

## 4.20 Pressure Distribution System

### **Description**

A low pressure system of small diameter perforated plastic pipe laterals, manifold, pressure transport line, dosing chamber and a pump or siphon.

### **Conditions for Approval**

1. The pressure distribution system is to be used whenever it is desirable to:
  - a) Maintain a uniform application rate throughout the drain field.
  - b) Treat and dispose of effluent in the uppermost levels of the soil profile.
  - c) Aid in mitigating the potential contamination of ground water in areas of excessive permeability.
  - d) Improve the performance and increase the life span of a drain field.
2. Pressure distribution may be used in sand mounds, sand filters, sand-filled trenches and standard trenches in aquifer-sensitive areas or in large drain fields. Low pressure distribution systems are required for systems that exceed 1,500 ft<sup>2</sup> in total trench bottom area as required by rule (IDAPA 58.01.03.008.04). Geotextile filter fabrics are required to be used for cover over pressure distribution systems.
3. These guidelines provide for a simple strategy of design to assist the non-engineer. They are not intended to supplant or limit engineering design or other low pressure systems. The guidance should not be used where laterals are at different elevations (elevation differences greater than 6") or for systems with daily flows over 2,500 gallons. Plans for systems with designs different than those provided herein shall be reviewed by the Department of Environmental Quality. The following guide is recommended for pressure system design outside of these guidelines:

Otis, R.J. 1981. Design of Pressure Distribution Networks for Septic-Tank Absorption Systems. Small Scale Waste Management Project Publication #9.6. University of Wisconsin, Madison, WI.

### **Design**

1. Laterals
  - a) The lateral length should be shorter than the trench length by at least 6" but not more than one-half the orifice spacing.
  - b) Laterals in trenches should be placed equidistant from each side.
  - c) The lateral spacing in beds is typically 3 to 6 feet. The outside laterals should be placed at one-half the selected lateral spacing from the bed's edge.