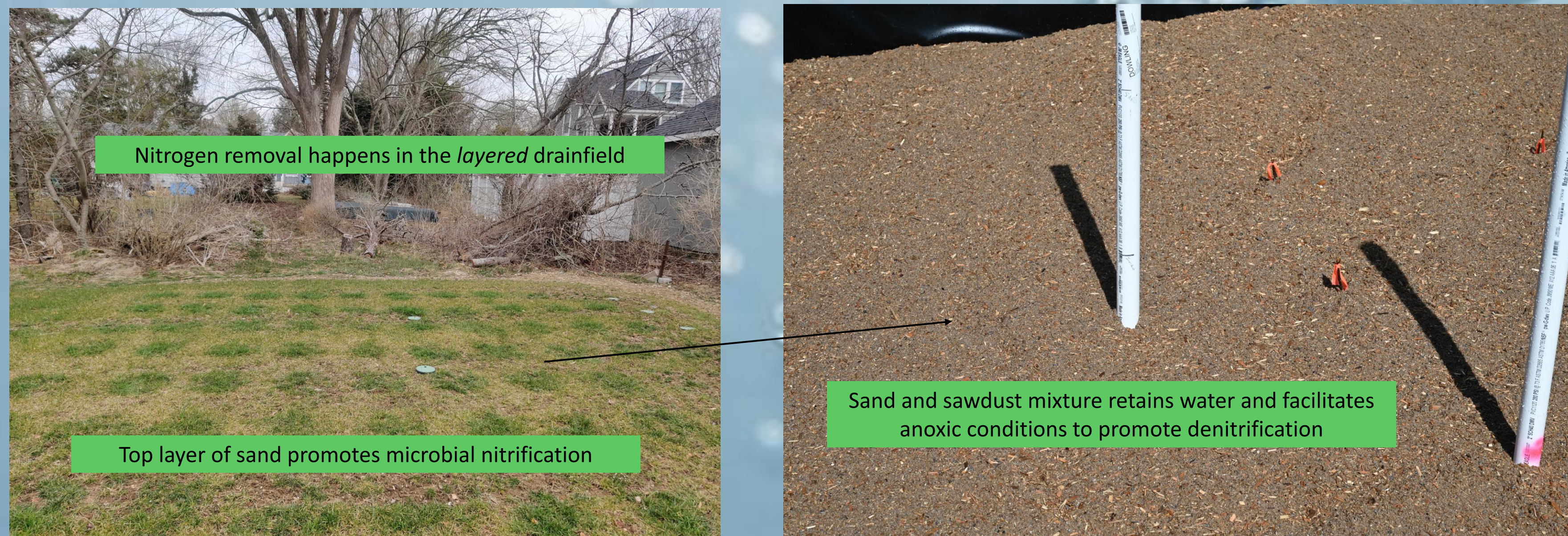


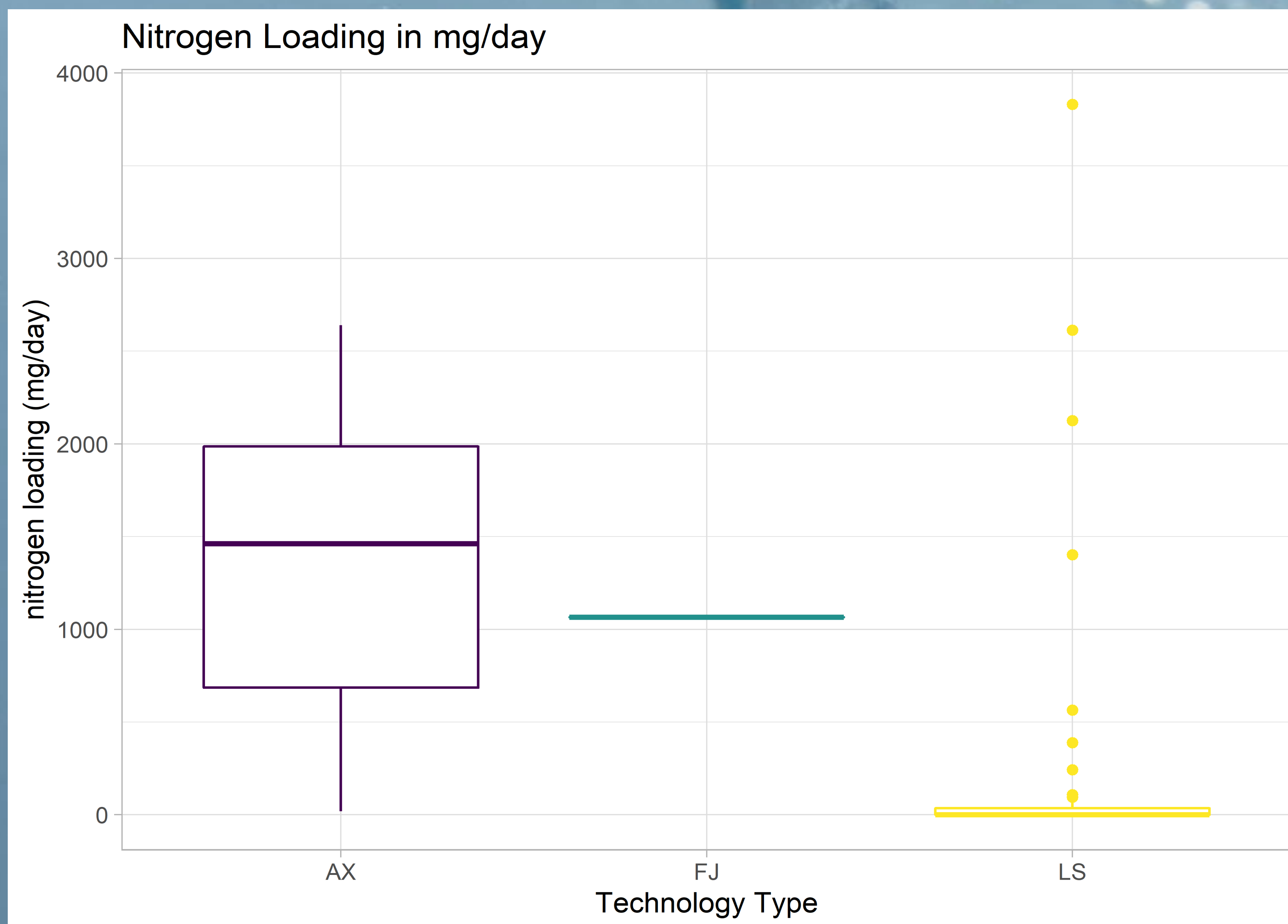
Nitrogen Reducing Septic System Upgrades Measurably Reduce Nitrogen Loading to Watersheds

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Layered Soil Treatment Area (LSTA) Approach to N Reduction



LSTA Perform Comparably to or Better than Existing N Reducing Technologies



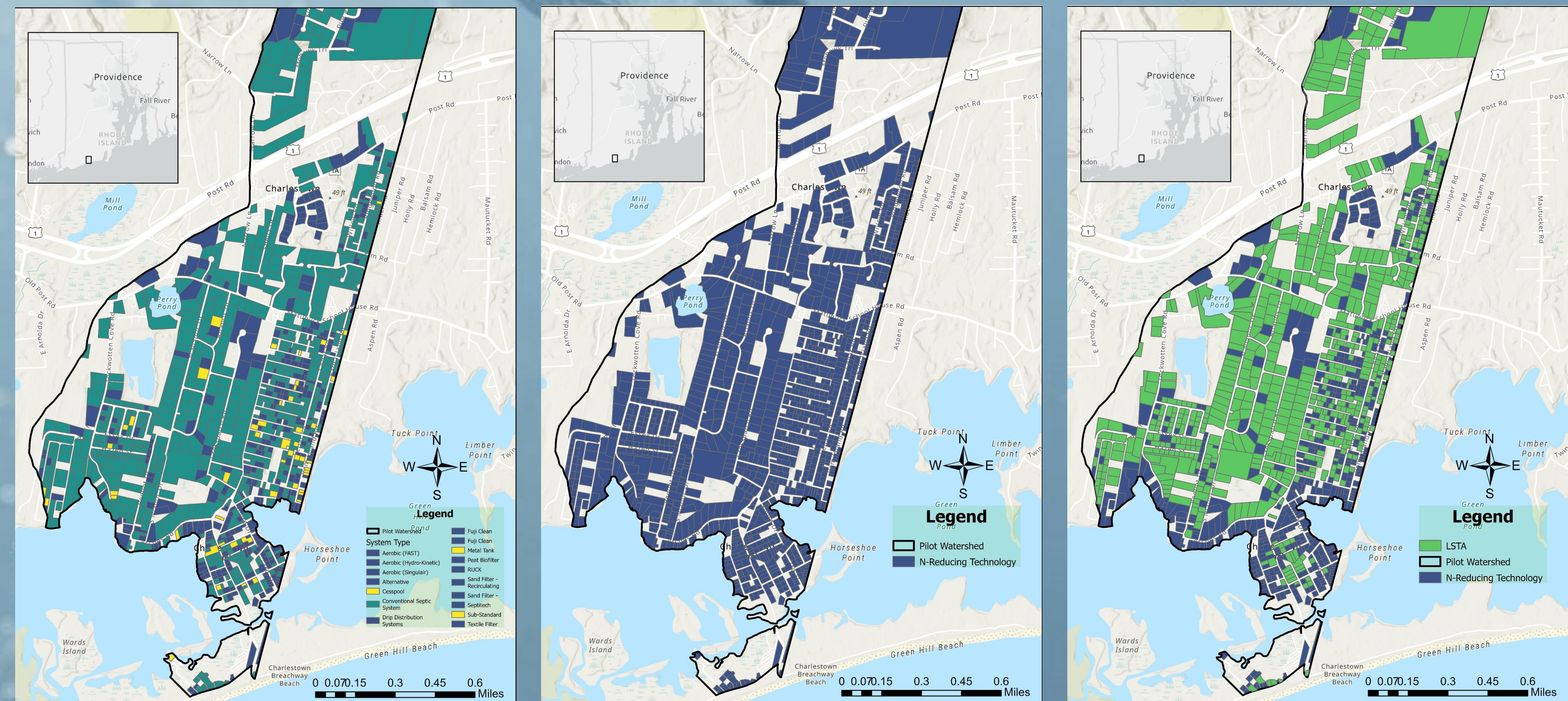
Nitrogen Loading is calculated from concentration and discharge from the system. The nitrogen concentrations in effluent combined with how much water flows through a system determine the mass of nutrients that enter the watershed where that septic system is located.

Conventional systems release 21 kg/year nitrogen

Nitrogen reducing systems release 5.8 kg/year nitrogen

Layered Soil Treatment Areas (LSTA) release 1.87 kg/year nitrogen

Our Pilot Watershed Would Receive Different Mass of Nitrogen With Different Septic Systems



20,146 kg nitrogen per year enter our pilot watershed from septic systems under current conditions

6,983 kg nitrogen per year would be the load if all septic systems were upgraded to nitrogen reducing technologies

4,347 kg nitrogen per year in a scenario where all viable sites are upgraded to use LSTA and the rest are on n-reducing systems

What Would Each of These Scenarios Cost if Installed Today?

Conventional = 816, Sub-standard = 50
Nitrogen reducing = 338, LSTA = 4
\$26,570,100

Nitrogen reducing = 1204
\$36,120,000

Nitrogen reducing = 534
LSTA = 670
\$31,949,250

With a combination of upgrades to proprietary nitrogen reducing septic systems and layered soil treatment areas (LSTA) where viable, our pilot watershed could see a **78.4% reduction of nitrogen loading per year** from septic systems.