiltrator ATL System

Cross Section

Contact Infiltrator Water Technologies at 1-800-221-4436 for additional technical and product information.
DESIGN INFORMATION

The Infiltrator ATL System is certified by NSF International as complying with NSF/ANSI 40 for the production of Class I effluent. The results of the NSF/ANSI testing and additional testing allows for the Building Materials Evaluation Committee (BMEC) to authorize the design and installation of the Infiltrator ATL System in Ontario (ON) as a combined treatment and dispersal system, providing Level IV effluent quality, as defined in Section 8.6.2.2.(1) of the Ontario Building Code (OBC).

The BMEC authorization (18-03-384) specifies conditions of use which must be followed in the design and installation of the Infiltrator ATL System. This manual is intended to provide system design, installation, and use information for designers, installers, and users in Ontario. All Infiltrator ATL Systems shall comply with the specifications and instructions in the BMEC authorization, as well as all requirements of the OBC. If design, installation, operation, or maintenance specifications are not specifically addressed in the BMEC authorization or the OBC, the information in this manual shall be applicable.

System Design Considerations
Design parameters of the Infiltrator ATL System shall be in accordance with Part 8 of the OBC.

- Daily design sanitary sewage flow shall be in accordance with Table 8.2.1.3.A. and Table 8.2.1.3.B. of the OBC.
- Septic tank sizing shall be in accordance with Section 8.2.2.3. of the OBC.
- Commercial strength sewage is acceptable if it has been pretreated to residential strength prior to introduction into the Infiltrator ATL System.
- Minimum horizontal clearances shall be in accordance with Section 8.2.1.6.A. of the OBC, and shall be measured from the centerline of the Infiltrator ATL conduit row.
- Minimum vertical clearances to the high water table, bedrock, or soil with a percolation time (T) greater than 50 min/cm shall be in accordance with Table 1 below as measured from the bottom of the system sand layer in the Infiltrator ATL System:

<table>
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<tr>
<th>Percolation Time (T) of Natural Soil</th>
<th>Minimum Vertical Separation</th>
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<tr>
<td>T ≤ 6 min/cm</td>
<td>600 mm</td>
</tr>
<tr>
<td>T &gt; 6 &amp; ≤ 50 min/cm</td>
<td>450 mm</td>
</tr>
<tr>
<td>T &gt; 50 min/cm</td>
<td>600 mm</td>
</tr>
</tbody>
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Table 1: Minimum Vertical Separation Clearances

Multiple Bed Systems
If site conditions do not allow for the design and installation of a single Infiltrator ATL System absorption bed along the topographic contours, the Infiltrator ATL System may be installed in multiple bed configurations, with the following conditions:

- each bed, where feasible, is to run along the length of topographic contours;
- each bed must receive proportionate flows (zoning); and
- each bed must meet all other requirements of the BMEC Authorization and OBC.
**Effluent Distribution**
The Infiltrator ATL System can accommodate all methods of effluent distribution, including gravity, pump-to-gravity and pressure distribution. If pressure distribution is utilized, the small-diameter pressure distribution piping should be placed within the 100 mm-diameter distribution pipe within the Infiltrator ATL conduit for the entire length of each Infiltrator ATL conduit row.

**Distribution Boxes (D-boxes)**
D-boxes are recommended in gravity applications when equal effluent distribution is desired within a single absorption bed, or when multiple beds are specified.

**Dosed Systems**
If effluent is pumped to the Infiltrator ATL System, the maximum volume per cycle shall be 1/6 of the Daily Design Sewage Flow.

**Minimum Infiltrator ATL Conduit Lengths**
A minimum of 39.6 m of Infiltrator ATL conduit is required for any system.

Individual Infiltrator ATL conduit rows within a system shall be a minimum of 6.1 m in length.

**Sloped Systems**
On sites with slopes greater than 10% (10 horizontal: 1 vertical), the 230 mm-deep system sand layer must extend horizontally a minimum of 900 mm on the downslope side.

Maximum slope on a site is 25% (4 horizontal: 1 vertical).

**Fill and Cover Materials**
System sand, septic sand, or approved soil as per the OBC shall be used to create side slopes in above-ground system applications, or installed below the system sand to provide clearance distances. The ATL System must include a minimum of 230mm of system sand below, and 300mm of system sand adjacent to (on both sides of) each ATL conduit row. If the width of the absorption bed allows for void areas between the rows of ATL conduit rows/system sand, septic sand or system sand may be used to fill these voids. See cross section and plan view drawings on pages 8-10.

The Infiltrator ATL System is designed for use with a minimum of 150 mm of topsoil cover. Topsoil cover shall meet the requirements of the OBC.

**Infiltrator ATL System Sampling**
BMEC authorization of the Infiltrator ATL System includes a requirement for testing in accordance with the requirements set out in Article 8.9.2.4 “Sampling of Treatment Units” of the OBC. Treated effluent shall be collected from the underside of the system sand layer by means of a collection and sampling system. A schematic of the sampling system device is provided on page 13.

**Installer Requirements**
Installers of the Infiltrator ATL System must:
- be licensed in accordance with all requirements of the OBC; and
- be trained and certified by Infiltrator.
DESIGN INFORMATION

The licensed Infiltrator ATL System designer should consider all aspects of the BMEC Authorization and the OBC, as well as the information below, in the design of each Infiltrator ATL System in ON.

SYSTEM DESIGN

Designing the Infiltrator ATL System in Ontario is a three-step process.
1. *Determine the minimum number of Infiltrator ATL conduits*
2. *Calculate the absorption bed/sand area*
3. *Make adjustments as may be required*

**Step 1: Determine the minimum number of Infiltrator ATL conduits**
Infiltrator ATL conduit is fabricated in 3.05 m-long conduits. Individual Infiltrator ATL conduits may not be cut. Each single 3.05-m-long Infiltrator ATL conduit will provide a maximum design loading rate of 81L per unit.

Calculate the daily design sewage flow in accordance with the requirements in the OBC. Determine the minimum number of Infiltrator ATL conduits required by dividing the daily design sewage flow by 81.

*NOTE: Infiltrator ATL conduit is fabricated in 3.05 m lengths, and individual Infiltrator ATL conduits may not be cut. The number of Infiltrator ATL conduits calculated according to the formula above must always be rounded up.*

Example:

\[
Q \text{ (Daily Design Sewage Flow)} = 1600 \text{ L/d}
\]

\[
1600 \text{ L/d} \div 81 \text{ L/Infiltrator ATL conduit} = 19.75 \text{ Infiltrator ATL conduits}
\]

Rounded up, a minimum of 20 Infiltrator ATL conduits are required.

When dividing the total length of Infiltrator ATL conduit required for the system into individual rows, the system designer must always round-up individual Infiltrator ATL conduits to create Infiltrator ATL conduit rows of even length.

**Step 2: Calculate the absorption bed/sand area**
The minimum absorption bed/sand area (A) in square metres (m²) required for design of the ATL System shall be determined by the formula:

\[
A = \frac{QT}{400}
\]

where,

\[
A = \text{the contact area in square metres (m}^2\text{) between the system sand layer and the underlying soil},
\]
\[
Q = \text{the total daily sewage design flow in litres/day (L/day), and}
\]
\[
T = \text{the percolation time of the underlying native soil, with a maximum percolation rate of 50 min/cm.}
\]
NOTES:
1. Any system with an Infiltrator ATL conduit length greater than 30m must be center-fed or split into multiple beds.
2. The Infiltrator ATL conduits come in 3.05m lengths; all conduit row length calculations are to be rounded up to the nearest 3.05m.
3. The system should be designed as long and narrow as site conditions allow. Therefore, the number of Infiltrator ATL conduit rows should be minimized.

Step 3: Make adjustments as may be required

Lay out the Infiltrator ATL conduit in rows of equal length considering site factors and constraints, including the minimum Infiltrator ATL conduit row spacing and sand extension requirements. Once this baseline system layout has been created, make the following design adjustments:

1. If the area, as created by the baseline layout, is greater than the absorption bed/sand area as calculated in Step #2, no adjustments are necessary. See “Design Example #1” below.

2. If the area, as created by the baseline layout, is smaller than the absorption bed/sand area as calculated in Step #2, the baseline layout width* must be widened to meet the minimum basal area requirements. When adding sand extensions:
   a. In level system applications, the ATL conduit rows shall be evenly spaced over the entire absorption bed/sand area width;
   b. In sloped system applications, additional width shall be entirely placed on the downslope side of the ATL System conduit rows.

*NOTE: The length of the absorption bed/sand area may be altered, but only by extending the ATL System conduit rows. This method may be preferred over increasing the width of the system on certain sites, due to limiting site constrictions.

To evenly space the ATL conduit rows following widening of the absorption bed/sand area under Step 2:

- Subtract the total width of the ATL conduits (# of ATL conduit rows times 300mm) from the final absorption bed/sand area width; and
- Divide the remaining width by the number of ATL conduit rows plus 1.
- The resulting number is the width of the area between adjacent ATL conduit rows and between the outside ATL conduit rows and the outside edge of the absorption bed/sand area.

Design Example #1
Assume the following baseline specifications:
• 2,000L/day daily flow
• T = 5
• Level site

Step #1: Determine the minimum number of Infiltrator ATL conduits

Based on a daily flow of 2000L/day, the minimum number of ATL conduits is 24.

\[ Q \text{ (Daily Design Sewage Flow)} = 2000 \text{ L/d} \]

\[ 2000 \div 81 \text{ L/Infiltrator ATL conduit} = 24.7 \text{ Infiltrator ATL conduits} \]

A minimum of 25 Infiltrator ATL conduits are required. Round up to 27 ATL conduits in order to design a three-row system (of equal lengths).

Step 2: Calculate the absorption bed/sand area

\[ A = QT/400 \]

\[ A = 2000(5)/400 \]

\[ A = 25m^2 \]

Step 3: Make adjustments as may be required

Where site conditions allow the use of 3 ATL conduit rows in the system, when considering the minimum system sand requirements the minimum width of the ATL System will be 2.1m and the length will be 28.05m to create a baseline layout area of 58.9m². Since the minimum required absorption bed area (25m²) is smaller than the 58.9m² baseline layout area, no adjustments (e.g. addition of sand extensions) are required.
Design Example #2

Assume the following baseline specifications:
- 2,000L/day daily flow
- T = 40
- Level site

**Step #1: Determine the minimum number of Infiltrator ATL conduits**

Based on a daily flow of 2000L/day, the minimum number of ATL conduits is 25.

\[ Q \text{ (Daily Design Sewage Flow)} = 2000 \text{ L/d} \]

\[ 2000 \div 81 \text{ L/Infiltrator ATL conduit} = 24.7 \text{ Infiltrator ATL conduits} \]

A minimum of 25 Infiltrator ATL conduits are required. Select 27 ATL conduit units in order to design a 3-row system.

**Step 2: Calculate the absorption bed/sand area**

\[ A = \frac{QT}{400} \]

\[ A = \frac{2000(40)}{400} \]

\[ A = 200\text{m}^2 \]

**Step 3: Make adjustments as may be required**

Where site conditions allow the use of 3 ATL conduit rows in the system, considering the minimum system sand requirements, the minimum width of the ATL System will be 2.1m and the length will be 28.05m to create a baseline layout area of 58.9m². Since the minimum required absorption bed/sand area (200m²) is larger than the 53.6m² baseline layout area, adjustments (e.g. addition of sand extensions) are required.

Adjustment calculations:
• Divide the required absorption bed area by the length of the baseline layout.  
\[200 \text{m}^2 \div 28.05 \text{m} = 7.13 \text{m}\]

• Subtract the design baseline layout width from the required width as calculated above.  
\[7.13 \text{m} - 2.1 \text{m} = 5.03 \text{m}\]

• The baseline layout width must be widened by 5.03m.

• Revise baseline layout by spreading the 3 ATL conduit rows out evenly over the width of the required absorption bed area (7.13m). To properly locate the ATL conduit rows:
   - Subtract the total width of the ATL conduits (# of ATL conduit rows times 300mm) from the final basal area width;  
\[7.13 \text{m} - 0.9 \text{m} (300 \text{mm} \times 3) = 6.23 \text{m}\]
   - Divide the remaining width by the number of ATL conduit rows plus 1  
\[6.23 \text{m} \div 4 (3 \text{ rows} + 1) = 1.56 \text{m}\]

• The revised area outside of, and between, the ATL conduit rows will be approximately 1.56m.
Basic rules of onsite sewage treatment system use and care apply to the Infiltrator ATL System. Infiltrator ATL System owners shall operate the system in accordance with the procedures and specifications described in the BMEC Authorization, the OBC and the following:

System Use and Abuse
Your Infiltrator ATL System is intended for use with residential-strength wastewater within the specified design daily sewage flow volume. To ensure long-term function of your system:

- Keep daily wastewater flow within design parameters. (Average flow is 50% Daily Design Sewage Flow over a 30-day period)
- Do not connect a rainwater management system to the Infiltrator ATL System.
- Direct water from any rainwater management system away from the Infiltrator ATL System.
- Solvents, paint, pharmaceuticals, aggressive cleaning products, and non-biodegradable items should not enter the Infiltrator ATL system.
- Solids, such as but not limited to, cigarette butts, diapers, feminine hygiene products, cat litter, and paper towels should not be introduced into the Infiltrator ATL system.

- Introduce only residential-strength wastewater into the Infiltrator ATL System.
- Maintain leak-free household plumbing fixtures, such as faucets and toilets.
- Do not utilize a garbage grinder (garborator), or direct any water softener backwash into the Infiltrator ATL System.
- The Infiltrator ATL System is intended for use in non-traffic applications.

Operation and Maintenance
Your Infiltrator ATL System has no advanced operating instructions. Proper use of the system as noted above is the primary operating concern.

Maintenance of the Infiltrator ATL System includes the following:

- The septic tank has an effluent filter. It should be cleaned on an annual basis at a minimum.
The septic tank should be pumped on a regular basis. The interval for septic tank pumping varies depending upon use. It is recommended that the septic tank be pumped every 3 to 5 years; however, more frequent pump outs are required whenever the sludge and scum occupy greater than one-third of the working capacity of the tank.

- If present, the alarm system should be tested annually to ensure that it is functional

If at any time you have concerns about the use, operation, or maintenance of your Infiltrator ATL System, contact the Infiltrator Water Technologies’ Technical Department at 1-800-221-4436.

System Start-up
There are no specific requirements for placing the Infiltrator ATL System into service. Any electrical and/or alarm components should be tested at the time of system start-up.

Intermittent Use
The Infiltrator ATL System is designed for intermittent/seasonal use, and requires no special attention if it is to be placed out of use for extended periods of time.

Trouble Shooting
In the event that any of the following indicators arise, contact your qualified onsite wastewater system professional.

- Wastewater back-up into the dwelling
- Persistent septic odour
- Unusually wet area atop and/or around the system
- “Breakout” of effluent along the side of a slope or other landscape feature

Repair
A qualified onsite wastewater system professional should be contacted when there are indications of malfunction with the Infiltrator ATL System. When visiting the site, the qualified onsite wastewater system professional should, at a minimum, do the following:

- Assess the present condition of the Infiltrator ATL System and the surrounding area
- Research the history of use, including water volume use and contaminants
- Evaluate the site for groundwater intrusion
- Inspect the septic tank
- Inspect the ground surface along the Infiltrator ATL System conduit lines
- Check faucet and toilet function

Upon completion of the site visit, the qualified onsite wastewater system professional should contact the Infiltrator Water Technologies’ Technical Department with the inspection report.
Sampling Device
These installation instructions are for the Infiltrator ATL Systems in Ontario. Infiltrator ATL Systems may only be installed according to this manual, the BMEC Authorization, and the OBC in effect at the time of design.

If unsure of the installation requirements for a site, contact the licensed professional responsible for the design. If unsure of the use of the Infiltrator ATL System, contact Infiltrator Water Technologies. A building permit issued by the local building department, health unit, or conservation authority must be issued prior to installation/ construction of any Infiltrator ATL System.

Before You Begin

### Materials and Equipment Needed

- Infiltrator ATL System conduits
- System Sand
- PVC pipe and couplings
- Backhoe
- Laser, transit or level
- Shovel and rake
- Endcaps
- 100 mm internal corrugated pipe couplers
- Tape measure

**Common practices shall apply to the installation of the Infiltrator ATL System. These include, but are not limited to:**

- avoid soil compaction on the infiltrative surface area, including all areas downslope of a sloped system; and
- install the Infiltrator ATL System conduit and system sand on the same day that the system footprint is excavated/exposed.

The use of tracked vehicles for material installation is required.

### Excavating and Preparing the Site

**NOTE:** The Infiltrator ATL System may not be installed during periods when the soil is sufficiently wet to exceed its plastic limit, as this causes machinery to smear the soil.

1. Stake out the locations of tank(s), pipes, conduit rows, and corners of the system to be scarified/excavated, per design. Set the elevations as shown on the approved plan. [Note: The proper elevation of solid PVC header line going to each Infiltrator ATL conduit row should be determined to ensure compliance with the required system bottom depth as shown on the approved permit. This height may vary dependent on system height and configuration used.]

2. Install sedimentation and erosion control measures. **NOTE:** The installation of temporary drainage swales/berms (surface diversions) may be necessary to protect the site during rainfall events.

3. Excavate the absorption bed area and scarify the ground, per design.

4. Rake the bed bottom and sides (when applicable) if smearing has occurred during excavation. Remove large stones and cut off protruding roots, fill voids with compacted system sand. **NOTE:** In fine textured soils (silts and clays), avoid walking on the excavation bottom to prevent compaction and loss of soil structure.

5. Verify that the absorption bed area is at the proper slope from side-to-side and from end-to-end using a level, transit, or laser.

### Installing the System

1. Install the system sand footprint layer over the entire Infiltrator ATL System area as per design. System sand should be leveled and stabilized prior to introduction of the Infiltrator ATL conduit. Installer should retain records verifying that system sand meets the specifications as described in the BMEC Authorization (See Page 2 of this manual, “System Sand”). Remove plastic stretch wrap from Infiltrator ATL conduits.

2. Place Infiltrator ATL conduits on the surface of the system sand, arranged in the configuration shown on the system design. Using the provided 100 mm-diameter internal pipe couplings, connect the Infiltrator ATL conduits end-to-end to create rows of the required length.

3. Infiltrator ATL conduit shall be installed level. A laser level or transit is recommended to ensure proper alignment.

Contact Infiltrator Water Technologies at 1-800-221-4436 for additional technical and product information.
4. Infiltrator ATL conduit rows shall be:
   - installed on a level plane with one another, or stepped to suit the site topography;
   - be separated by a minimum of 150 mm of system sand; and
   - be installed with the white stripe/seam oriented in the 12 o’clock position.

6. Once the Infiltrator ATL conduit is placed on the surface of the system sand and distribution piping is connected to the conduits per design, additional system sand shall be ladled between and to the top of each of the Infiltrator ATL conduit rows. System sand shall also be installed on each side and at each end of the backfilled Infiltrator ATL conduit rows, per the design. This additional system sand shall be stabilized. Where possible all machine work should be done from the uphill side of the infiltration area to reduce possible compaction of the receiving soil area.

**Installing the Sampling Port System**

Purchase the preassembled sampling port components from your authorized Infiltrator ATL System distributor.

Upon completion of infiltrative surface area preparation, and immediately prior to installation of system sand:

1. At a distance of at least 3 m and no greater than 6 m from the front end of the ATL conduit rows, as determined by the location of the distribution box, excavate a level, 100 mm-deep by 3m long trench into the infiltrative surface at the base of the system sand, directly below the first row of ATL conduits. (Note: the sampling port trench must be level in all instances.)

2. Parallel to this trench, to the outside aspect of the bed, excavate a level, 200-mm-deep by 3m long trench into the infiltrative surface at the base of the system sand.

3. Place the collection pipe in the more-shallow trench, and the discharge pipe in the deeper trench.

4. Attach the both pipes to the collection reservoir.

5. Cut a 150 mm-diameter PVC pipe to the desired length, ensuring the pipe will extend a minimum of 150 mm above the elevation of final grade. Attach this access pipe to the collection reservoir.

6. Install a removable, water-tight, secure cap on the top of this access pipe.

**Covering the Infiltrator ATL System**

*NOTE: Before backfilling, the Infiltrator ATL System must be inspected in accordance with the requirements of the building permit and the OBC.*

1. Material placed around the system sand and atop the Infiltrator ATL conduit may be additional system sand or material which meets the requirements of the OBC. However, the final 150 mm placed atop or adjacent to the Infiltrator ATL System shall be comprised of breathable sandy loam - no clay).

2. Backfill the absorption bed by placing material over the Infiltrator ATL System. It is best to mound several extra cm of soil over the finish grade to allow for settling. This also ensures that runoff is diverted away from the system.

*NOTE: Do not drive over the system while backfilling in sand.*

3. After the absorption bed is covered, the site should be seeded or sodded. Ensure that sand-based sod, and not clay-based sod, is used to prevent erosion.

*NOTE: If the system is for new home construction, it is important to leave marking stakes along the boundary of the system. This will notify contractors of the system location so they will not cross it with equipment or vehicles.*
INTEGRATOR WATER TECHNOLOGIES, LLC ("Infiltrator")

ATL SYSTEM STANDARD LIMITED WARRANTY

(a) The structural integrity of the Infiltrator ATL System conduits manufactured by Infiltrator (collectively referred to as “Units”), when installed and operated in a leachfield of an onsite septic system in accordance with Infiltrator's installation instructions, is warranted to the original purchaser (“Holder”) against defective materials and workmanship for one year from the date upon which Letter of Certification is issued for the septic system containing the Units provided, however, that if a septic permit is not required for the septic system by applicable law, the one (1) year warranty period will begin upon the date that installation of the septic system commences. In order to exercise its warranty rights, Holder must notify Infiltrator in writing at its corporate headquarters in Old Saybrook, Connecticut within fifteen (15) days of the alleged defect. Infiltrator will supply replacement Units for those Units determined by Infiltrator to be defective and covered by this Limited Warranty. Infiltrator’s liability specifically excludes the cost of removal and/or installation of the Units.

(b) THE LIMITED WARRANTY AND REMEDIES IN SUBPARAGRAPH (a) ARE EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE UNITS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

(c) This Limited Warranty shall be void if any part of the ATL System components is manufactured by anyone other than Infiltrator. The Limited Warranty does not extend to incidental, consequential, special or indirect damages. Infiltrator shall not be liable for penalties or liquidated damages, including loss of production and profits, labor and materials, overhead costs, or other losses or expenses incurred by the Holder or any third party. Specifically excluded from Limited Warranty coverage are damage to the Units due to ordinary wear and tear, alteration, accident, misuse, abuse or neglect of the Units; the Units being subjected to vehicle traffic or other conditions which are not permitted by the installation instructions; failure to maintain the minimum ground covers set forth in the installation instructions; the placement of improper materials into the system containing the Units; failure of the Units or the septic system due to improper siting or improper sizing, excessive water usage, improper grease disposal, or improper operation; or any other event not caused by Infiltrator. This Limited Warranty shall be void if the Holder fails to comply with all of the terms set forth in this Limited Warranty.

Further, in no event shall Infiltrator be responsible for any loss or damage to the Holder, the Units, or any third party resulting from installation or shipment, or from any product liability claims of Holder or any third party. For this Limited Warranty to apply, the Units must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and Infiltrator’s installation instructions.

(d) No representative of Infiltrator has the authority to change this Limited Warranty in any manner whatsoever, or to extend this Limited Warranty. No warranty applies to any party other than the original Holder.

* * * * * *

The above represents the standard Limited Warranty offered by Infiltrator. A limited number of states and counties have different warranty requirements. Any purchaser of Units should contact Infiltrator's corporate headquarters in Old Saybrook, Connecticut, prior to such purchase, to obtain a copy of the applicable warranty, and should carefully read that warranty prior to the purchase of Units.