

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.

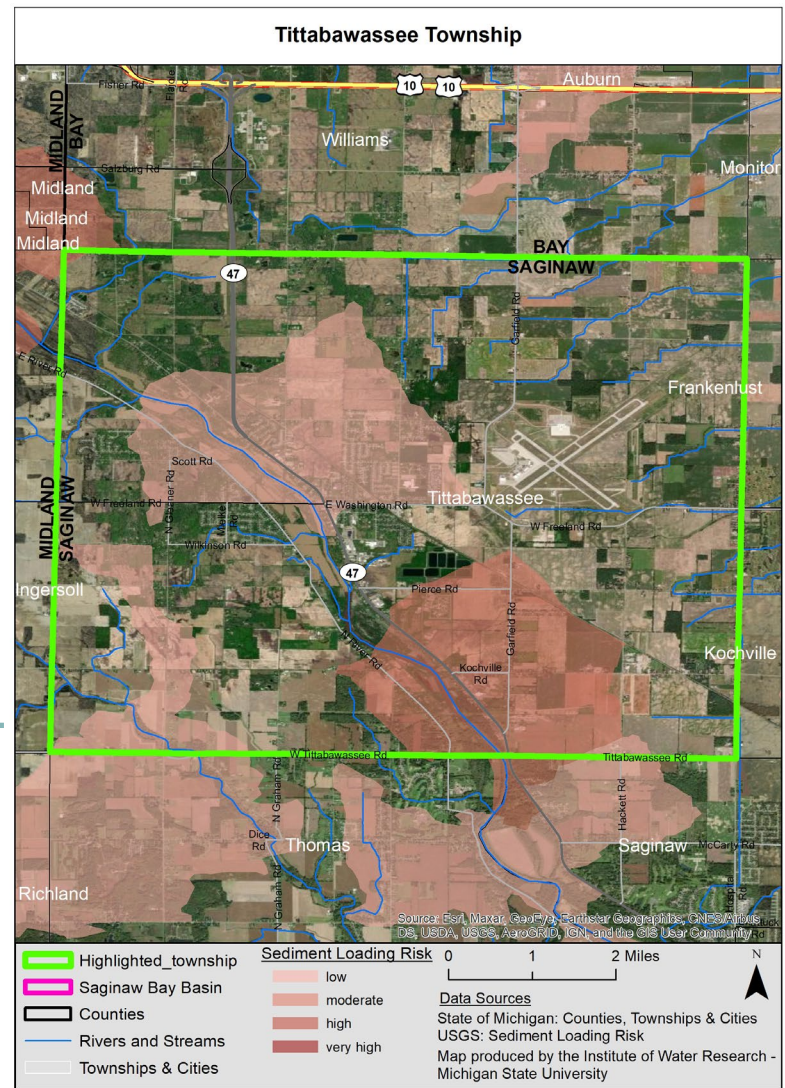
Data

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
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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

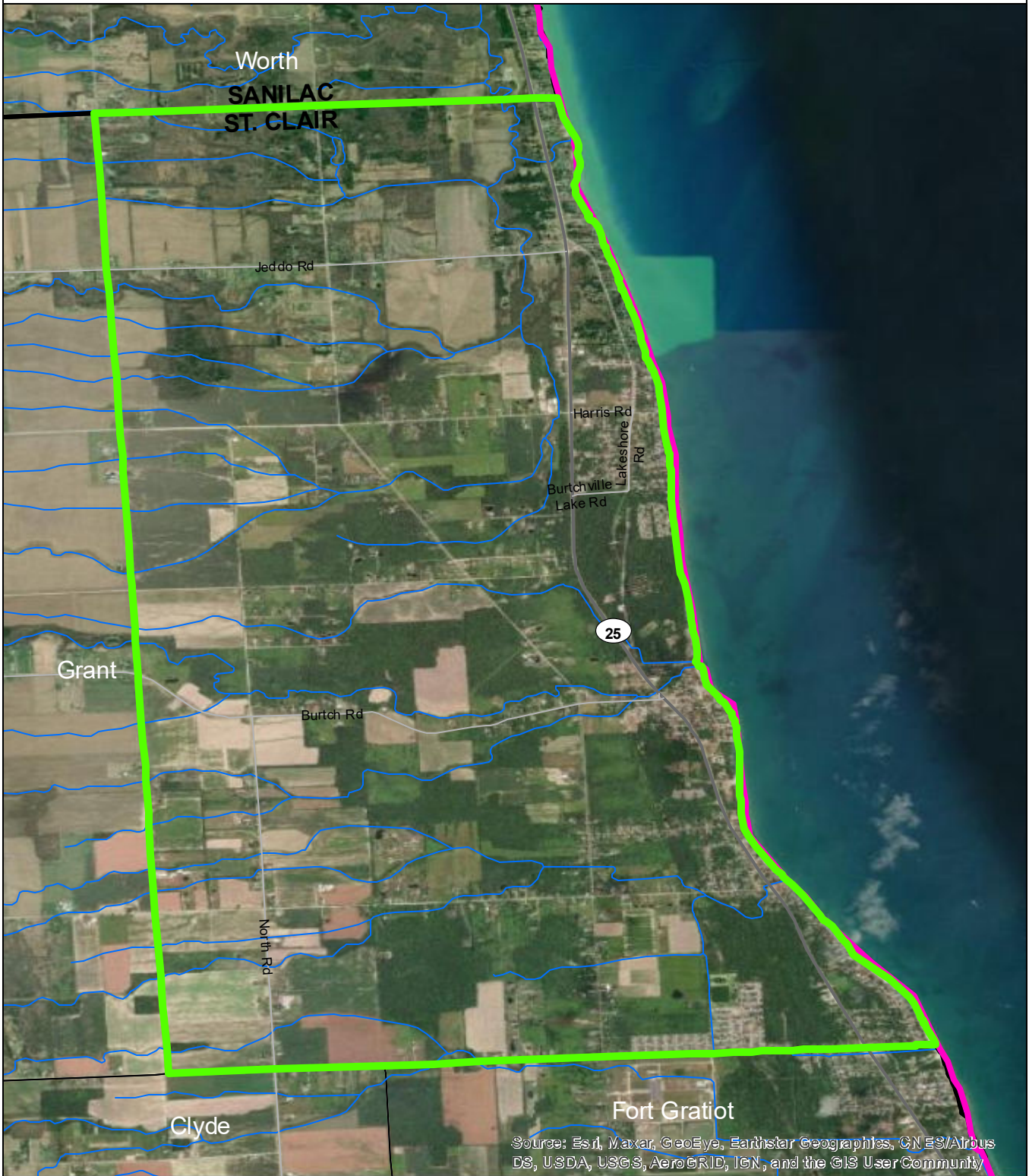


* <https://www.sciencebase.gov/catalog/item/5cbf5150e4b09b8c0b700df3>

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Burtchville Township



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

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

Sediment Loading Risk

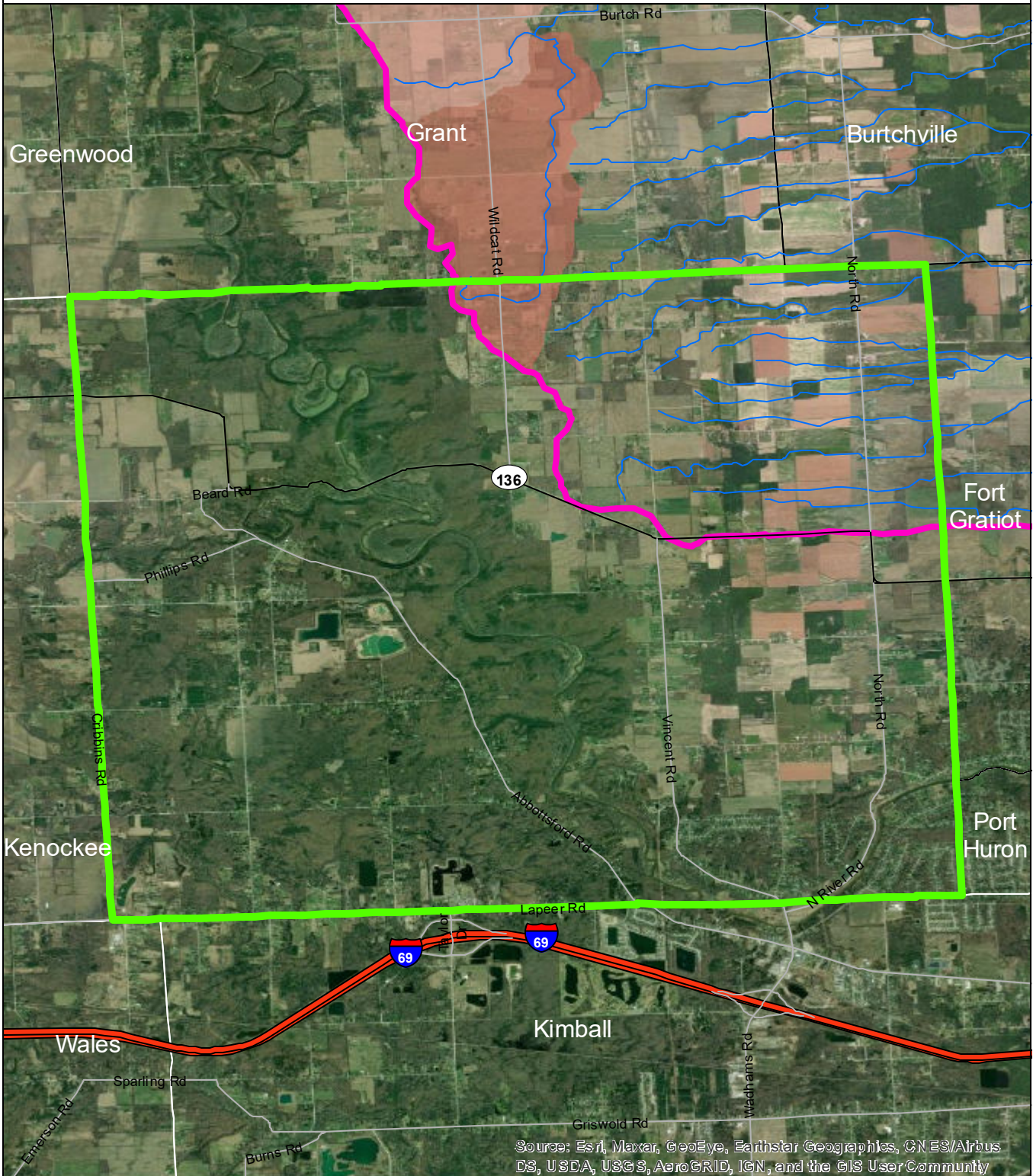
	low
	moderate
	high
	very high



Data Sources

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

Clyde Township

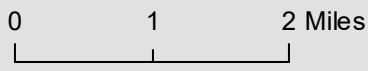


Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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

Sediment Loading Risk

- low
- moderate
- high
- very high

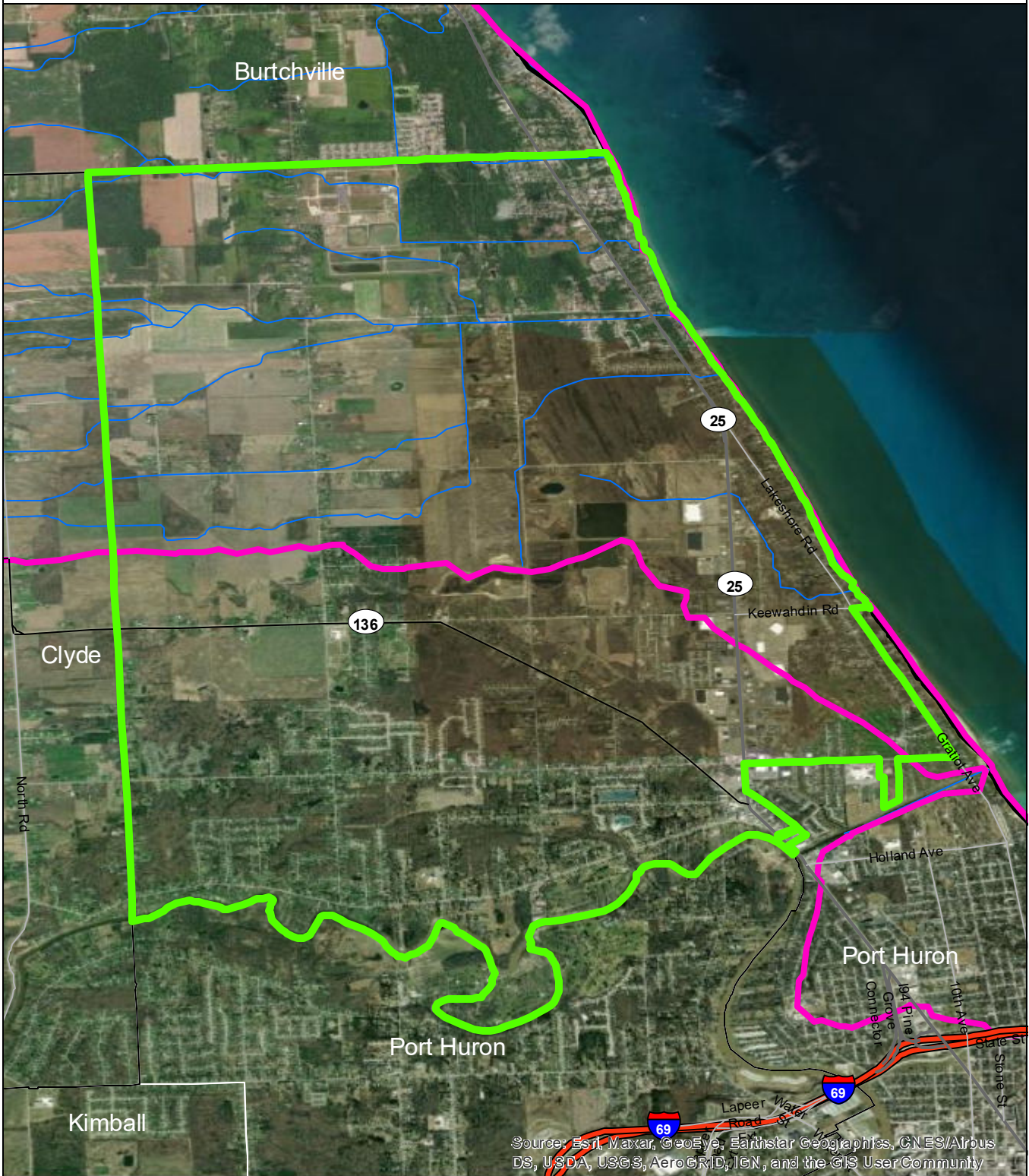


Data Sources

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



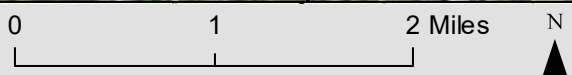
Fort Gratiot Township



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

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

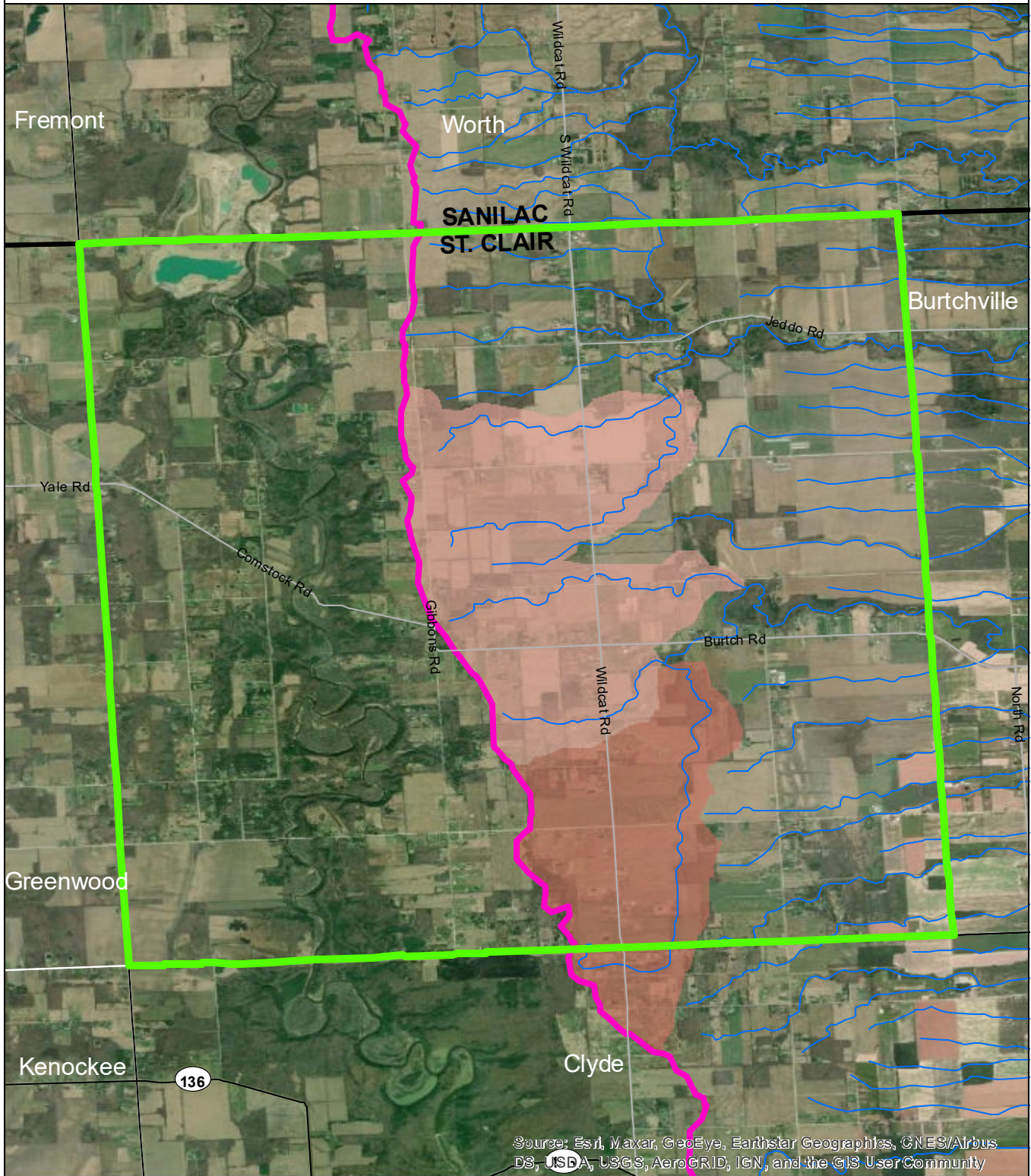
- Sediment Loading Risk**
- 0 low
 - 1 moderate
 - 2 high
 - 3 very high



Data Sources

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

Grant Township

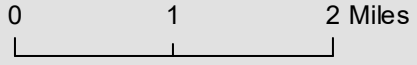


Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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

Sediment Loading Risk

- low
- moderate
- high
- very high

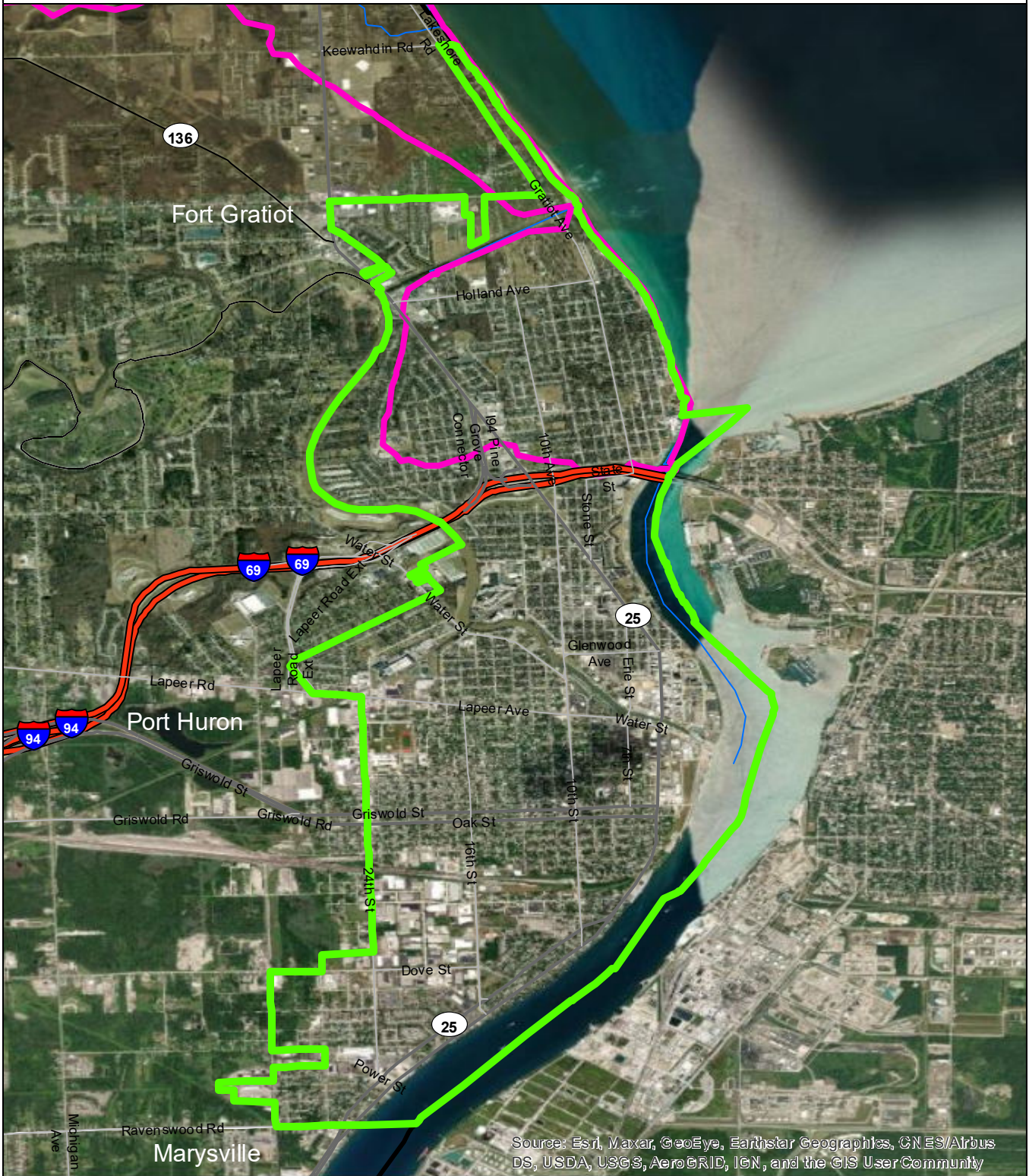


Data Sources

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



City of Port Huron



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

- City of Port Huron
- Saginaw Bay Basin
- Counties
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- Sediment Loading Risk**
- low
 - moderate
 - high
 - very high

0 1 2 Miles

Data Sources
 State of Michigan: Counties, Townships & Cities
 USGS: Sediment Loading Risk

Map produced by the Institute of Water Research - Michigan State University