

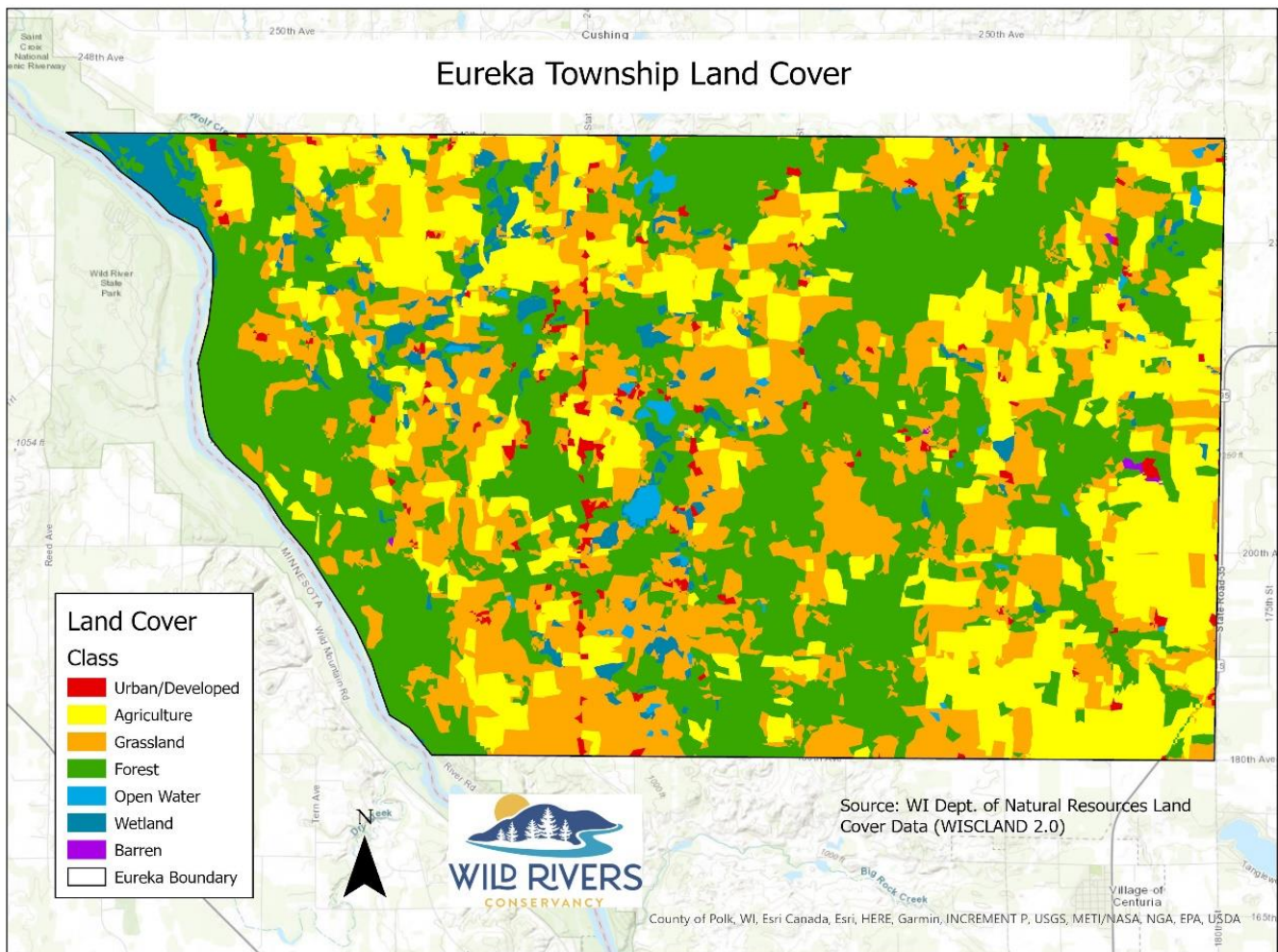
**TOWN OF EUREKA
POLK COUNTY, WISCONSIN
ORDINANCE NO. 22-01-0
CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFO) ORDINANCE**

APPENDIX B.

Map 1. Land Cover - Local Finding 5

Data for the Town of Eureka extracted from WisLand 2 show the approximate land cover as follows:

Land Cover - WisLand (Not land use)	Percent
Agriculture	25%
Barren	0%
Forest	43%
Grassland	27%
Open Water	1%
Urban/Developed	1%
Wetland	3%

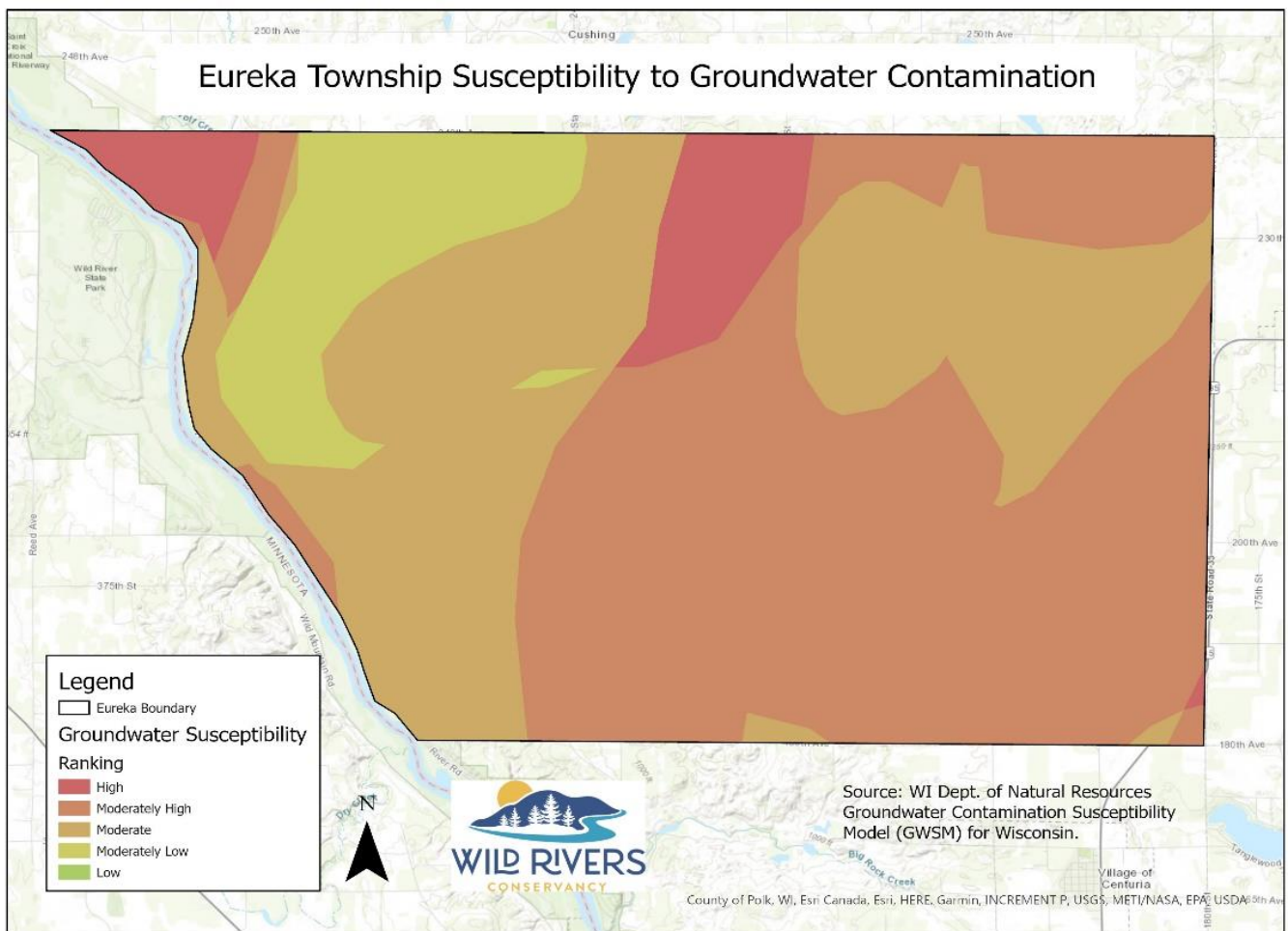


Source: Wisconsin Land Cover Data (WISCLAND 2.0): <https://dnr.wisconsin.gov/maps/WISCLAND>

Map 2. Groundwater Susceptibility to Contamination Model - Local Finding 8

The Town has a vulnerable landscape with shallow soils, high water table and gravel formations that make large areas susceptible to groundwater pollution. 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 Department of Natural Resources Groundwater Contamination Susceptibility Model (GCSM) was divided into five evenly spread categories ranging from high to low. Of the town’s total acreage approximately 7% is ranked high susceptibility to contamination 49% moderately high, 35% moderate, 10% moderately low, and 0% ranked low susceptibility.

Groundwater Susceptibility Ranking	
Ranking	Percent of Total
High	7%
Moderately High	49%
Moderate	35%
Moderately Low	10%
Low	0%



Source: Wisconsin Department of Natural Resources (DNR). (2008).

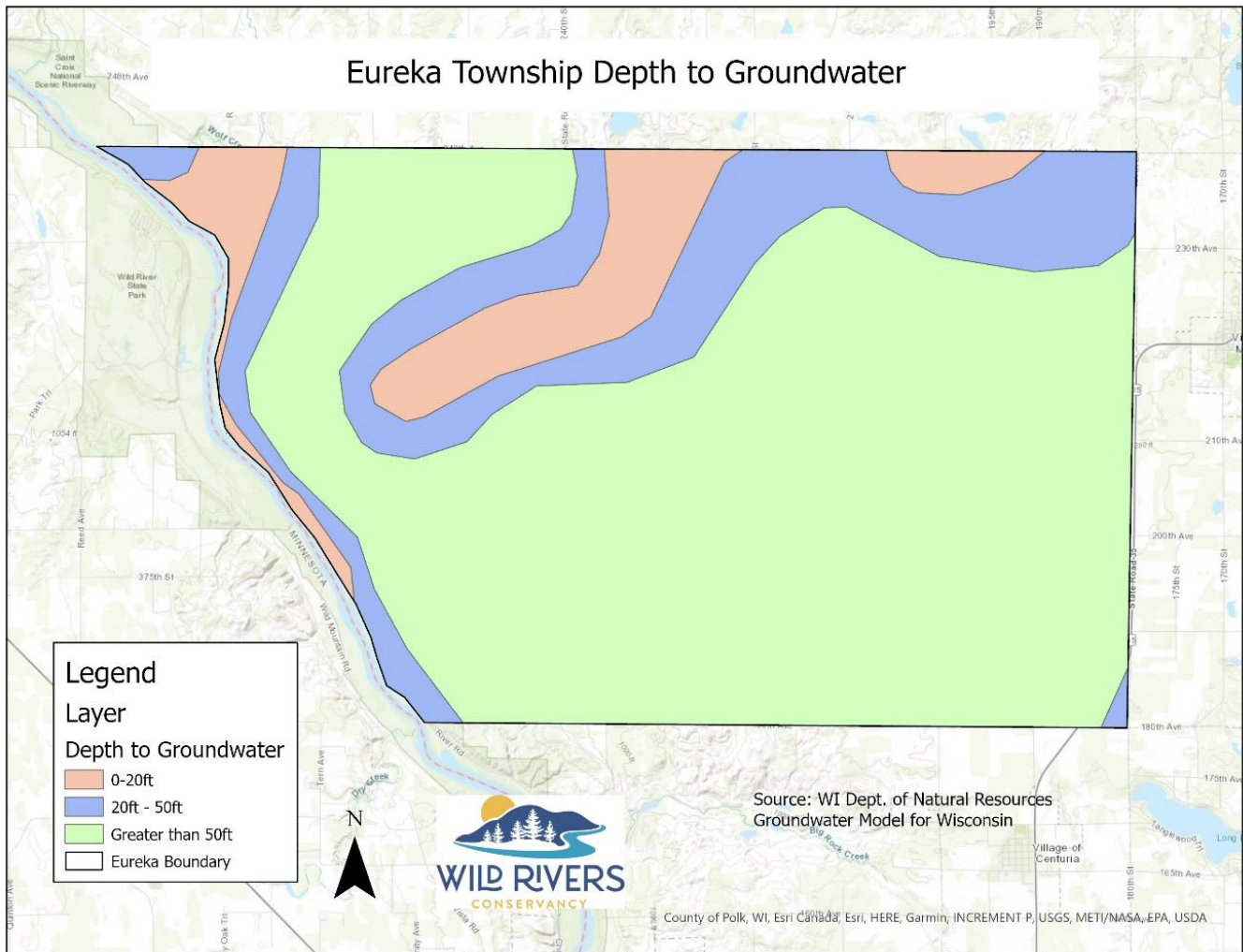
<https://geodata.wisc.edu/catalog/CF9E8298-63E5-43C7-9E8A-DEDCB93C1519>

Developed by the DNR, US Geological Survey, Wisconsin Geological & Natural History Survey, and University of Wisconsin – Madison in the mid-1980s.

Map 3. Depth to Groundwater - Local Finding 9

Approximately 10% of Eureka Township’s total acres have groundwater within 20 feet of the land surface. Approximately 29% is within 50 feet of the land surface.

Depth to Groundwater	
1-20ft	10%
20ft - 50ft	19%
Over 50ft	71%

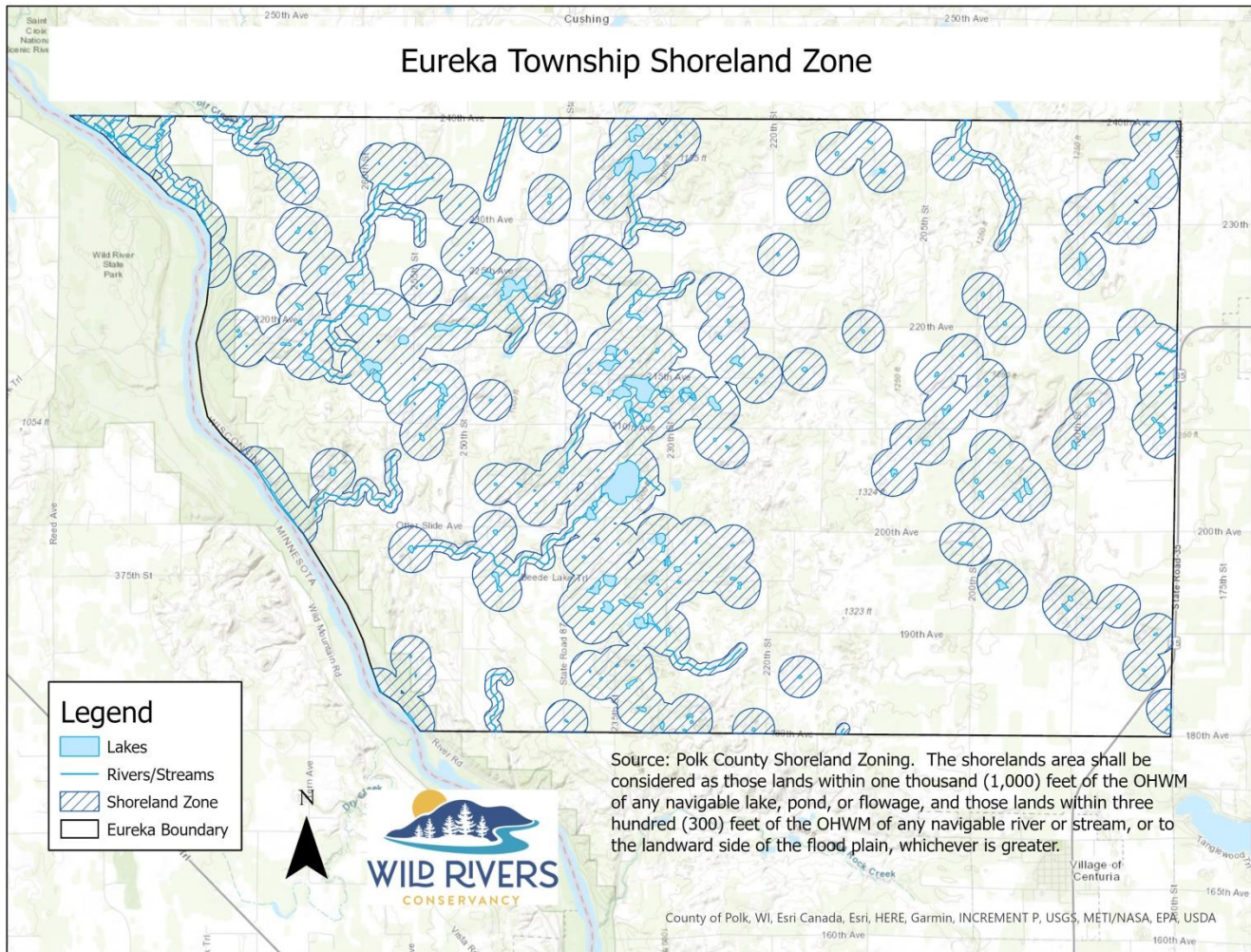


Source:

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

Map 4. Shoreland Zoning by Polk County - Local Finding 10

An estimated 40% of Eureka is zoned shoreland by Polk County.



Source: Polk County Shoreland Zoning

Map 5. Fragile Soil Index - Local Finding 11

Web Soil Survey (WSS)

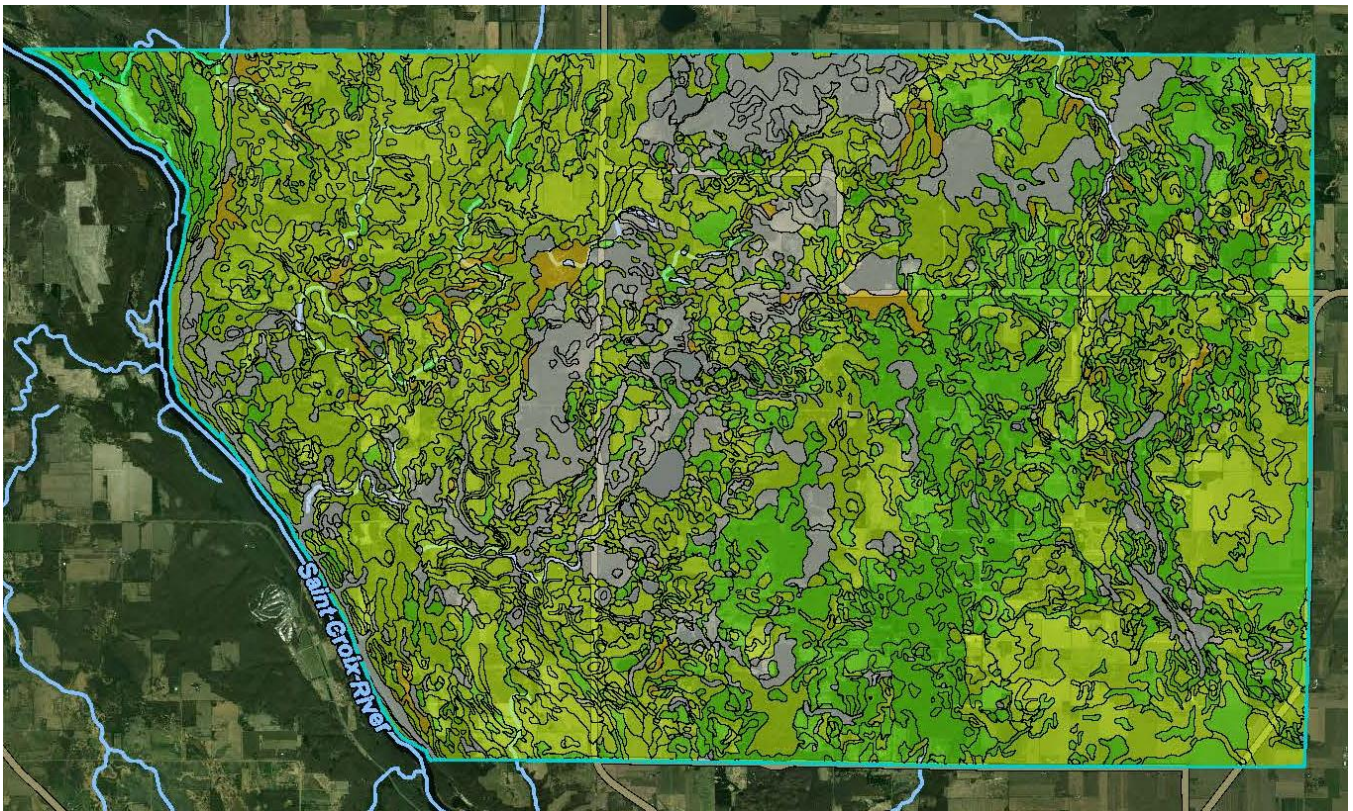
WSS provides soil data (Soil Survey Geographic Database) and information produced by the National Cooperative Soil Survey. It is operated by the USDA – NRCS and provides access to the largest natural resource information system in the world. Soil surveys can be used for general farm, local and wider area planning.

<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

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.

Of Eureka's total acres:

- 0% Extremely to Highly Fragile
- 2.2% Fragile
- 53.9% Moderately Fragile
- 27.8% Slightly Fragile
- 0.1% Not Fragile
- 15.9% Not Rated



Map Legend on next page.

Source: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

Map 5. Fragile Soil Index

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

-  Extremely fragile
-  Highly fragile
-  Fragile
-  Moderately fragile
-  Slightly fragile
-  Not fragile
-  Not rated or not available

Soil Rating Lines

-  Extremely fragile
-  Highly fragile
-  Fragile
-  Moderately fragile
-  Slightly fragile
-  Not fragile
-  Not rated or not available

Soil Rating Points

-  Extremely fragile
-  Highly fragile
-  Fragile
-  Moderately fragile
-  Slightly fragile
-  Not fragile

 Not rated or not available

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

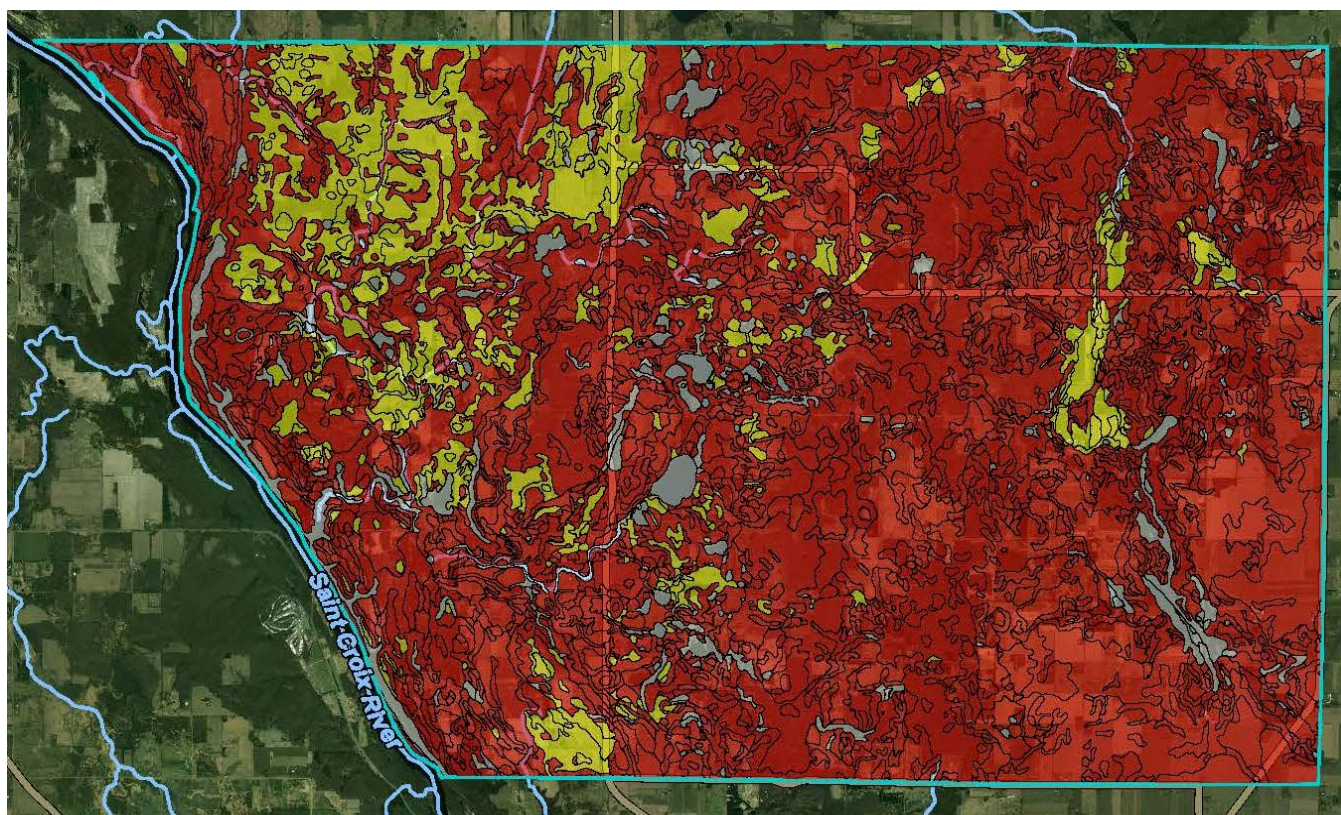
Map 6. Manure and Food-Processing Waste - Local Finding 12

The application of manure and food-processing waste not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied.

The 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.

Of Eureka's total acres:

- **81% 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.
- **13.4% 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.
- **0% Not Limited**
- **5.6% Not rated**




Map Legend on next page.

Source: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>


Map 6. Manure and Food-Processing Waste - Map Legend

MAP LEGEND

Area of Interest (AOI)





 Area of Interest (AOI)

Background





 Aerial Photography

Soils





Soil Rating Polygons

-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available


Soil Rating Lines

-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available

Soil Rating Points

-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available

Water Features

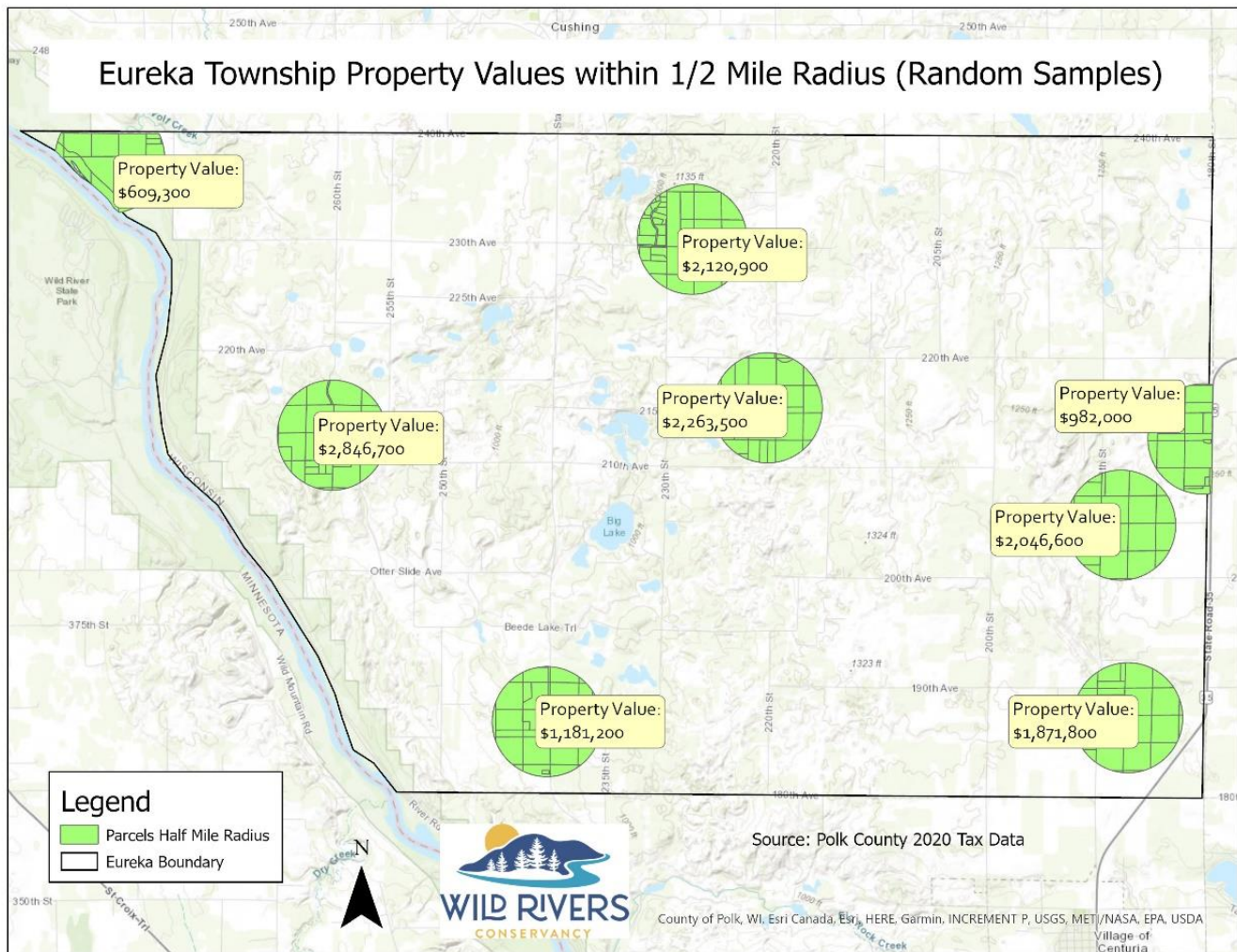
 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Map 7. Property Tax Values Within 0.5 mile radius of 8 Randomly Selected Potential CAFO Sites

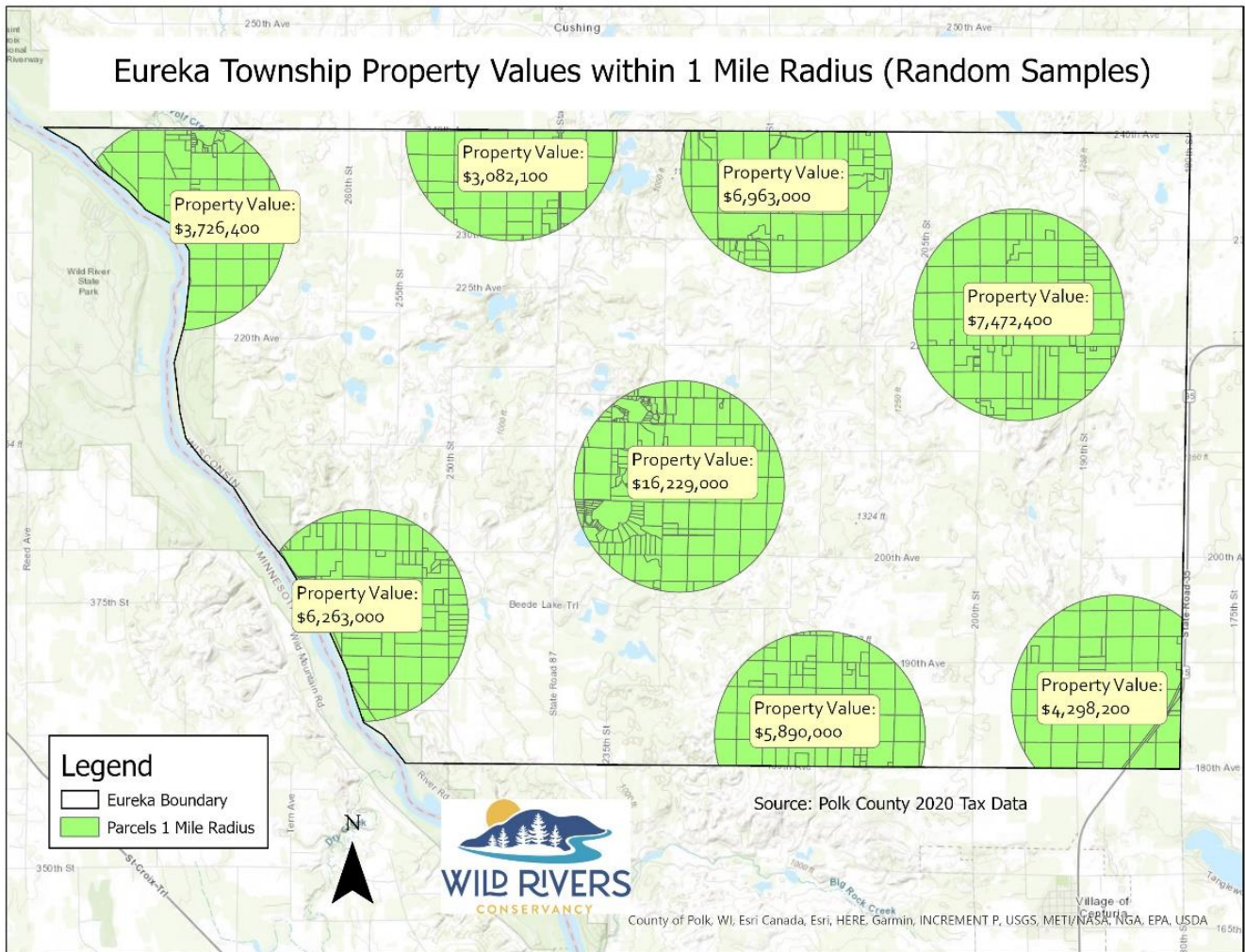
Local Finding 18



Source: 2020 Wisconsin County Parcel Data – Polk County, WI - <https://www.sco.wisc.edu/parcels/data-county/>

Map 8. Property Tax Values within 1 mile radius of 8 Randomly Selected Potential CAFO Sites

Local Finding 18



Source: 2020 Wisconsin County Parcel Data – Polk County, WI - <https://www.sco.wisc.edu/parcels/data-county/>