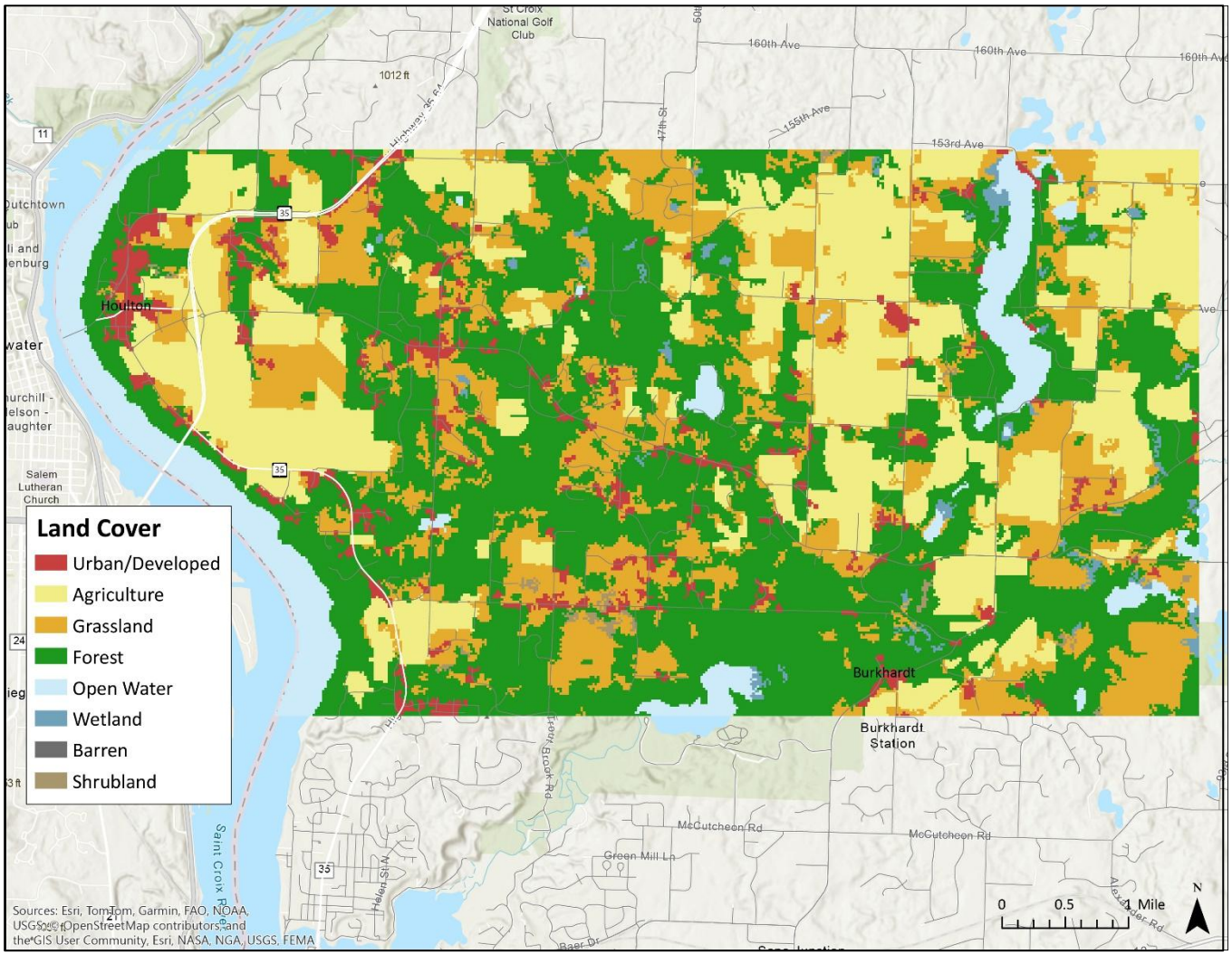
APPENDIX B Town of St. Joseph

Land Cover, Open Water, and Wetlands

Land Cover - WiscLand (Not land use)	Percent
Agriculture	25%
Barren	0%
Forest	43%
Grassland	21%
Open Water	6%
Shrubland	<1%
Urban/Developed	4%
Wetland	1%



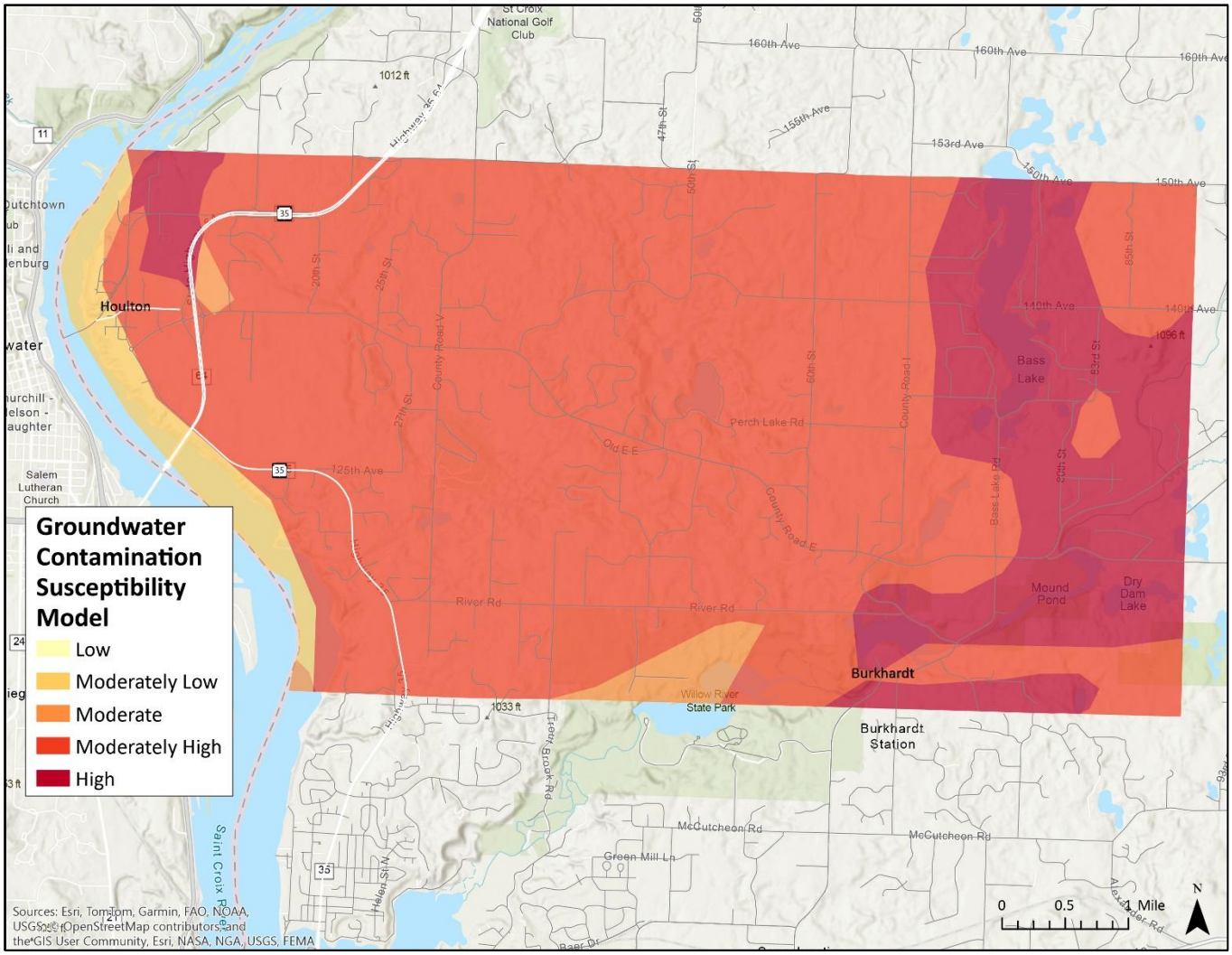
Source: Wisconsin Land Cover Data (WISCLAND 2.0)
https://dnr.wisconsin.gov/maps/WISCLAND

APPENDIX B Town of St. Joseph

Groundwater Susceptibility to Contamination

Five factors contribute to groundwater susceptibility, including: type of soil, bedrock and materials between soil and bedrock; depth to bedrock; and depth to groundwater. Data from the Wisconsin Department of Natural Resources Groundwater Susceptibility Model was divided into five evenly spread categories ranging from high to low. Of the town's total acreage approximately 20% is ranked high susceptibility to contamination, 74% moderately high, 2% moderate, and 4% ranked moderately low susceptibility.

Groundwater Susceptibility to Contamination	Percent of Total
High	20%
Moderately High	74%
Moderate	2%
Moderately Low	4%
Low	0%



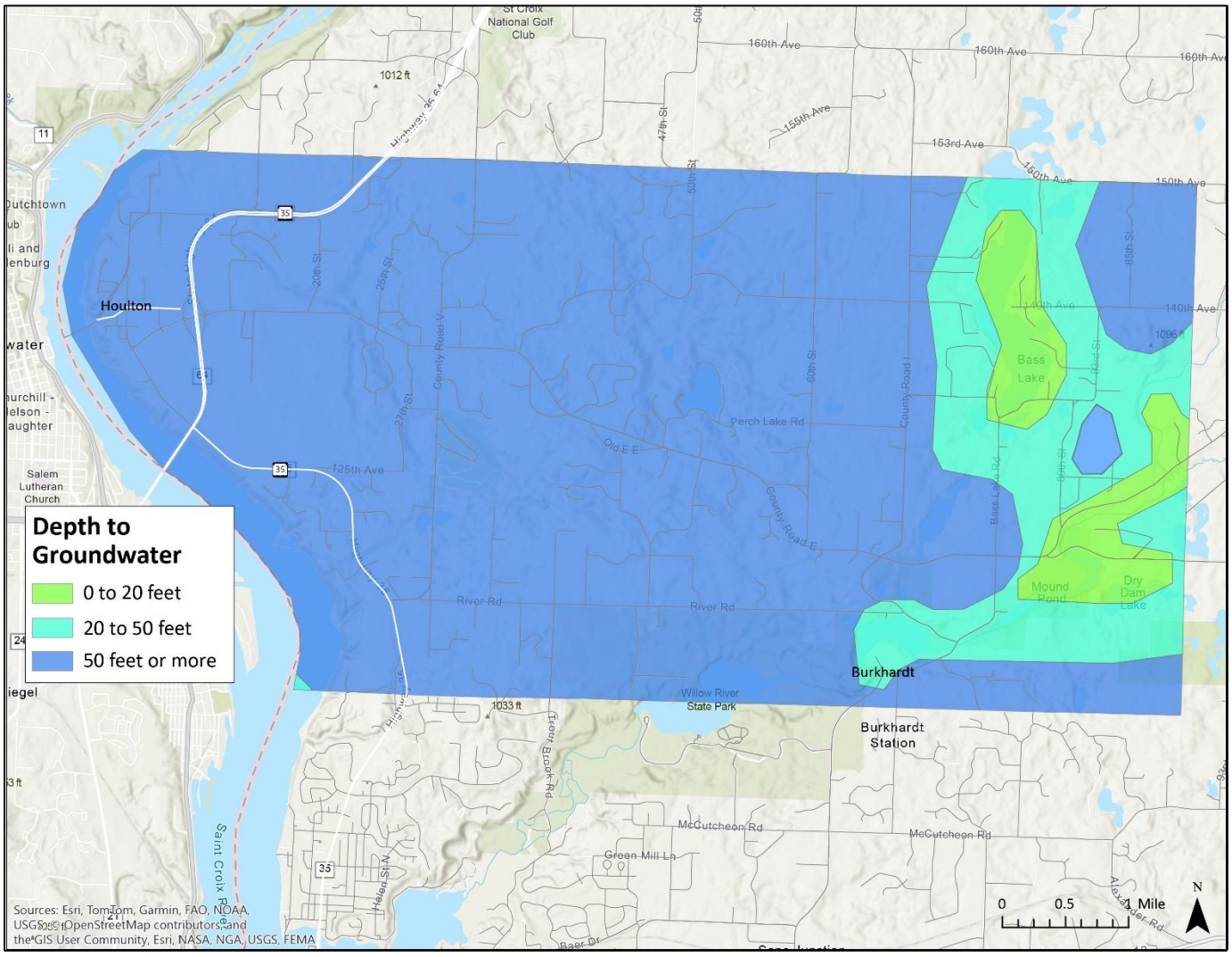
Source: Wisconsin Department of Natural Resources (DNR)
https://geodata.wisc.edu/catalog/CF9E8298-63E5-43C7-9E8A-DEDCB93C1519

APPENDIX B Town of St. Joseph

Depth to Groundwater

Approximately 5% of St. Joseph's total acres have groundwater within 20 feet of the land surface, 13% is 20 to 50 feet, and 82% is over 50 feet from the land surface.

Depth to Groundwater	
0-20ft	5%
20ft - 50ft	13%
Over 50ft	82%

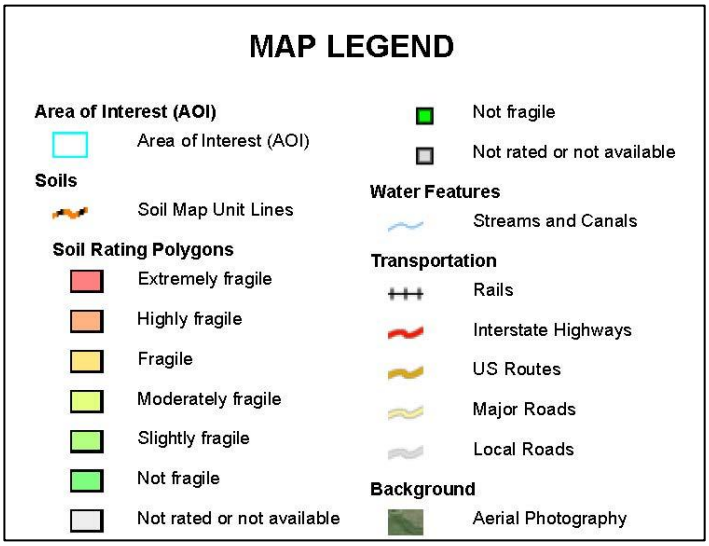


Source: Wisconsin DNR Groundwater Susceptibility Model, Depth to Groundwater
https://data-wi-dnr.opendata.arcgis.com/datasets/wi-dnr::gcsm-water-table-depth/about

APPENDIX B Town of St. Joseph

Fragile Soil Index

Fragile soils are those that are most vulnerable to degradation. They are easily degraded and are highly susceptible to erosion with low resilience. They are characterized as having low organic matter contents, low water-stable aggregates and low soil structure. Fragile soils are generally located on sloping ground, have sparse plant cover and tend to be in arid and semiarid regions. A fragile soil index interpretation was developed to rate soils based on their fragility. The index can be used in conservation and watershed planning to assist in identifying soils and areas with greater vulnerability to degradation.



Fragile Soils	
Fragile	13%
Moderately Fragile	67%
Slightly Fragile	4%
Null or Not Rated	16%



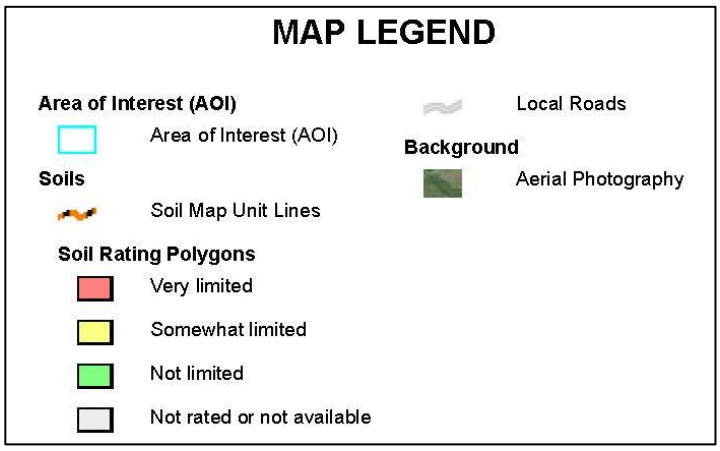
Source: National Cooperative Soil Survey, USDA – NRCS
https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

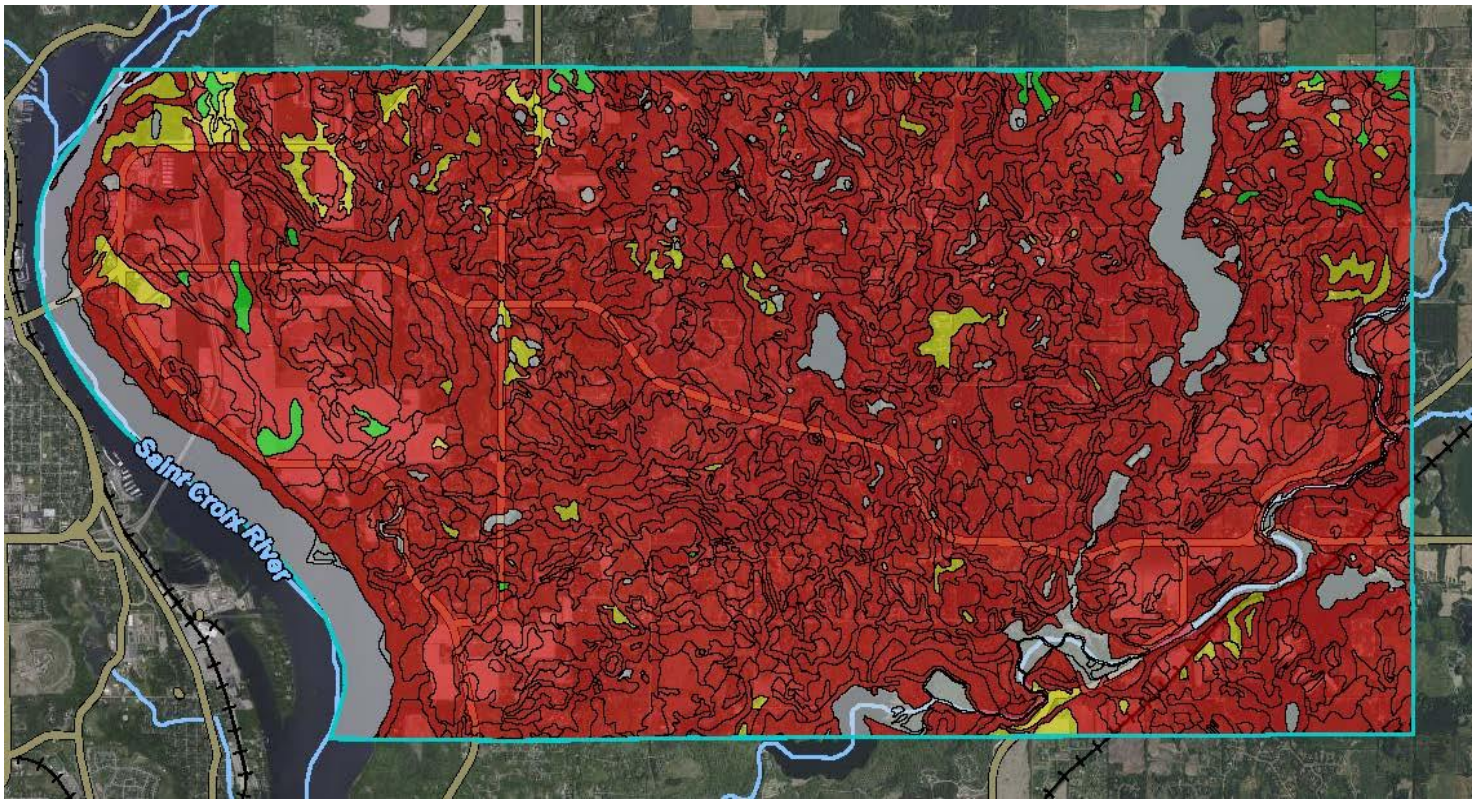
APPENDIX B Town of St. Joseph

Manure and Food-Processing Waste

These ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include saturated hydraulic conductivity (Ksat), depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, soil erosion factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

- **87% Very Limited** – indicates that soil has one or more features that are unfavorable for the specific use. Limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.
- **3% Somewhat Limited** – indicates that the soil has features that are moderately favorable for specified use. Limitations can be overcome or minimized by special planning, design, or installation.
- **10% Not Limited or Not Rated**



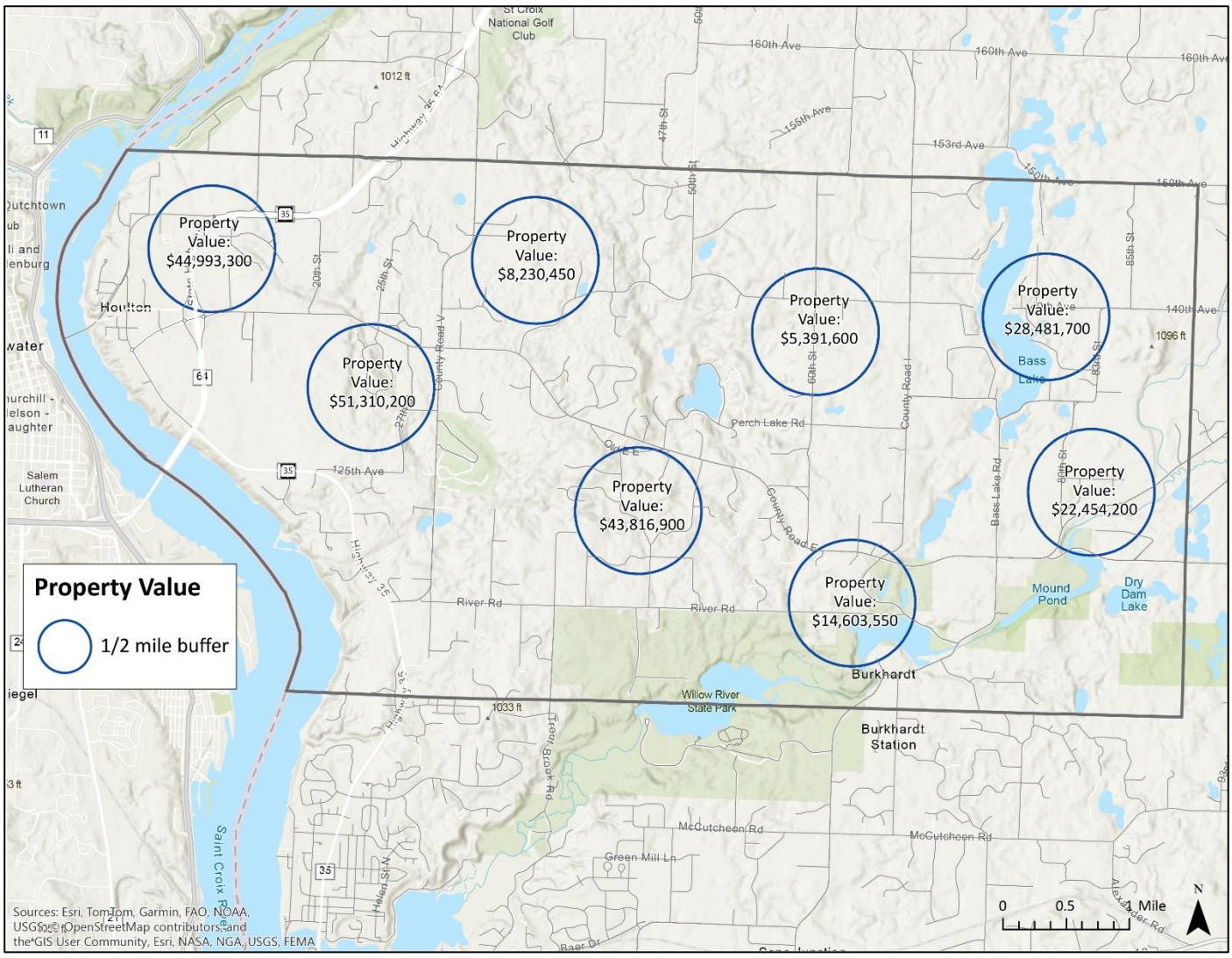


Source: National Cooperative Soil Survey, USDA https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

APPENDIX B Town of St. Joseph

Property Tax Values Within 1/2 mile Radius of Eight Randomly Selected Potential CAFO Sites

Property values within 1/2 mile of 8 randomly selected sites range in value from $5.3 million to $51.3 million.



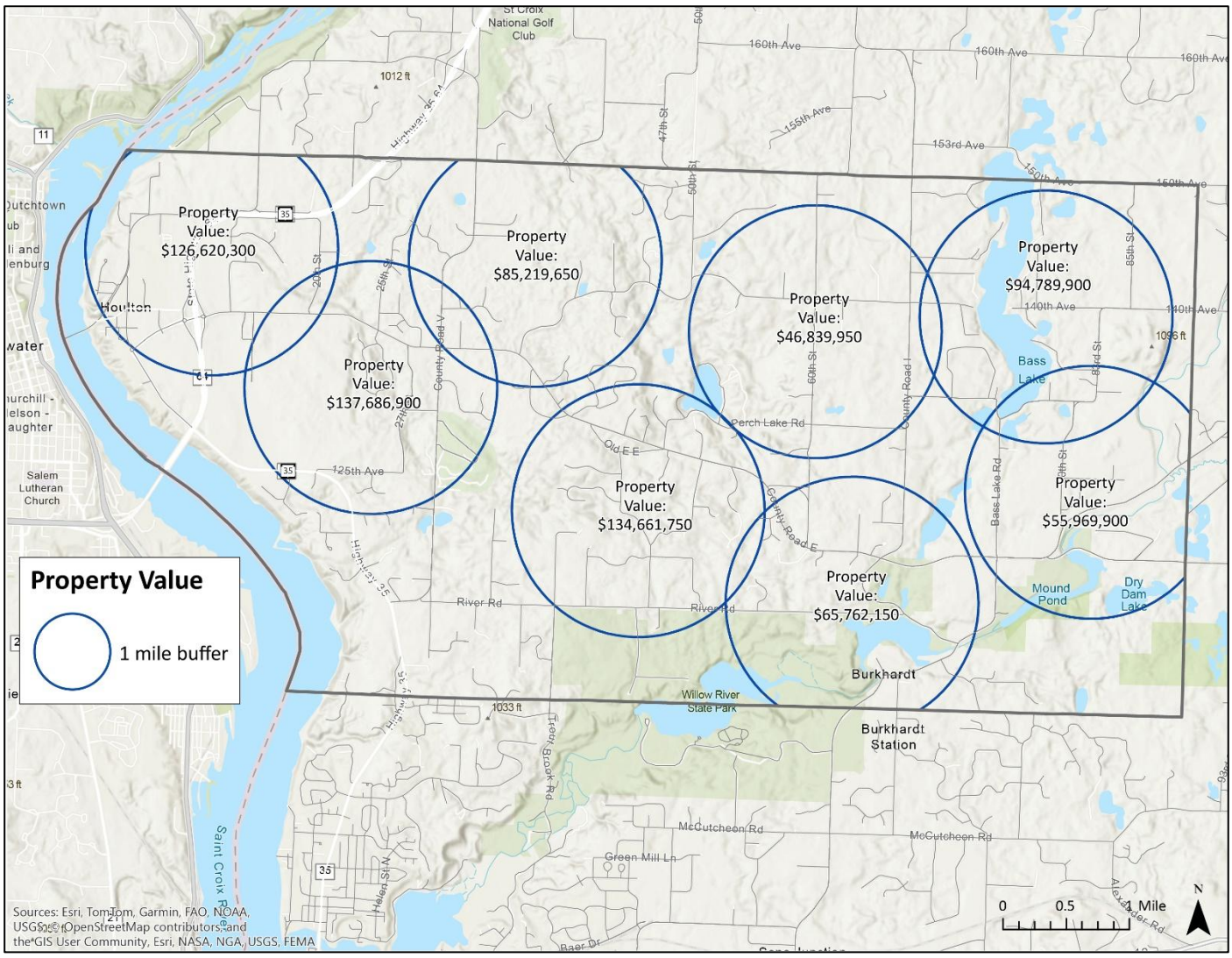
Source: 2025 Wisconsin County Parcel Data St. Croix County, WI

https://www.sco.wisc.edu/parcels/data-county/

APPENDIX B Town of St. Joseph

Property Tax Values Within 1 mile Radius of Eight Randomly Selected Potential CAFO Sites

Property values within 1 mile of 8 randomly selected sites range in value from $46 million to $137 million.



Source: 2025 Wisconsin County Parcel Data St. Croix County, WI

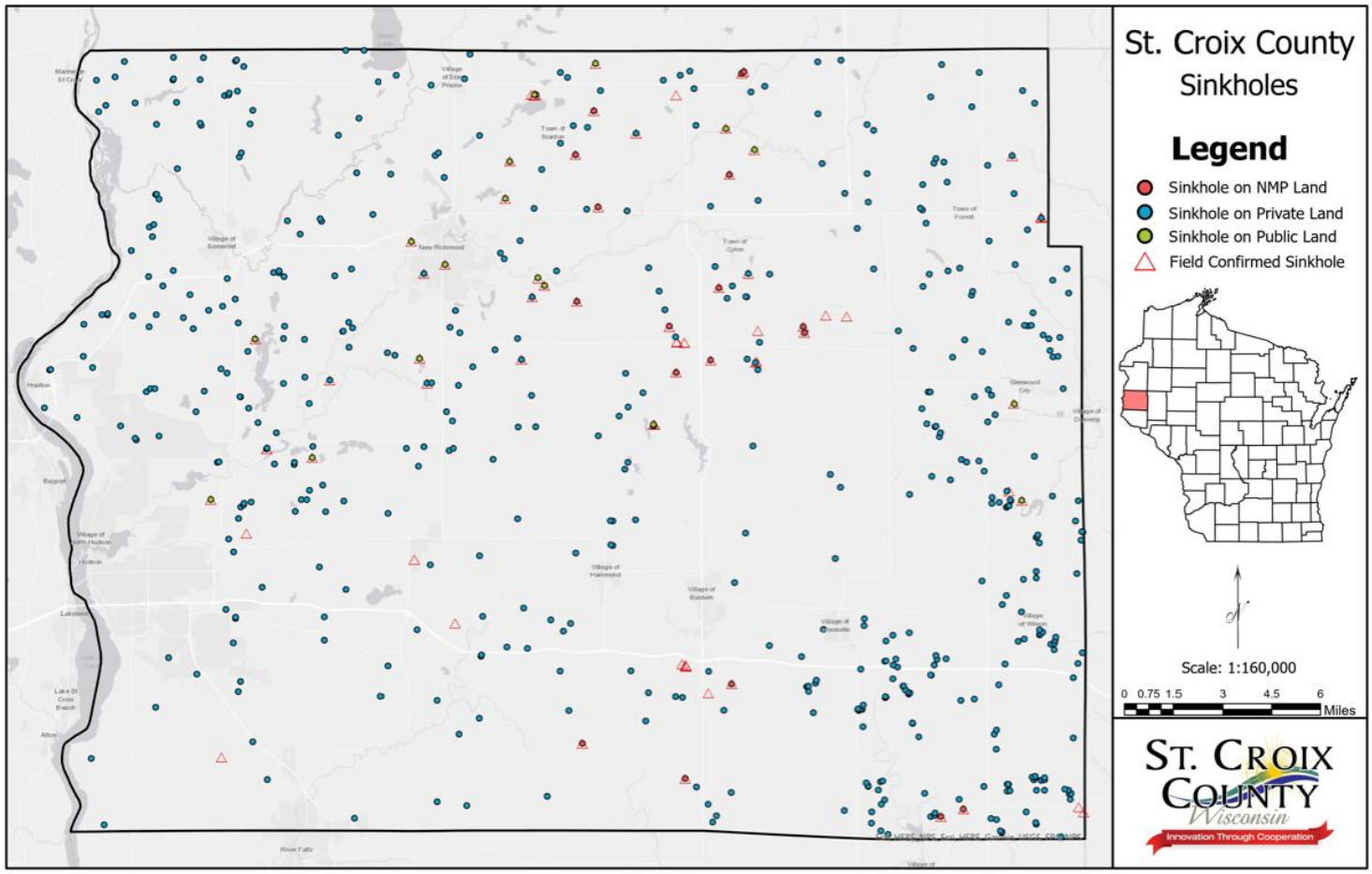
https://www.sco.wisc.edu/parcels/data-county/

APPENDIX B Town of St. Joseph

Fragile Areas: Sink Holes

St. Croix County has documented numerous sinkholes within the Town of St. Josehp. Sinkholes form when the ground collapses into cracks and caverns that have formed below the ground surface. The formation of sinkholes is common in western Wisconsin because of the presence of readily dissolvable limestone bedrock that is near the surface. Sinkholes can vary in size and depth from a few feet to hundreds of feet and can form slowly over hundreds to thousands of years.

Sinkholes also function as direct conduits from the ground surface to the water table. These conduits mean that the groundwater in these areas is extremely vulnerable to contamination from the surface.



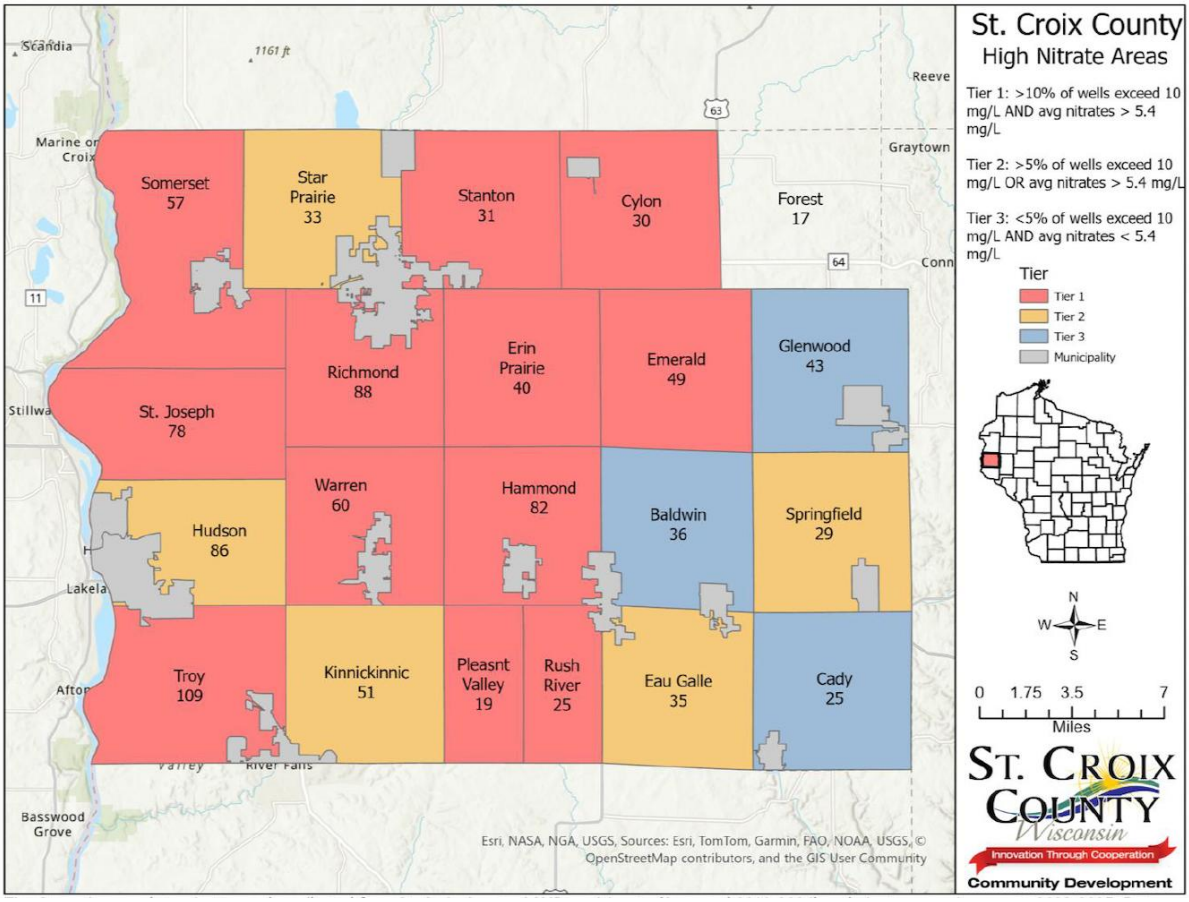
Source: Source: 2026, St. Croix County, WI

https://www.sccwi.gov/DocumentCenter/View/7546/St-Croix-County---Sinkhole-Map

APPENDIX B Town of St. Joseph

Nitrate Contamination

In 2026, the Town of St. Joseph was listed as a Tier 1 area by St. Croix County Land and Water Conservation Division due to high nitrate concentrations in wells tested. A Tier 1 designation is the highest concern with 10% of wells exceeding 10mg/l AND avg nitrates over 5.4 mg/l noted in the Citizen Ground Water Monitoring Program. This program has been in existence for seven years thus far monitoring wells. This is the first year St. Joseph was listed.



Source: 2026, St. Croix County, WI
https://sccwi.gov/921/Citizen-Groundwater-Monitoring-Program