Evaluation of Drainfield Absorption and Evapotranspiration Capacity January, 2004 Ken Rainwater, Ph.D., P.E., DEE and Andrew Jackson, Ph.D., P.E. Texas Tech University Water Resources Center Grant Contract Number: 582-2-49490

Executive Summary

Te research supplemented earlier research aimed at studying the long-term soil loading rates for drainfields in the Lubbock area. The research monitored drainfields receiving an effluent similar to septic tank effluent and determined the loss to the environment from downward migration beneath the trench and evaporation to the surface. The research also looked at soil and evaporation characteristics throughout the state in order to apply the results statewide.

Author's Recommendations

- Doubling the long-term loading rates in class II and II soils in what is generally the West Texas area; and
- Increasing the spacing between absorptive trenches in the area to 15 to 20 feet to allow for greater losses through evapotranspiration.

Were rule changes identified?

The author feels that the long-term soil loading rates for the West Texas area are too conservative and that when higher loading rates are used, the trenches should be spread out farther on the landscape.

Is further research needed?

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