

Septage Land Application Overview and Impacts

City of Afton

Planning Commission

December 7, 2015



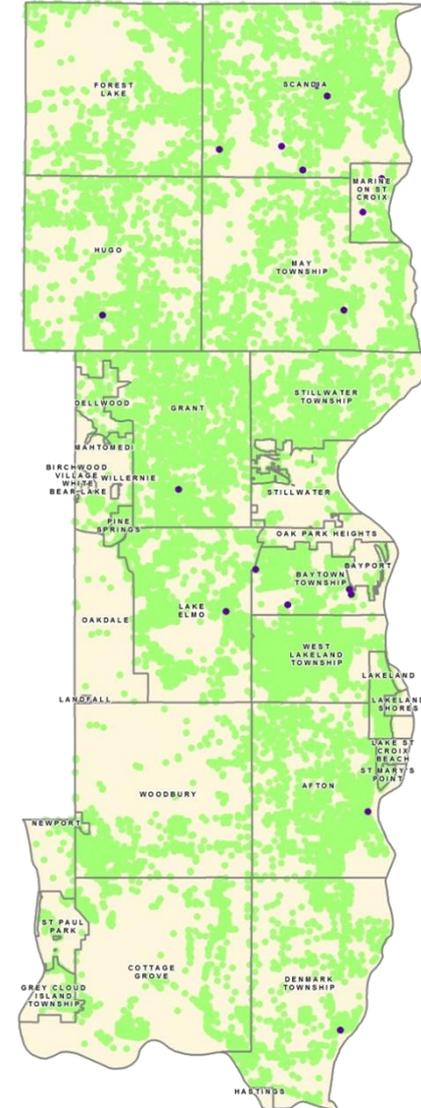
Department of Public Health and Environment

Jeff Travis – Senior Program Manager

Girard Goder – Environmental Program Supervisor

County Role

- County administers Subsurface Sewage Treatment System program in all townships and 17 cities (including Afton)
- Coordinate with Minnesota Pollution Control Agency (MPCA) on rules and planning
- Adopted standards for the land application of septage on April 28, 2015



Requirements Origins

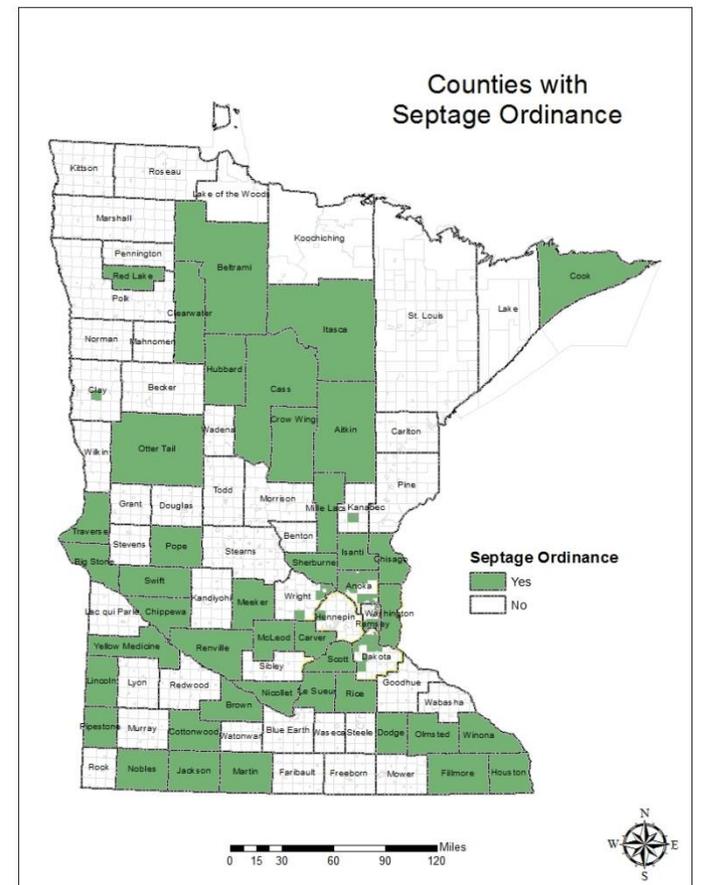
- 40 CFR Part 503
 - The minimum standards which allow the safe application of septage based on the available scientific evidence
- MPCA Guidelines
 - Soil Type
 - Slope Restrictions
 - Setbacks

Septage and Restaurant Grease Trap Waste Management Guidelines



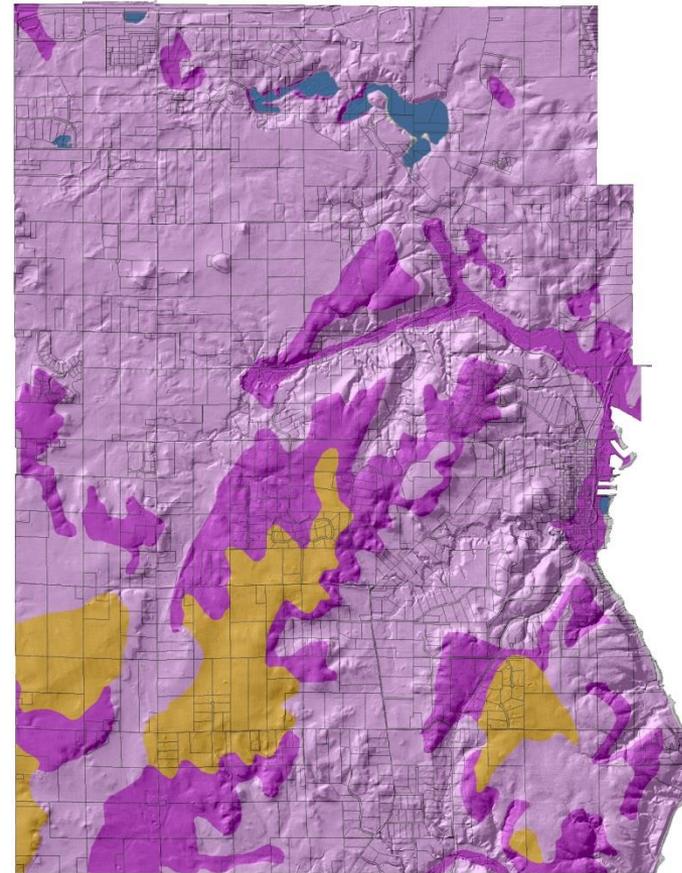
County Requirements

- Obtain a permit prior to septage application
- Includes submittal of “Documentation from the LGU indicating the proposed activity is allowed.”
- Operate in accordance with federal regulations, state guidelines and county standards.
- Annual reporting to the county.
- Incorporate oversight of land spreading activities in compliance with federal regulations and state guidelines
 - Allows Department to assess site suitability
 - Will require a permit prior to land spreading septage
 - Implements policy outlined in the Groundwater Plan
 - Local approval required prior to permit issuance



Environmental Impacts

- The County Groundwater Plan calls for a cautious and protective approach to land application of septage. The Plan calls for a strong regulatory program to ensure the process is done safely and protective of county surface and groundwater.



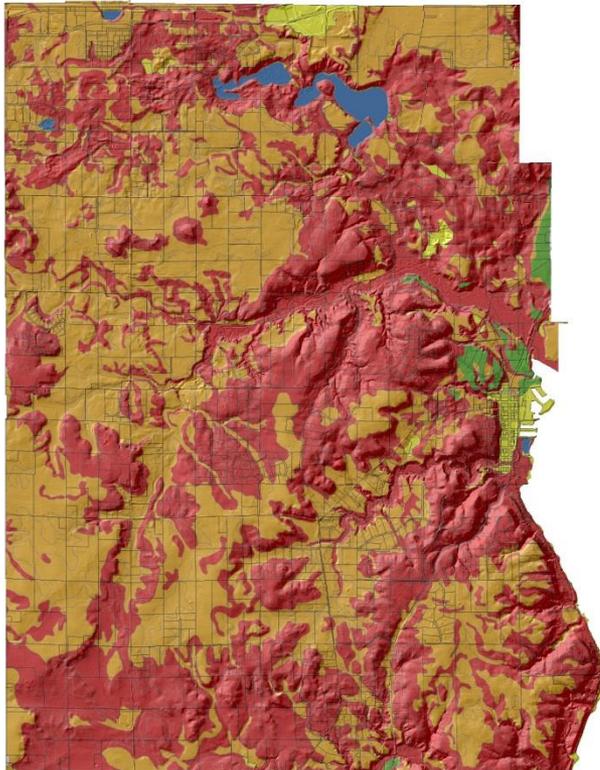
Aquifer Sensitivity



City of Afton



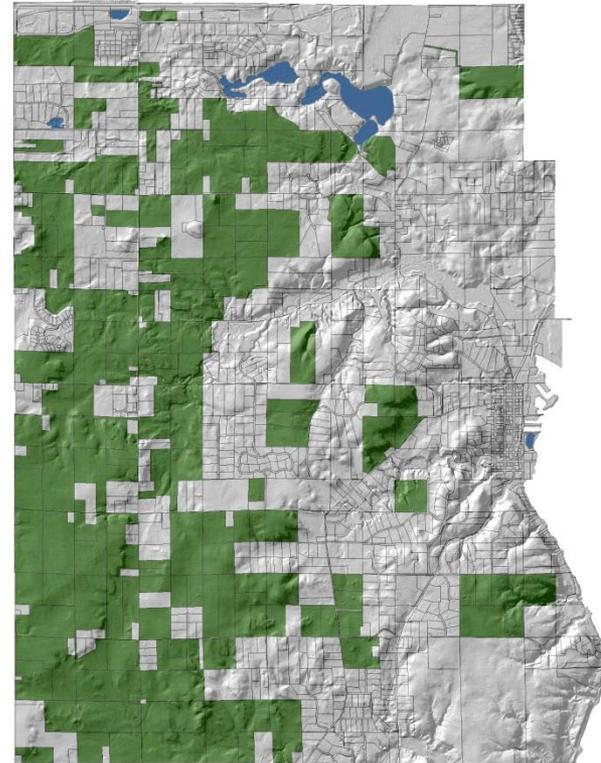
Suitability of Land in Afton



Soil Survey
Septage Land Application Suitability

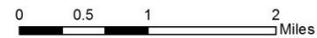
- Not Limited
- Not Rated
- Limited
- Very Limited

City of Afton



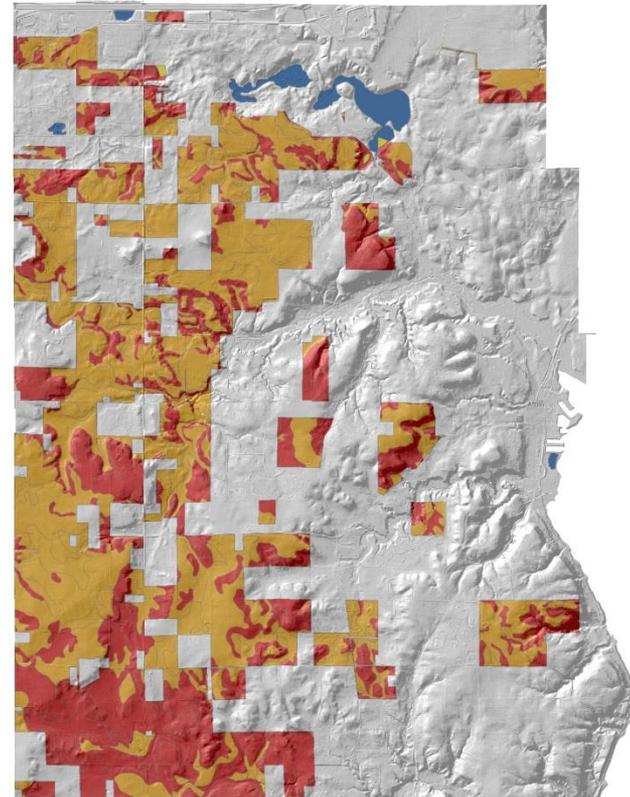
Zoned Agricultural

City of Afton



Suitability of Land in Afton

- Limited land exists which is potentially suitable for the application of septage.



Soil Survey on Land Zoned Agricultural
Septage Land Application Suitability

Not Rated
Limited
Very Limited

City of Afton

0 0.5 1 2 Miles



Injection



Incorporation



Direct Application-Lime



Septage and Animal Manure

- Potential Dangers
 - Chemicals
 - Cadmium
 - Lead
 - Nickel
 - Zinc
 - Medications
 - Pathogens
 - Viruses
 - Bacteria
 - Parasitic worms
 - Fungi



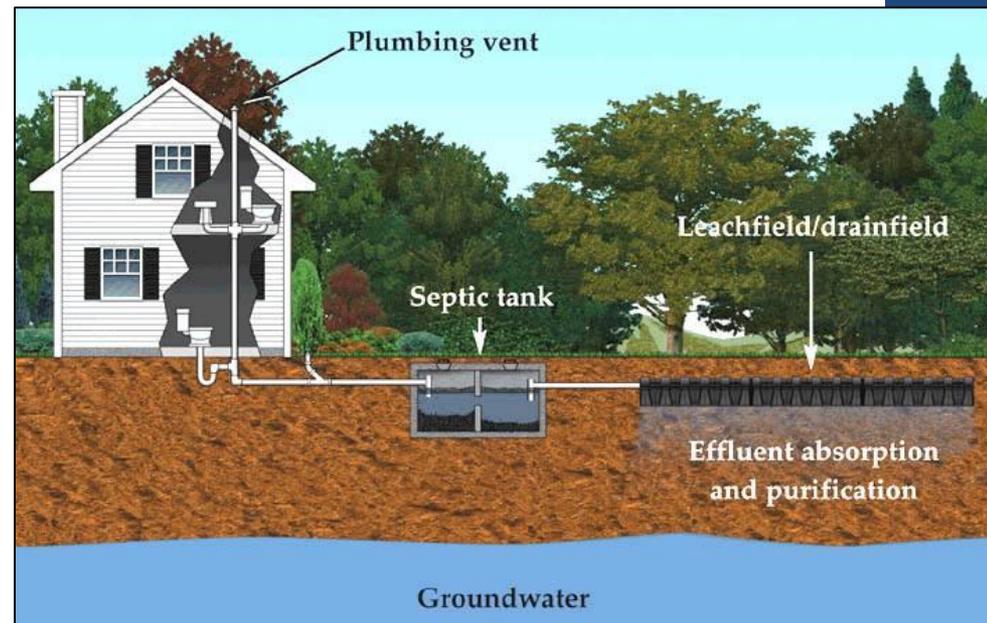
Chemicals / Metals

- Toxic metal concentration in domestic septage are low
- Septic system owners are conscientious about what they flush
- Cleaning chemicals do not tend to accumulate in septage



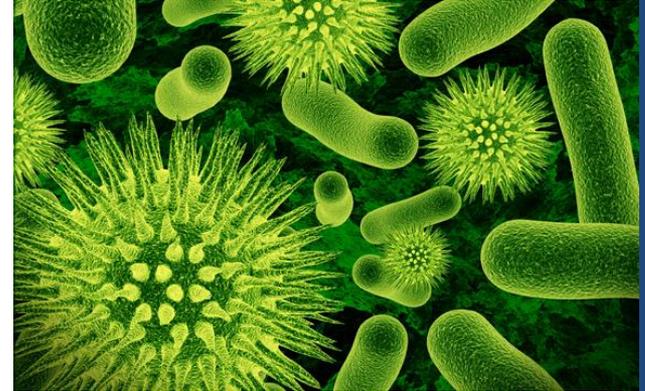
Medication Metabolites

- Domestic animals
 - Antibiotics
 - ~75% pass through unmetabolized
 - Growth Hormones
- Humans
 - Antibiotics
 - Antidepressants
 - Triclosan
 - Endocrine Disruptors



Pathogens

- Pathogens
 - Bacteria
 - Viruses
 - Protozoa
 - Fungi
 - Parasitic Worms
- Time, Distance, Pathogen Reduction
- Harvesting Restrictions
- No Unauthorized Access
- Injected
- Incorporated within 6 hours
- Lime Treatment



Questions?