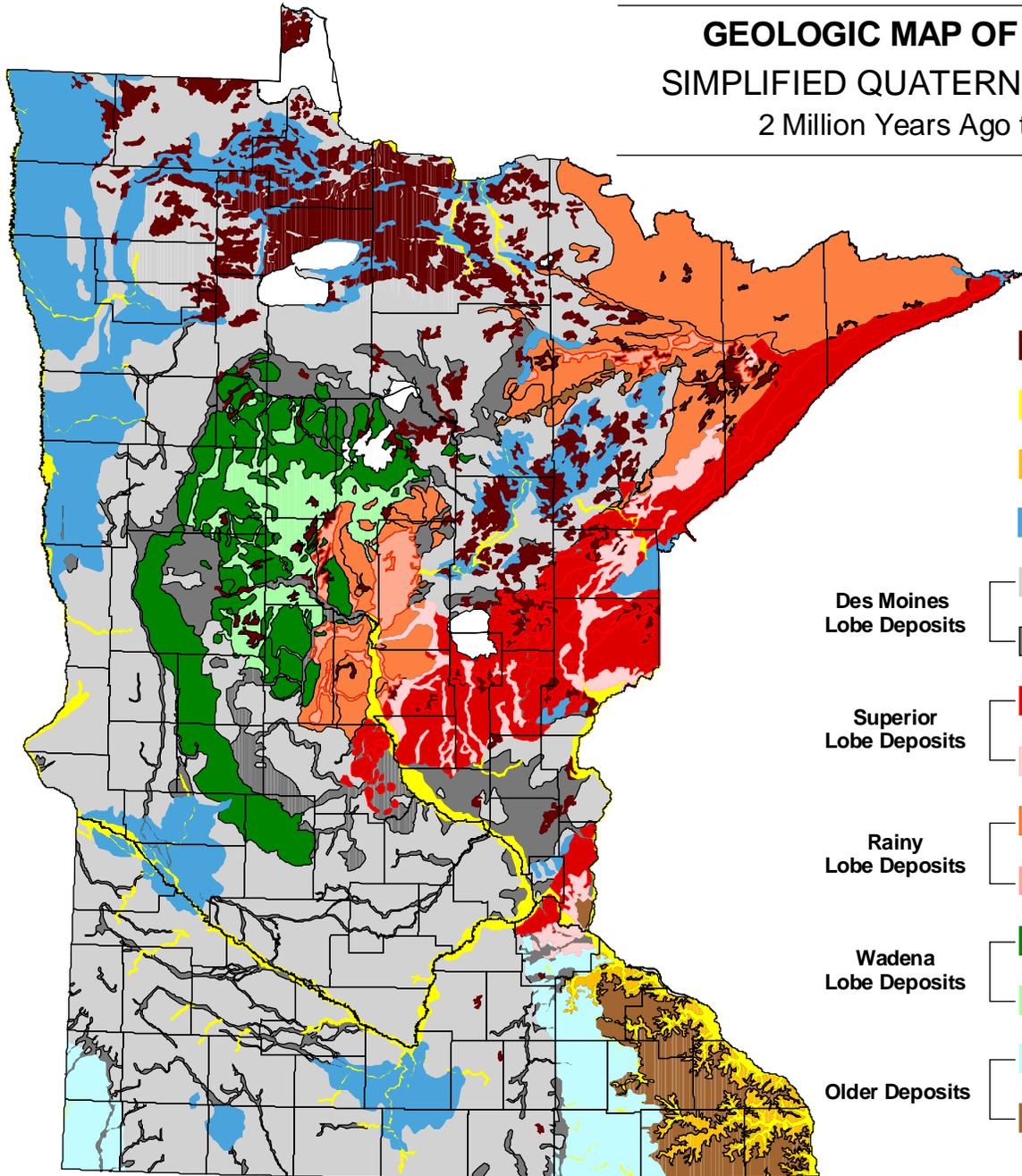


# GEOLOGIC MAP OF MINNESOTA

## SIMPLIFIED QUATERNARY GEOLOGY

2 Million Years Ago to Present



### DESCRIPTION OF MAP UNITS

- Peat - organic deposits in wetlands
- Alluvium and terrace deposits - sorted stream deposits and filled channels of former streams
- Colluvium - unsorted slope sediment, commonly rock debris. Bedrock outcrops commonly present
- Glacial lake sediments, predominantly silt and clay
- Des Moines Lobe Deposits**
  - Till, gray and calcareous; shale and limestone clasts generally common, derived from Manitoba and eastern North Dakota; combined silt and clay typically exceeds 50%
  - Outwash, typically sorted granular material
- Superior Lobe Deposits**
  - Till, reddish-brown, noncalcareous; clasts predominantly igneous and metamorphic rocks of the Canadian Shield, and also distinctive rocks (amygdaloidal basalt, rhyolite and agate) of the Superior basin
  - Outwash, typically sorted granular material
- Rainy Lobe Deposits**
  - Till, brown to gray, noncalcareous; clasts predominantly igneous and metamorphic rocks of the Canadian Shield
  - Outwash, typically sorted granular material
- Wadena Lobe Deposits**
  - Till, gray and calcareous; limestone clasts are common, but shale is rare to absent; deposits are less clayey than the Des Moines Lobe
  - Outwash, typically sorted granular material
- Older Deposits**
  - Till, older, Pre-Wisconsinan in age
  - Weathering residuum over bedrock

Quaternary map based on data from the University of Minnesota - Minnesota Geological Survey, *Geologic Map of Minnesota, Quaternary geology*, H.C. Hobbs and J.E. Goebel, 1982.

Simplified description by C.R. Howe, 2000, Mn/DOT