Efficacy of Bacterial Reductions by Onsite Wastewater Treatment Systems
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Executive Summary

The objective of the research was to study bacterial reductions through a variety of OSSF treatment systems. The researchers isolated treatment through three treatment systems: a septic tank, a submerged flow wetland preceded by a septic tank, and an aerobic treatment unit. The researchers also applied from the three treatment systems to soil columns of Class Ib and III soils. Bacterial reduction through the through the soil column was also measured.

Research findings include:

- During winter and early spring, aerobic treatment resulted in the greatest total coliform reduction.
- During late spring and summer, the septic tank/submerged flow wetland combination resulted in the greatest total coliform reduction.
- Aerobic treatment and septic tank/submerged flow wetlands resulted in a greater reduction in total coliforms when compared to septic tanks alone.
- Leach fields containing higher amounts of clay were more effective in treating wastewater than leach fields with lower amounts of clay.

Author's Recommendations

There were no specific recommendations

Were rule changes identified?

None

Is further researched needed?

No further research was identified by the author or by TCEQ staff.