Biomass GIS Data

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Introduction

Spatial Data has been compiled for Michigan counties within 150 miles of the Mascoma Plant at Kinross, Michigan. In the Upper Peninsula this includes Chippewa, Mackinac, Alger, Schoolcraft, Luce, Delta, Menominee and Marquette counties. Lower Peninsula counties include Emmet, Cheboygan, Presque Isle, Alpena, Montmorency, Otsego, Antrim, Charlevoix, Leelanau, Benzie, Grand Traverse, Kalkaska, Crawford, Oscoda, Alcona, Manistee, Wexford, Missaukee, Roscommon, Ogemaw, Iosco, Arenac, Gladwin, Clare, and Osceola.

The spatial data is formatted in an ArcMap File Geodatabase (GDB). File GDBs have improved versatility and usability compared to ArcMap coverages and shapefiles. The format is based on relational principles and provides a simple, formal data model for storing and working with spatial data and associated attributes. GDBs are optimized for performance and storage and can manage individual thematic layers as large as 1 terabyte in size, which is critical for extensive spatial data sets with multiple attributes. GDB's also significantly outperform shapefiles and coverages in GIS analysis operations. The GDB also allows storage and management of raster data such as orthophotos and digital elevation data.

Geodatabase

The following layers have been compiled and imported in the GDB:

- Transportation including roads and railroads. Data was downloaded from the Michigan Geographic Data Library (http://www.mcgi.state.mi.us/mgdl).
- Hydrology including lakes, rivers and streams. Data was downloaded from the National Hydrography Dataset (http://nhd.usgs.gov/).
- Wetlands as mapped by the National Wetlands Inventory, US Fish and Wildlife. This data is compiled by county at the Michigan Geographic Data Library (http://www.mcgi.state.mi.us/mgdl).
- Political boundaries include county, incorporated city, Michigan DNR and federal ownership boundaries as well as public land survey features. Data was downloaded from the Michigan Geographic Data Library (http://www.mcgi.state.mi.us/mgdl) and the National Atlas (http://nationalatlas.gov).
- Soils- download by county from the Soils Data Mart (http://soildatamart.nrcs.usda.gov/). Attribute tables downloaded and linked to the soil polygons included Component, Mapunit, Canopy Cover, Crop Yield, Ecological Classification and Associated Flora, and Forest Productivity.
- Land Use is currently based on the IF map land cover compiled by the Michigan DNR and with agricultural lands updated from the 2010 Cropland Data Layer developed by the National Agricultural Statistics Service (http://www.nass.usda.gov/research/Cropland/SARS1a.htm).

Thematic layers are registered to the Michigan GeoRef projected coordinate system. This is the only projected coordinate system which can be applied to the entire state. Details on the system can be found at http://www.michigan.gov/documents /DNR_Map_ Proj_and_MI_Georef_Info_20889_7.pdf.

Data Availability

Currently the compiled data is not available on a public site. Plans are being made to upload the data to the Sustainable Futures Institute's MUSES website by the end of the year.