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
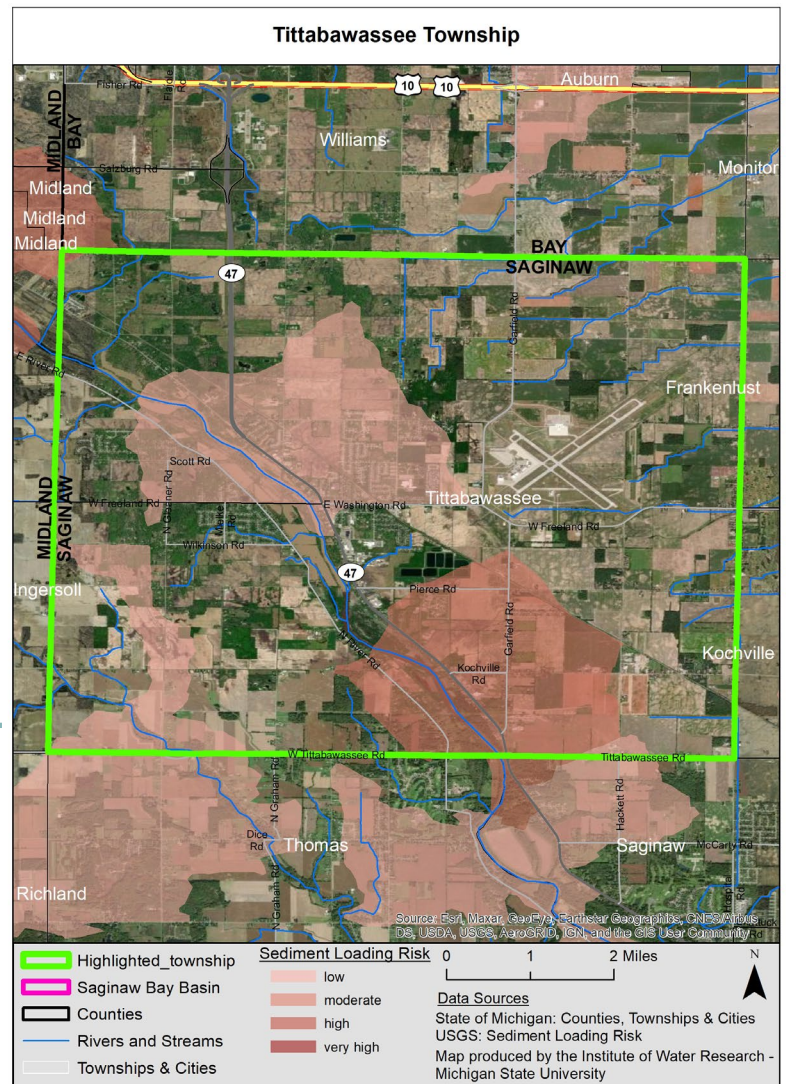
Please direct questions about MSUE's project to:
Sarah Fronczak
Environmental Management Educator
Michigan State University Extension
froncza3@msu.edu

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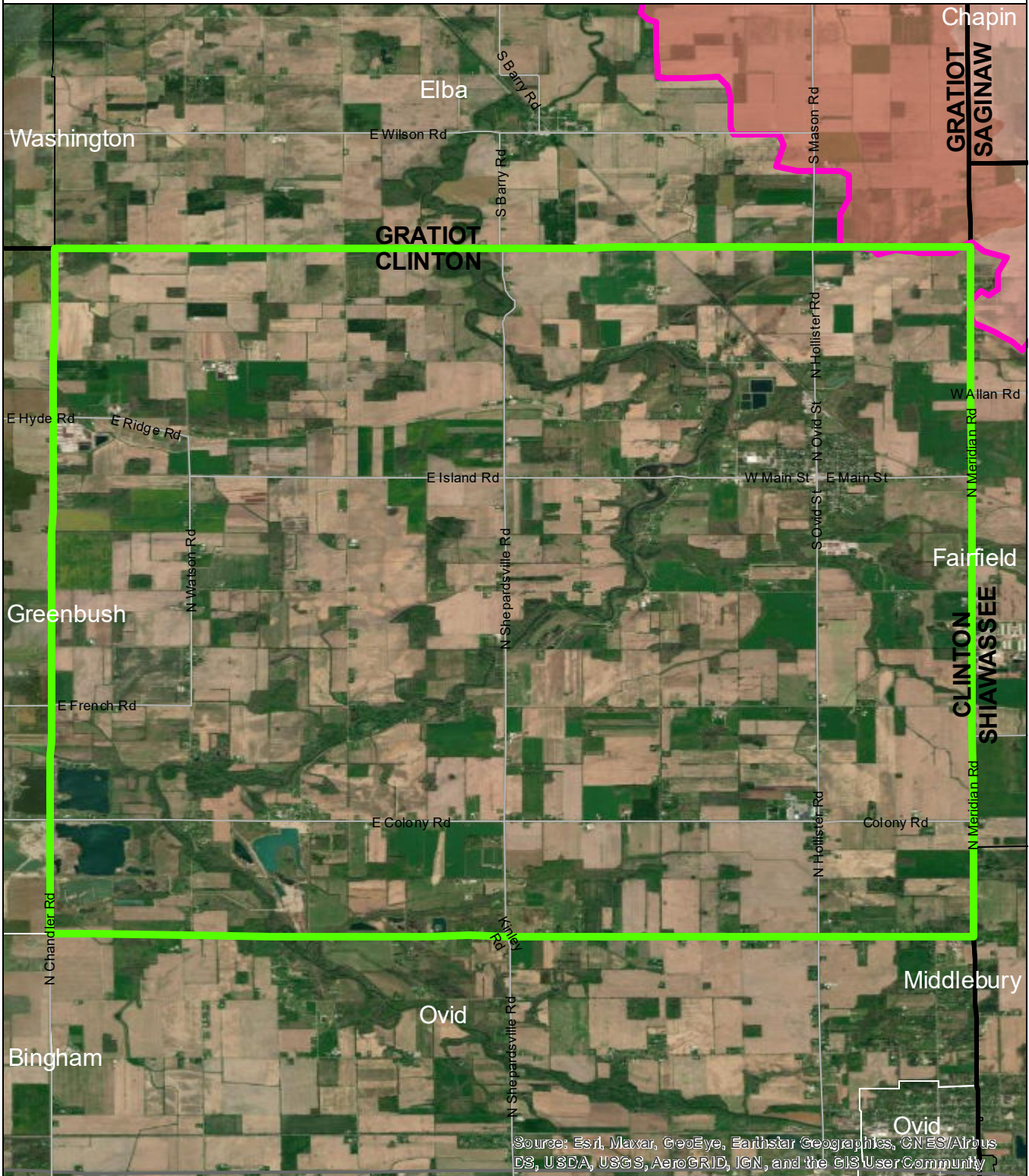Institute of Water Research - Michigan State University
oneilg@msu.edu

Tittabawassee Township

Highlighted_township
Saginaw Bay Basin
Counties
Rivers and Streams
Townships & Cities

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

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Michigan CREP
Conservation Reserve Enhancement Program

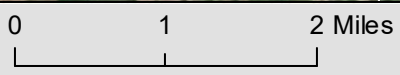* https://www.sciencebase.gov/catalog/item/5cbf5150e4b09b8c0b700df3

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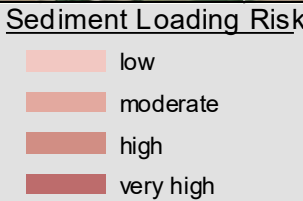
Duplain Township

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

Legend

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

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

0   1   2 Miles

N

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

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

Michigan CREP
Conservation Reserve
Enhancement Program