

CREP Prioritization: Mapping Sediment Loading Risk in the Saginaw Bay Basin

Background

Michigan State University Extension (MSUE) is collaborating with the State of Michigan and local stakeholders to re-establish the Conservation Reserve Enhancement Program (CREP) in Michigan. To aid in prioritizing lands eligible for CREP enrollment, the Institute of Water Research (IWR) at MSU developed township-scale maps of sediment loading risk for the Saginaw Bay basin. This book organizes those maps at the township scale.

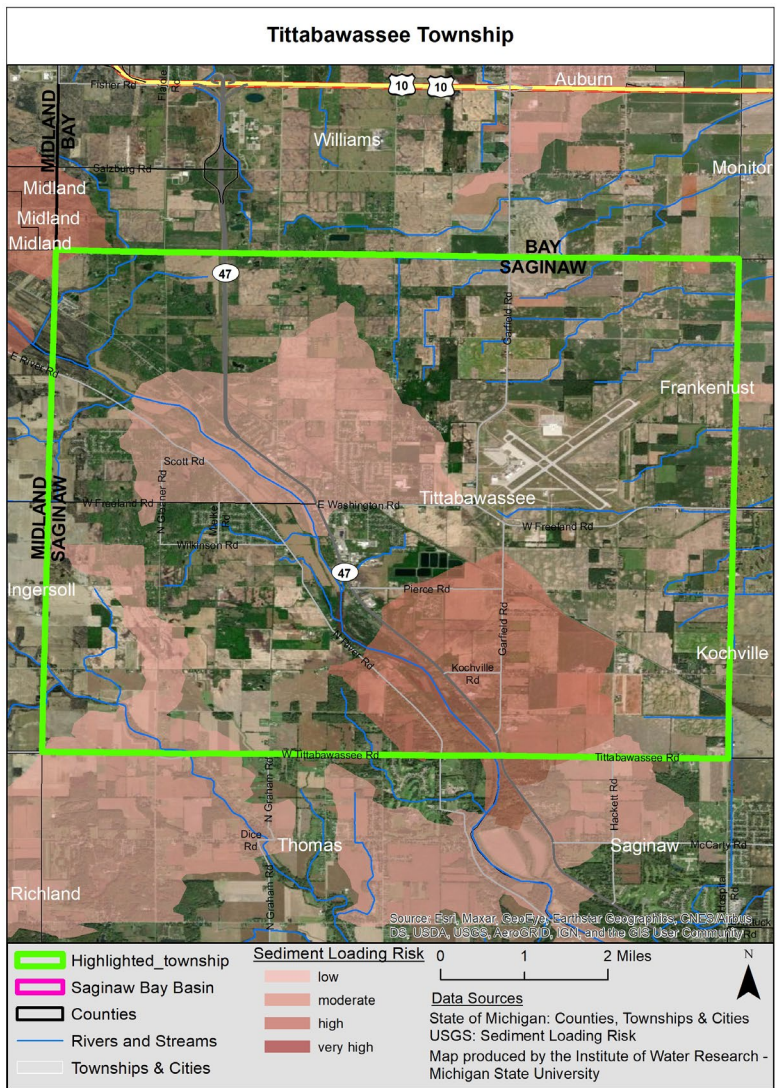
Data

The maps are based upon data from the United States Geological Survey's (USGS) SPATIally Referenced Regression On Watershed attributes (SPARROW) model*. The model uses observations, land use characteristics, and statistical relationships, among other variables, to estimate pollutant loads to streams and rivers. The data in this map book represents incremental sediment load contribution for each small catchment in the basin (see image at right), i.e. the amount of sediment load that originated in a particular area (not the total, accumulated amount moving through the stream in that area).

Contacts

Please direct questions about MSUE's project to:
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 Michigan State University Extension
froncz3@msu.edu

Please use the URL below to learn more about the SPARROW model, and direct questions about the maps to:
Glenn O'Neil
 Environmental Scientist
 Institute of Water Research - Michigan State University
oneilg@msu.edu

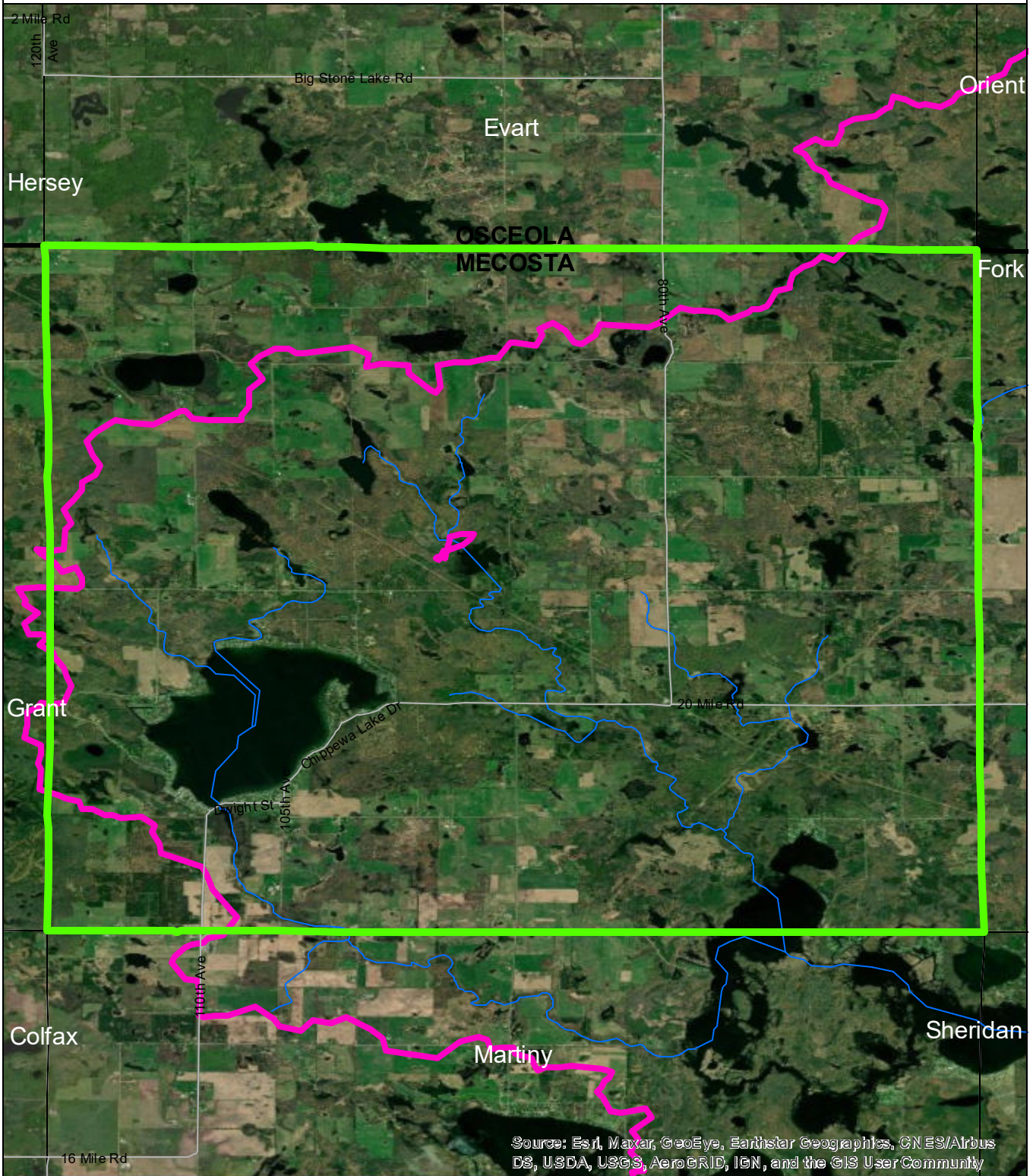


* <https://www.sciencebase.gov/catalog/item/5cbf5150e4b09b8c0b700df3>

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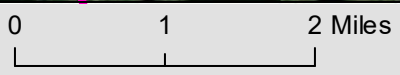
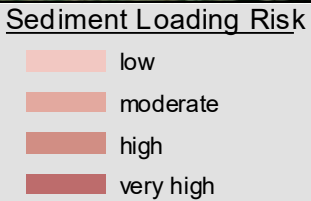
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Chippewa Township



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CN ES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

- Chippewa Township
- Saginaw Bay Basin
- Counties
- Rivers and Streams
- Townships & Cities

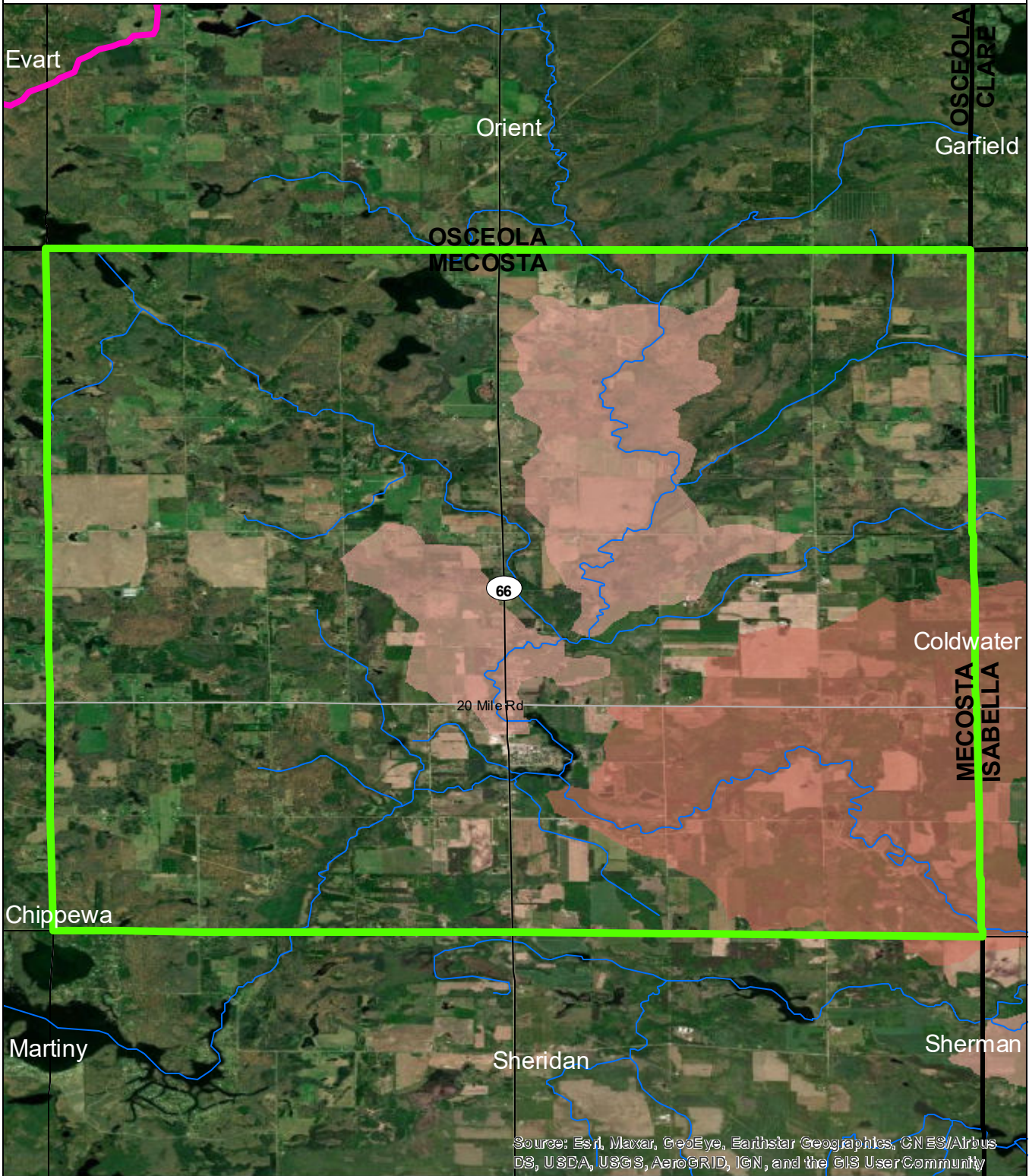


Data Sources






State of Michigan: Counties, Townships & Cities
 USGS: Sediment Loading Risk
 Map produced by the Institute of Water Research - Michigan State University







Fork Township

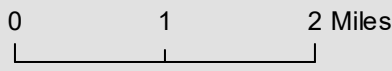


Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

-  Fork Township
-  Saginaw Bay Basin
-  Counties
-  Rivers and Streams
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Sediment Loading Risk

-  low
-  moderate
-  high
-  very high

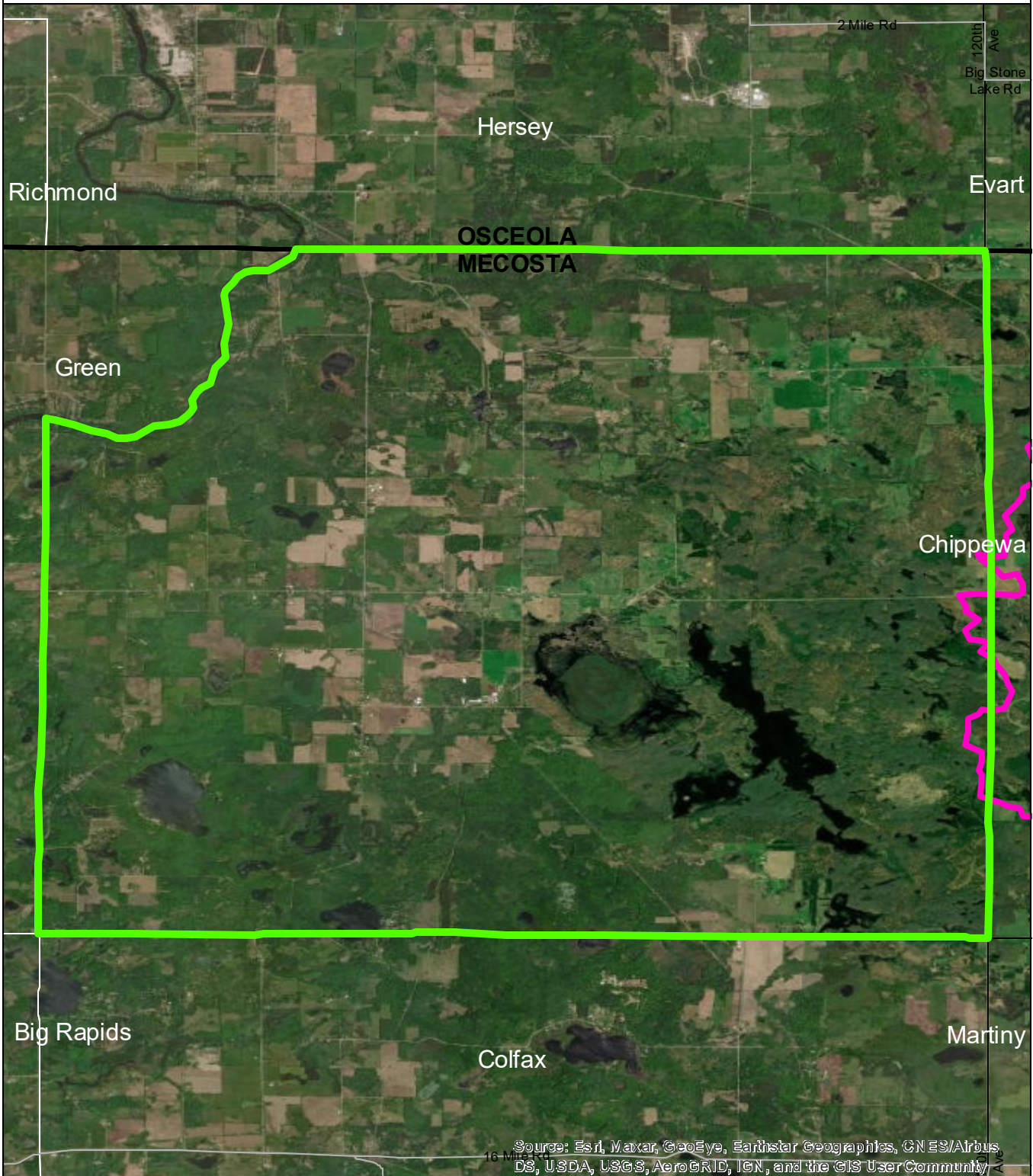


Data Sources

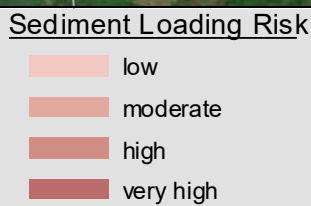
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Grant Township



- Grant Township
- Saginaw Bay Basin
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- Rivers and Streams
- Townships & Cities

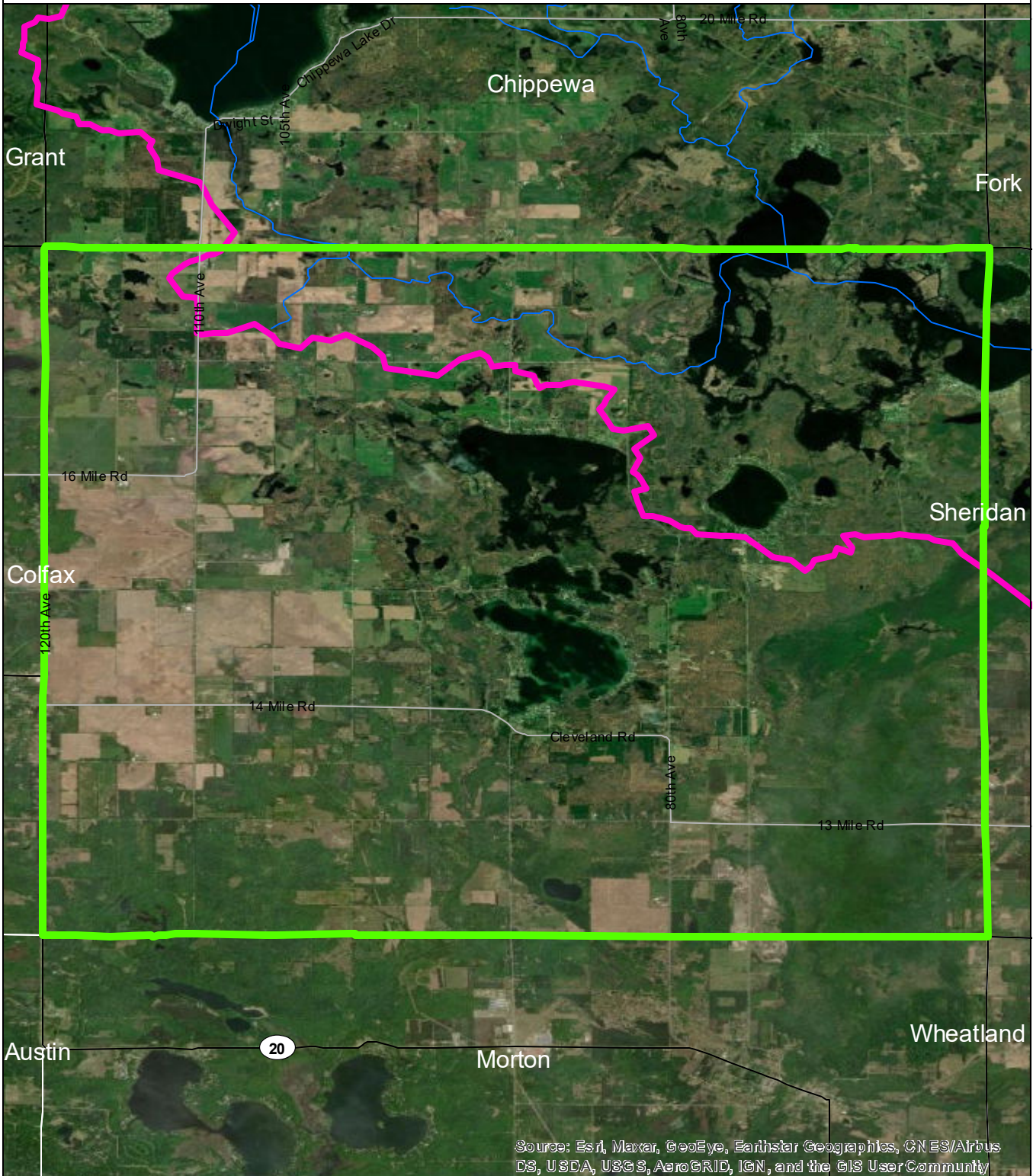


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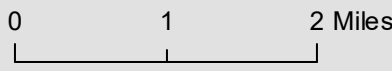
Martiny Township



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- Martiny Township
- Saginaw Bay Basin
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- Sediment Loading Risk**
- low
 - moderate
 - high
 - very high

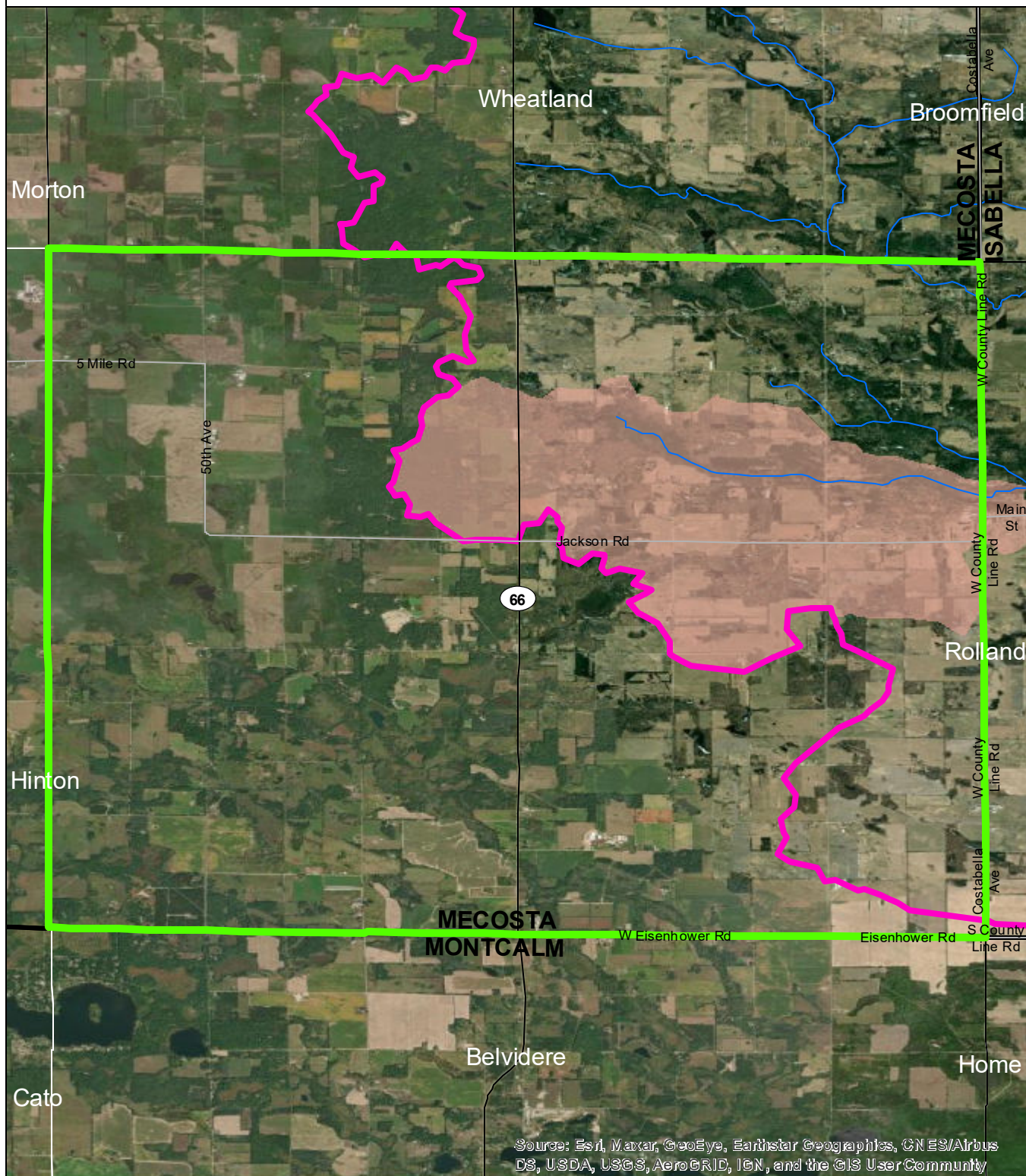


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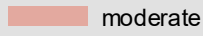
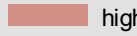

Millbrook Township

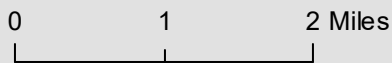


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-  Millbrook Township
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Sediment Loading Risk

-  low
-  moderate
-  high
-  very high



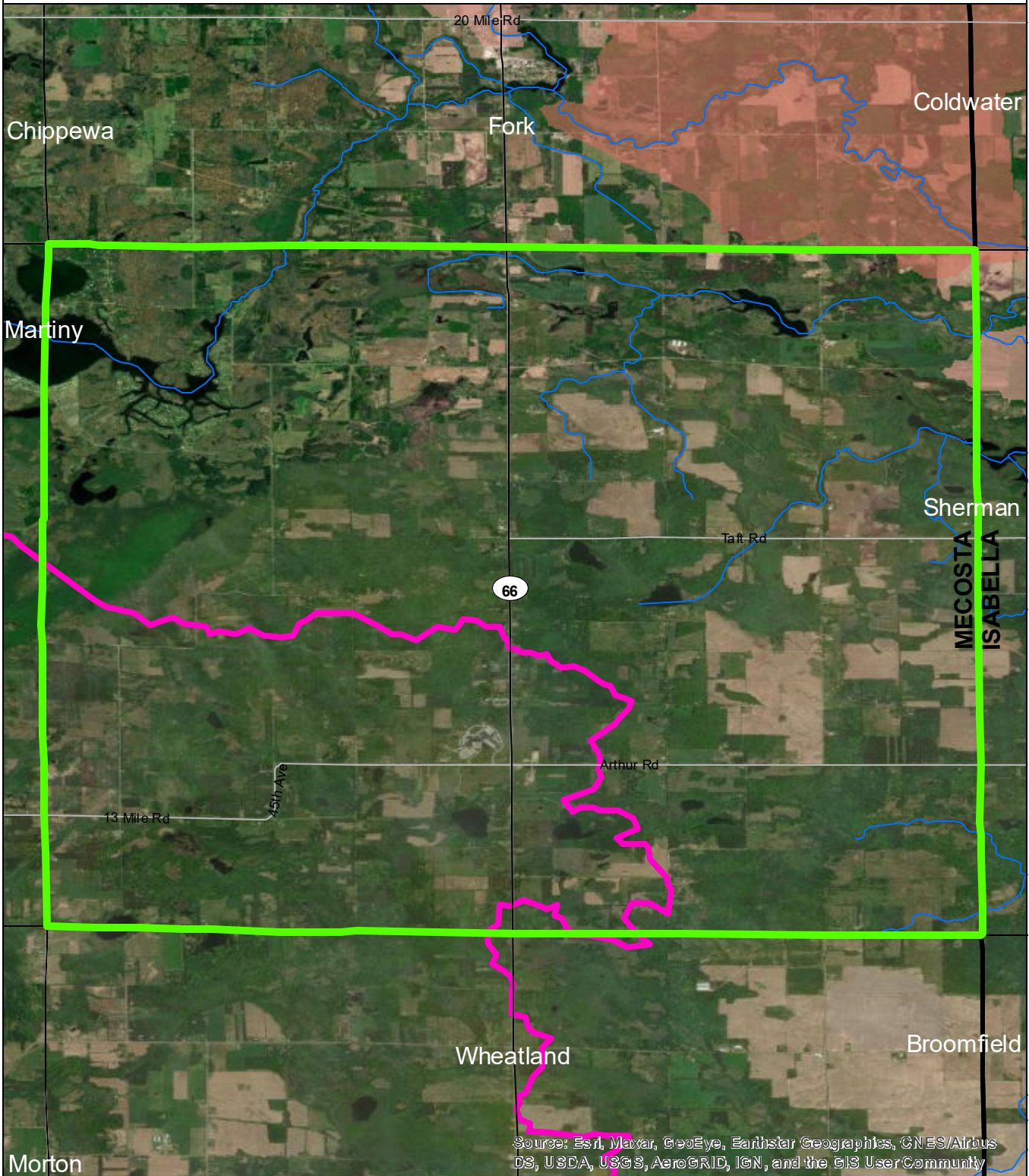
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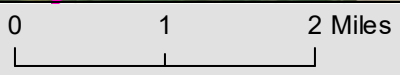
Sheridan Township



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- Sediment Loading Risk**
- low
 - moderate
 - high
 - very high



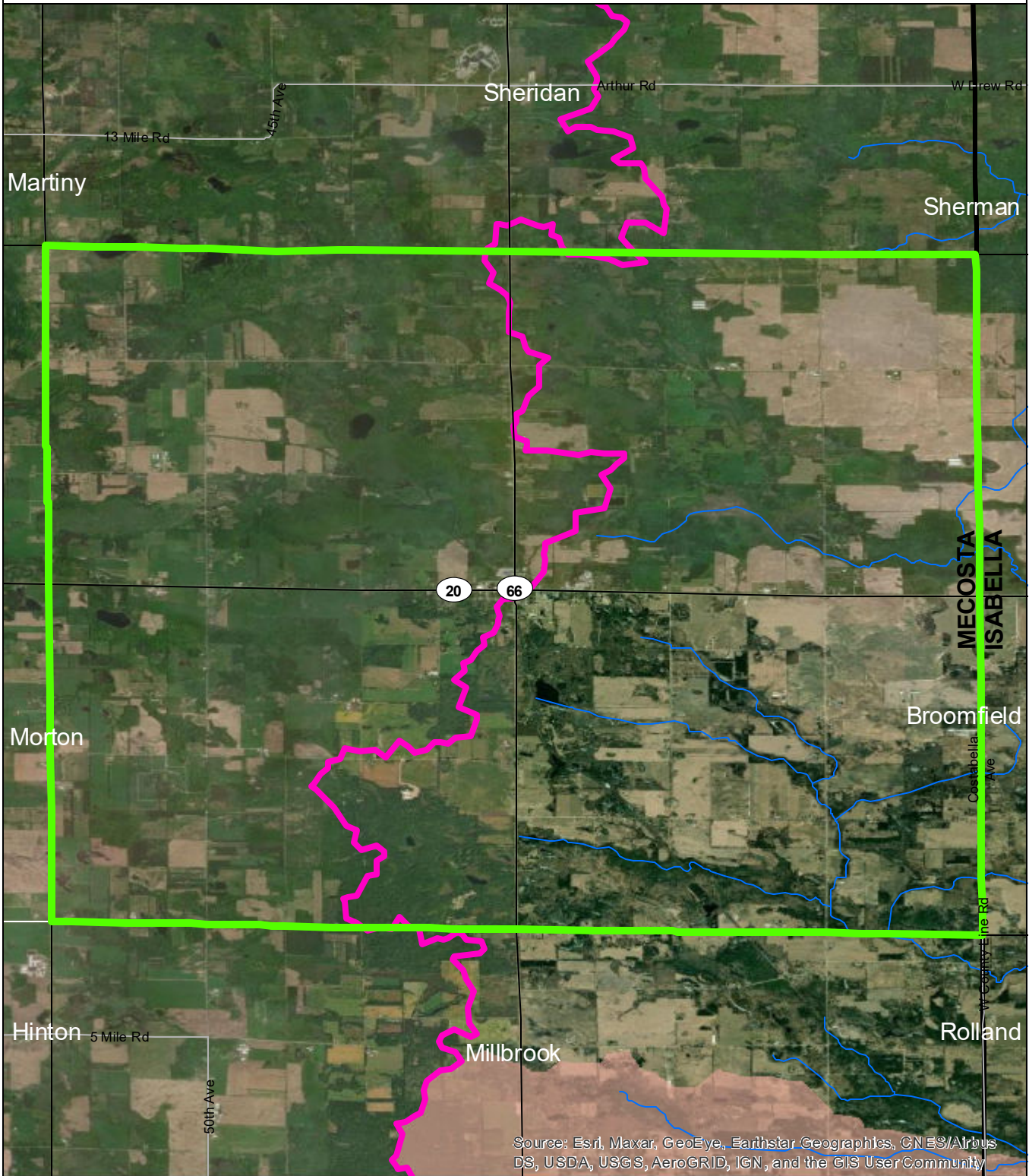
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Wheatland Township

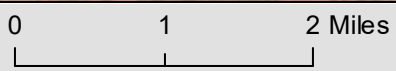


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Sediment Loading Risk

- low
- moderate
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- very high



Data Sources

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