Wastewater Dispersal Products\(^1\) Approved by the State of NC (Effective: August 9, 2017)

<table>
<thead>
<tr>
<th>Approval Number</th>
<th>Manufacturer</th>
<th>System or Model Name And Applicable Dispersal Area Product/Components(^1)</th>
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</thead>
</table>
| JWWS-1993-1-R7A| American Manufacturing | **American Perc-Rite\(^{®}\) Subsurface Drip System, Anaerobic**  
• Netafim Bioline drip tubing with built-in emitters on 2 foot centers with a nominal flow rate of 0.61 to 0.65 gallons per hour per emitter  
• American Perc-Rite compression adapters  
• American Perc-Rite insert adapters  
• American Perc-Rite compression fittings | 7/1/2017                                           |
| JWWS-1993-01-R6B| American Manufacturing | **American Perc-Rite\(^{®}\) Subsurface Drip System, Aerobic**  
• Netafim Bioline drip tubing with built-in emitters on 2 foot centers with a nominal flow rate of 0.61 to 0.65 gallons per hour per emitter  
• American Perc-Rite compression adapters  
• American Perc-Rite insert adapters  
• American Perc-Rite compression fittings | 7/1/2017                                           |
| JWWS-1995-04-R2 | Cultec, Inc.       | **Pre-formed HDPE chambers**  
• Contactor EZ-24  
• Contactor 75  
• Contactor 100  
• Contactor 125  
• Field Drain Panel C-1  
• Field Drain Panel C-2  
• Field Drain Panel C-3  
• Field Drain Panel C-4 | 7/1/2017                                           |
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| JWWS-2001-01    | Delta Environmental Products, Inc. | **Delta’s Subsurface Drip System**  
  - Geoflow Wasteflow PC dripline with built-in pressure compensating emitters on 24” spacing  
  - Netafim Bioline drip tubing with built-in pressure-compensating emitters on 24” centers delivering a nominal flow of 0.62 or 0.92 gallons per hour per emitter  
  - Manufacturer-approved lockslip couplings (used to connect two emitting driplines together) within the dispersal area | 7/1/2017 |
| JWWS-1995-03-R7 | EZflow, LP, a wholly owned subsidiary of Infiltrator Water Technologies, LLC | **Expanded polystyrene aggregate particles contained in cylindrical high strength netting with or without an integrated corrugated, perforated pipe and pre-fabricated geotextile, plus manufacturer-approved internal coupling devices used to connect pipe-containing bundles**  
  - EZ1003T  
  - EZ1003T-GEO  
  - EZ1203T  
  - EZ1203T-GEO  
  - EZ1203H*  
  - EZ1203H-GEO*  
  *Central cylinder with offset 4-inch pipe may be used in LPP | 7/1/2017 |
| JWWS-2007-01-R2 | E-Z Treat | **E-Z Treat Subsurface Wastewater Drip System**  
  - Geoflow Wasteflow PC dripline with built-in pressure compensating emitters  
  - Geoflow compression adapters  
  - Geoflow lock-slip fittings | 7/1/2017 |
| JWWS-2003-01    | Various manufacturers | **Component Substitution for 4” Perforated Corrugated Plastic Tubing in Nitrification Lines**  
  - 4” dia. pipe complying with ASTM F405 (superceded by ASTM F667/F667M), ASTM D 2729, or ASTM D 2751¹ and having 3 rows of 0.5” dia. to 0.75” dia. holes spaced longitudinally at approximately four inches on centers and equally spaced 120 degrees on centers around the periphery or three rows may be located in the lower portion of the pipe, the outside rows being approximately on 120-degree centers | 7/1/2017 |
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| JWWS-2000-02R   | Geoflow, Inc. | Geoflow’s Subsurface Drip System  
- Geoflow Wasteflow PC dripline with built-in emitters  
- Geoflow compression adapters  
- Geoflow lock-slip fittings | 7/1/2017 |
| JWWS-2012-01    | ICC Technologies, LLC (Now Infiltrator Water Technologies) | Expanded polystyrene aggregate particles contained in cylindrical high strength netting and fabric with or without an integrated corrugated, perforated pipe, plus manufacturer-approved internal coupling devices used to connect pipe-containing bundles  
- FTSG123H-1 OC | 7/1/2017 |
| JWWS-2002-02-R3 | Plastic Tubing Industries of Georgia, Inc. | Multi-Pipe trench system 11-Pipe Model  
4” dia. HDPE corrugated pipe, including void pipe with a minimum 6 in² per linear foot open area created from slots and holes and distribution pipe, with two rows of holes from 45 to 60 degrees off the bottom centerline and a top reference line, prefabricated into a bundle using plastic bands | 7/1/2017 |
| JWWS-2010-01-R4 | Infiltrator Systems, Inc. and its successors | Pre-formed HDPE or polypropylene chambers  
- Infiltrator Quick4 Plus Standard LP (polypropylene)  
- Quick4 Plus All-in-One 8 Endcap  
- Arc 36 LP (polypropylene or polyethylene)  
- Arc 36 LP end plate | 7/1/2017 |
| JWWS 2015-02    | Presby Environmental Inc. | Presby Advanced Enviro-Septic (AES) system  
- Enviro-Septic (AES) HDPE perforated pipe with external ridges and internal skimmers, Bio-Accelerator fabric, plastic fiber mat and geotextile fabric wrap, and manufacturer-approved, pre-formed HDPE couplings and offset adapters | 7/1/2017 |
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<tr>
<td>IWWS-1993-02-R16</td>
<td>Infiltrator Water Technologies, LLC</td>
<td>Pre-formed HDPE or polypropylene chambers, including angle chamber sections</td>
<td>7/1/2017</td>
</tr>
</tbody>
</table>

- Infiltrator Standard
- Standard SideWinder (polyethylene)
- Infiltrator High Capacity (polyethylene)
- Quick4 Plus Standard
- Quick4 Standard
- Quick4 Standard-W
- Standard SC
- Standard SideWinder SC (polypropylene)
- Equalizer 36
- Quick4 Equalizer 36
- Quick4 High Capacity
- Quick4 Equalizer 24
- High Capacity SideWinder (polypropylene)
- Contour Wedge
- EQ36 Swivel
- Standard Contour Swivel
- Quick4 Standard MultiPort Endcap
- Quick4 EQ 24 MultiPort Endcap
- Quick4 EQ 36 MultiPort Endcap
- Quick4 High Capacity MultiPort Endcap
- Quick4 Plus Standard All-in-One 12 Endcap
- BioDiffuser Standard Model
- Angle Chamber section
- Bio 3
- Arc 36
- Arc 24
- Arc 36 HC
- Arc 24 Side Port Coupler (SPC)
- Arc 36 Side Port Coupler (SPC)
- Arc 36 HC Side Port Coupler (SPC)
- Arc 36 SPC Endcap
- Arc 36 HC SPC End Cap
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| CDWS-2011-01    | Clearstream Wastewater Systems, Inc. | Clearstream Subsurface Drip Dispersal System  
  • Geoflow Wasteflow Classic with built-in non-pressure-compensating emitters on 12” to 24” centers with a nominal flow rate of 1.0 gallons per hour per emitter  
  • Geoflow compression adapters  
  • Geoflow lock-slip fittings | 7/1/2017 |
| CDWS 2012-01    | Hoot<sup>®</sup> Systems, Inc. | Hoot Subsurface Drip Dispersal System  
  • Netafim PC polyethylene dripline with built-in pressure compensating emitters with a nominal flow rate of 0.61 to 0.65 gallons per hour per emitter  
  • Geoflow Wasteflow Classic low-density polyethylene (LDP) tubing (16-, 18-, or 20-mm in diameter) with built-in pressure compensating emitters on 12” to 24” centers with a nominal flow rate of 0.53 or 1.02 gallons per hour per emitter;  
  • Manufacturer approved lockslip couplings (used to connect two Wasteflow driplines) | 7/1/2017 |
| CDWS 2010-1-R2B (Piedmont) | Infiltrator Systems, Inc. and its successors | Pre-formed polypropylene chambers  
  • Quick4 Plus Standard LP  
  • Quick4 Plus All-in-One 8 Endcap  
  • Quick4 Plus Periscope | 7/1/2017 |
| AWWS 2005-02-R6 | EZflow, LP, a wholly owned subsidiary of Infiltrator Water Technologies, LLC | Expanded polystyrene aggregate particles contained in cylindrical high strength netting with or without an integrated corrugated, perforated pipe and pre-fabricated geotextile, plus manufacturer-approved internal coupling devices used to connect pipe-containing bundles  
  • EZ1203H  
  • EZ1203H-GEO | 7/1/2017 |
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| AWWS 2005-01-R5 | Infiltrator Water Technologies, LLC | Pre-formed HDPE or polypropylene chambers  
- Infiltrator Standard (polyethylene)  
- Standard SideWinder (polyethylene)  
- High Capacity (polyethylene)  
- Quick4 Plus Standard  
- Quick4 Standard-W  
- Standard SC  
- Standard SideWinder SC (polypropylene)  
- High Capacity SideWinder (polypropylene)  
- Contour Wedge  
- Standard Contour Swivel  
- Quick4 Standard MultiPort Endcap  
- Quick4 High Capacity MultiPort Endcap  
- Quick4 Plus Standard All-in-One 12 Endcap  
- BioDiffuser Standard Model (polyethylene)  
- BioDiffuser Angle Chamber Section  
- ARC 36 (polypropylene or polyethylene)  
- ARC 36 Side Port Coupler (SPC)  
- ARC 36 SPC Endcap | 7/1/2017 |

Approved via Title 15A Subchapter 18A, Section .1900 of the North Carolina Administrative Code

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<thead>
<tr>
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<th>Component Specifications</th>
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<tbody>
<tr>
<td>15A NCAC 18A .1955(f) &amp; (h)</td>
<td>State of North Carolina</td>
<td>4&quot; dia. or 6&quot; dia. plastic corrugated pipe certified as complying with ASTM F405 (superceded by ASTM F667/F667M) and having 3 rows of 0.5&quot; dia. to 0.75&quot; dia. holes spaced longitudinally at approximately four inches on centers and equally spaced 120 degrees on centers around the periphery or three rows may be located in the lower portion of the pipe, the outside rows being approximately on 120-degree centers</td>
<td>7/1/2017</td>
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<tr>
<td><strong>15A NCAC 18A .1956(3)(a)(i)</strong></td>
<td>State of North Carolina</td>
<td>8” dia. or 10” dia. corrugated polyethylene tubing certified as complying with ASTM F667 having two rows of holes, each hole between 0.375” dia. and 0.5” dia., located 120 degrees apart along the bottom half of the pipe (each 60 degrees from the bottom center line) and staggered so that one hole is present in the valley of each corrugation; tubing shall be encased in spun, bonded, or spun-laced nylon, polyester, or nylon/polyester blend nylon filter wrap meeting the following minimum specifications: 1 ounce/square yard, 23 pounds grab tensile strength (machine direction), 6.2 pounds (machine) and 5.1 pounds (cross) trapezoid tear strength, 40 pounds per square inch Mullent burst strength, and 500 cubic feet/minute/square foot at 0.5” of water pressure differential Frazier air permeability</td>
<td>7/1/2017</td>
</tr>
<tr>
<td><strong>15A NCAC 18A .1956(3)(a)(ii)</strong></td>
<td>State of North Carolina</td>
<td>Prefabricated, permeable block panel system utilizing both horizontal and vertical air chambers and constructed to promote downline and horizontal distribution of effluent and 1.25” diameter perforated PVC 160 psi or stronger pressure rated pipe, perforated with minimum 0.125 or 0.188 inch-diameter holes spaced between 3.5 to 4.5 feet on center</td>
<td>7/1/2017</td>
</tr>
<tr>
<td><strong>15A NCAC 18A .1956(7)</strong></td>
<td>State of North Carolina</td>
<td>4” dia. or 6” dia. corrugated polyethylene tubing certified as complying with ASTM F667 and having 3 rows of 0.5” dia. to 0.75” dia. holes spaced longitudinally at approximately four inches on centers and equally spaced 120 degrees on centers around the periphery or three rows may be located in the lower portion of the pipe, the outside rows being approximately on 120-degree centers or 1” dia. To 2” dia. perforated PVC 160 psi or stronger pressure rated pipe, perforated with minimum 0.125-inch-diameter holes spaced between 5 and 10 feet on center</td>
<td>7/1/2017</td>
</tr>
<tr>
<td><strong>15A NCAC 18A .1957(a)(1)(A)</strong></td>
<td>State of North Carolina</td>
<td>1” dia. to 2” dia. PVC 160 psi or stronger pressure rated pipe, perforated with minimum 0.125-inch-diameter holes spaced between 5 and 10 feet on center</td>
<td>7/1/2017</td>
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1. In accordance with S.L. 2017-139. Determination of what constitutes a dispersal field product is based upon product being located within the trench that disperses wastewater to the soil. Excludes supply lines, distribution boxes, and manifolds.

2. Note: Controlled Demonstration approval status (CDWS) changed to Provisional approval status (PWWS) by Session Laws 2015-286, s. 4.15(a), effective October 22, 2015.

   ASTM F667 – Standard Specification for 3 through 24 in. corrugated Polyethylene Pipe and Fittings
   ASTM D2729 – Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings