

4.19 Pressure Distribution System

Revision: June 5, 2014

Installer registration permit: Complex

Licensed professional engineer required: Yes

4.19.1 Description

A pressure distribution system is a low-pressure system of small-diameter perforated plastic pipe laterals, manifold, pressure transport line, dosing chamber, and a pump or siphon. The pressure distribution system is used when it is desirable to:

1. Maintain a uniform application of effluent across the drainfield.
2. Treat and dispose of effluent in the uppermost levels of the soil profile.
3. Aid in mitigating the potential contamination of ground water.
4. Improve the performance and increase the life span of a drainfield.

4.19.2 Approval Conditions

1. Pressure distribution shall be used in drip distribution, pressurized grey water systems, sand mounds, intermittent sand filters, recirculating gravel filters, drainfields that exceed 1,500 ft² in total trench bottom (IDAPA 58.01.03.008.4), and large soil absorption systems.
2. Pressure distribution may be used in in-trench sand filters to obtain a reduced separation distance to permeable limiting layers, standard or basic alternative systems at the applicant's request, and in environmentally sensitive areas.
3. Geotextile filter fabrics are required to be used for cover over drainfield aggregate in pressure distribution systems.
4. All design guidance related to dosing chambers, in-tank pumps, and pump to gravity distribution systems contained herein shall be followed for any alternative system using these components regardless of whether the drainfield is pressurized or not (IDAPA 58.01.03.004.10).
5. The design guidance provided herein for piping, pump, and dosage requirements is meant to be a simple design strategy and is not intended to supplant or limit engineering design for these components and systems.
6. Plans for systems with designs different than those provided herein and where daily wastewater flows exceed 2,500 gallons shall be reviewed by DEQ.
7. The system must be designed by a PE licensed in Idaho.
8. The design engineer shall provide an O&M manual for the system to the health district prior to permit issuance.
9. The following guides are recommended for use in pressure system design:

Otis, R.J. 1981. *Design of Pressure Distribution Networks for Septic-Tank Absorption Systems*. Madison, WI: University of Wisconsin. Small Scale Waste Management Project Publication No. 9.6. www.soils.wisc.edu/sswmp/pubs/9.6.pdf.