

OPEN-FILE REPORT OFR16-4
Preliminary surficial geologic map of the Southwestern Arrowhead area,
St. Louis County, northeastern Minnesota

SURFICIAL GEOLOGIC MAP
Kaleb Wagner, Jenn Horton, and Gary Meyer
Minnesota Geological Survey
scale 1:100,000
2018

This Map has not been thoroughly reviewed and edited to conform to formal publication standards of the Minnesota Geological Survey.

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This year and this part of the Open-File Report contains 2017-2018 data, reports and GIS files relating to the surficial geology and is provided in the following formats:

1. SwA_SurficialGeology2018.pdf—Surficial geologic map in pdf format
2. ESRI GIS files; Map package SwA_SurficialGeology2018.mpk, ESRI map package for all versions of ArcGis 10, placed within OFR16_4 archive in the University of Minnesota Archives (UDC) <http://hdl.handle.net/11299/183258> (contact: Richard Lively, MGS)

1. GEOLOGIC MAP

The map covers an irregular area that extends from longitude 92° 30', latitude 48° 00', westward to St. Louis/Itasca county boundary thence south to latitude 47°30' east to 92° 15', thence south to the southern border of St. Louis county. It is the third in a series of 4 surficial maps that collectively will provide data and interpretations for county geologic atlases of Lake and St. Louis Counties.

2. GIS FILES

The data and results of the project are provided as ArcGis shape and geodatabase files compiled within an ArcGis 10 project that opens when the map package (mpk) file is downloaded and unpacked. Local copies of the files are created on the local computer (usually in C:\documents\ArcGis\Packages).

All gis files are in UTM coordinates, zone 15N, NAD83 projection.

A list of the files in the map package is given below:

Ofr_sg_2018_SwA_version.mxd-- Arcgis mxd containing the gis files, within the map package

GlacialAndSurficialLines—polylines that show linear features mapped as part of the surficial geology, clipped to the study area. ESRI Representations using the Field RuleID

city.shp—point file showing city locations and names within the study area

lakes_Clip_Dissolve.shp—polygon file showing locations of lakes

outcrop_buffer.shp— polygon file showing areas where the bedrock is thought to be within approximately 10 feet of the land surface, starting 200m from outcrops. No label attributes.

qdi_pts.shp—point file showing locations of Quaternary sample locations

highways.shp—line file showing locations of surface roads within the study area

peat—polygon file showing locations of mapped peat

rivers_erase—line file showing locations of streams within the study area. Flow lines within lakes removed.

sgpg_ofr18_table.shp—Surficial geology polygon file showing locations of the mapped surficial geology in the Southwestern Arrowhead region for the 2018 time period. Attributes include unit descriptions, map labels and additional geological information. Map labels are explained on the map PDF.

Sg_area_pg.shp—polygon (outline) of map area

Wells_all.shp—point file showing location of water wells from CWI. This file also includes unlocated data. Unlocated points have not been verified as to location or materials.

Printed copies of the map (42"x72", scale 1:100,000) can be requested from MGS Map Sales--612-626-2969. Prints can be provided at 50 percent reduction as well.