

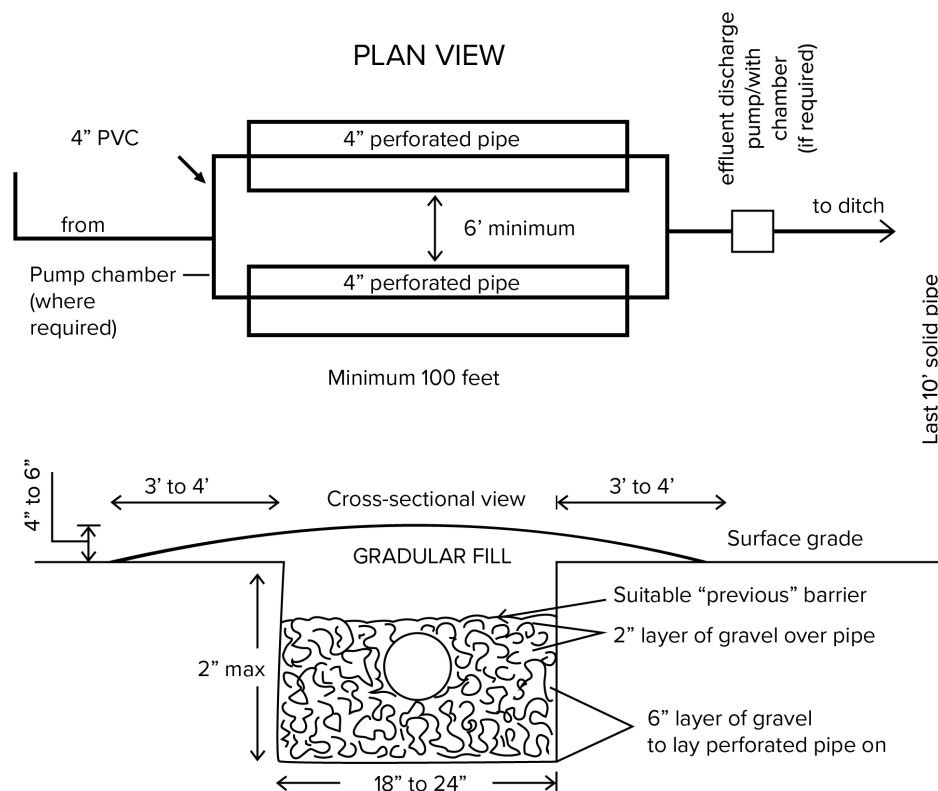
Wastewater Installers

Effluent Reduction Field

An effluent reduction field is designed as a soil absorption field that will both treat and reduce the amount of effluent that drains from a septic system to the surrounding water courses. Individual sewage systems, with a capacity up to and including 1,500 gallons per day (GPD), that produce a treated off-site effluent shall include an effluent reducer as part of the overall system. All effluent reduction systems shall be installed by a licensed installer. Existing field lines cannot be used for the newly installed effluent reduction system. The size of the effluent

reduction system installed has to correspond with the recommended size of the sewerage system. This size corresponds to the "Application for Permit for Installation of On-Site Wastewater Disposal System" (LHS-47) for a particular plant. Additionally, in accordance with the appropriate edition and section of National Sanitation Foundation (NSF) Standard 40 and the applicable provisions of the Louisiana Department of Health Code, a sample port for a sewerage system must be installed immediately downstream of the system.

Design and Dimension Requirements



The effluent reduction field will have similar features to a standard absorption trench. A pumping station can be used if there is not sufficient grade for gravity flow to the discharge point. To help alleviate the force of the pumped effluent, a distribution box, a tee or similar appurtenance can be used to reduce the flow. The bottom of the effluent reduction field must be graded and leveled to promote equal distribution of effect. Each field trench shall be at least 18 inches wide and between 16-24 inches in depth. Porous soils or sands should be used as fill material to allow water to pass in all directions. This fill should be at least 4-6 inches above grade and spread at least 3-4 feet on either side of the trench. Perforated pipe may be used but will require a

6-inch layer of porous material below the pipe, as well. The media should be clean, graded gravel from 0.5-2.5 inches in diameter, but clam or oyster shells may be substituted for gravel in the effluent reduction fields. The distance between individual trenches must be at least 6 feet with one discharge pipe provided. The end of the discharge line must have a 1/2 diameter PVC endcap over the lower half of the end pipe, causing longer retention of the effluent. The minimum total length for the effluent reduction field is based on the treatment capacity of the primary systems in gallons per day (GPD).

Treatment Capacity of Sewerage System	Minimum Total Trench Length
500 GPD or less	100 feet
501-750 GPD	150 feet
751-1,000 GPD	200 feet
1,001-1,500 GPD	300 feet

The maximum length of a single trench is 100 feet. The pipe from the end of the effluent reduction field to the discharge point must be solid. **If the end of the discharge line is more than 2 inches lower than the absorption line, other provisions must be made to cause the effluent to be retained in the reduction field.** A backwater valve must be provided at the end of the effluent reduction field whenever the discharge line is less than 12 inches above the ditch flow line. The effluent reduction field must comply with all minimum requirements for water wells and supply lines. Additionally, they should be a minimum of 10 feet from the property line.

Additional Requirements

The effluent reduction field and its drainage must be a minimum of:

- 50 feet from any private water wells
- 10 feet from any property line
- 100 feet from public water supply wells
- 25 feet from potable water (pressure) lines

References

- <https://www.doa.la.gov/media/j3hnpfdy/51.pdf>
- <https://ldh.la.gov/assets/oph/Center-EH/sanitarian/onsitewastewater/7056.pdf>
- <https://ldh.la.gov/page/wastewater>

Authors

M.P. Hayes, Assistant Professor in the School of Plant,
Environmental and Soil Science and Louisiana Sea Grant

Richard Grabert, Sanitarian Program Specialist for the Louisiana Department of Health

Paula Guient, Assistant Program Administrator, Onsite Wastewater and Compliance
for the Louisiana Department of Health



P3985-J (online) 11/25

The LSU AgCenter and LSU provide equal opportunities in programs and employment.