

#### 4.20.3.6 Pump to Drop Box

A pump to drop box system may be utilized when an area for drainfield placement is not able to be reached by standard gravity flow from the wastewater generating structure. Standard drainfields located at higher elevations than the septic tank are not required to be designed as a pressure distribution system unless the square footage of disposal area exceeds 1500 square feet. When the drainfield is not pressurized wastewater is conveyed by a pump through a transport (pressure) line to a drop box where effluent pressurization breaks to gravity distribution into the drainfield.

1. Pump selection, transport (pressure) line design, dosage, and dosing chamber or in-tank pump design shall follow the procedures within section 4.20 Pressure Distribution System of the Technical Guidance Manual.
2. Pumps should be sized to effectively deliver a maximum dose of 120 gallons with a maximum pump rate of 10 GPM.
3. Effluent velocity in the transport (pressure) line should be between 2 to 4 feet per second.
4. A drop box should be installed that allows equal gravity distribution to all drainfield trenches.
5. Upon entry into the drop box the effluent line should be angled to the bottom of the box with the effluent line terminating above the high water level of the drop box.
  - a. A ¼ inch hole may be necessary to be drilled in the top of the angle connection to prevent a potential siphon.
6. A complex installer's permit shall be required for installation.
7. The pump to drop box system design may require engineering based upon the regulatory authority's judgment. Pump design should be performed by an engineer licensed in the State of Idaho when elevation gains of greater than 20 feet or lengths of 100 feet are exceeded in effluent transport.

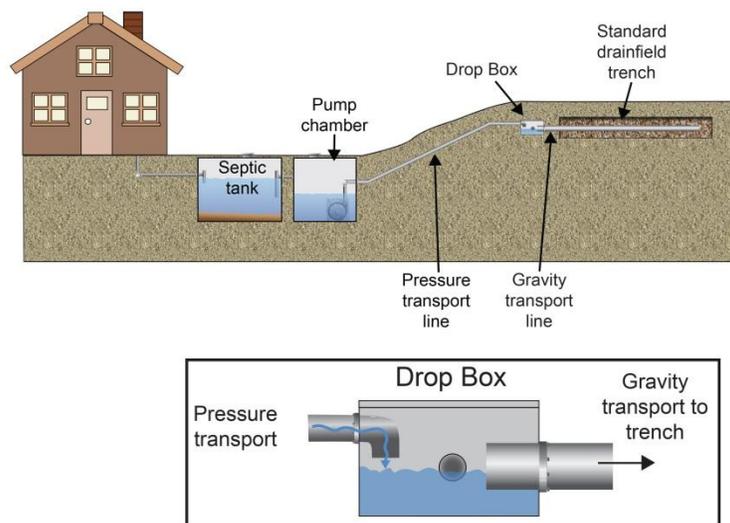


Figure 4-20. Pump to drop box detail.