

# The Surficial Geologic Map of Kent County, Michigan

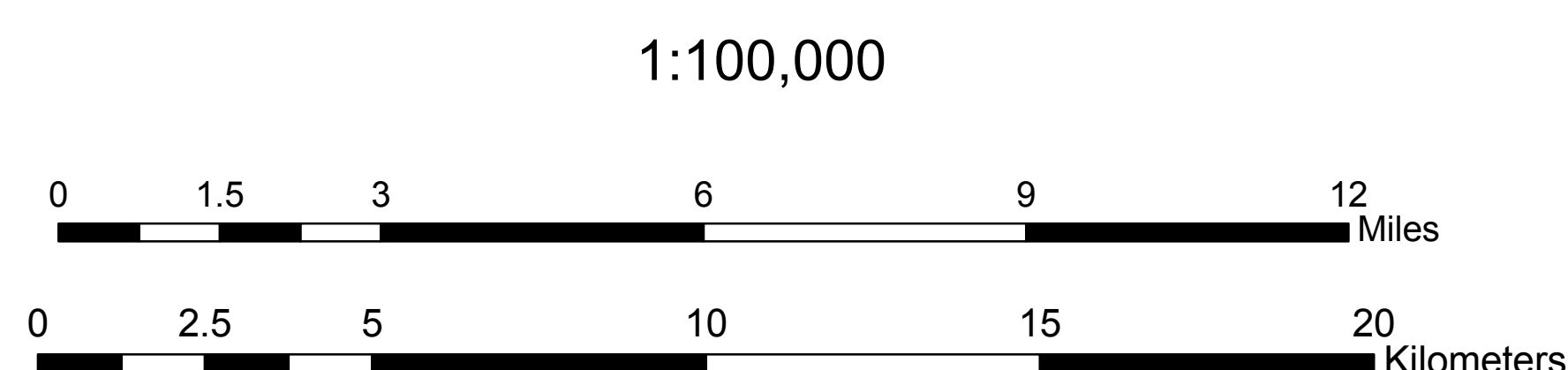
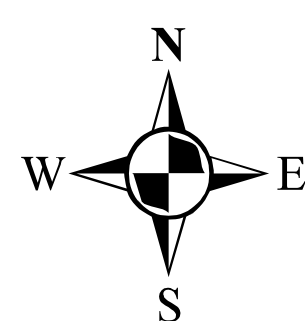
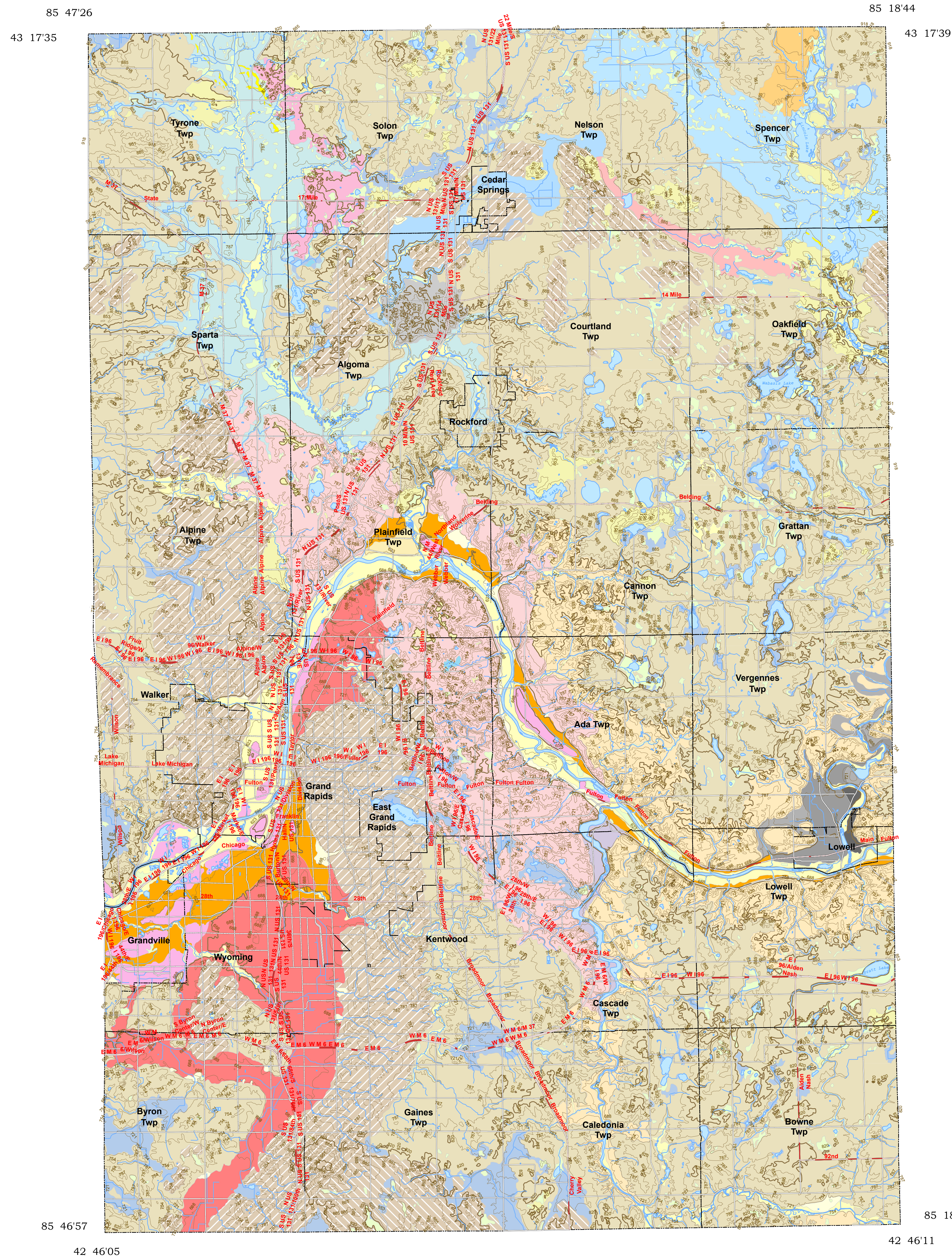
by

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## Description of Map Units

- Qal** RECENT FLOODPLAIN DEPOSITS: Bedded sands and silts along modern rivers and streams. Includes natural levees.
- Qd** DUNE DEPOSIT: Mostly poorly bedded, well sorted sand.
- Qfb** BELFONT FAN DEPOSIT: Mostly fine-to-coarse horizontally bedded and cross-bedded sand with lenticular beds of gravel.
- Qlc** GLACIAL LAKE CEDAR SPRINGS DEPOSIT: Horizontally bedded lacustrine silt and clay with occasional drop stones. Locally includes bedded sand deposits.
- Qlsc** STEGMAN CREEK FAN DEPOSIT: Mostly fine-to-coarse horizontally bedded and cross-bedded sand with lenticular beds of gravel; collapse and normal faulting common; some cobbles and boulders present.
- Qogv1** GRAND VALLEY OUTWASH DEPOSIT: Horizontally bedded and cross-bedded, fine-to-coarse sand, pebbles, and cobbles. Deposits form a large terraced valley train system within the Grand River Valley whose surface slopes towards the west. Includes
- Qogv2**
- Qcv** CUTLERVILLE OUTWASH DEPOSIT: Mostly stratified and cross-bedded coarse pebbly sand and gravel; locally includes boulders.
- Qoe** EASTMAN OUTWASH DEPOSIT: Mostly stratified pebbly sand to cobble gravel. Locally includes boulders, debris flow deposits, and bedded silts
- Qft1** FLAT RIVER TERRACE DEPOSITS: Mostly horizontally bedded and cross-bedded fine-to-coarse sand and gravel; produced by incision of the Flat River Valley.
- Qft2**
- Qft3**
- Qkf** KENT FORMATION: Mostly fine-to-coarse sand and pebble-to-cobble gravel; locally includes clay rich till, bedded silt and clay, and organic deposits.
- Ql** UNDIFFERENTIATED LACUSTRINE DEPOSITS: Mostly bedded silt and sand associated with ponded water. Locally contains some bedded clay.
- Qg** UNDIFFERENTIATED SAND AND GRAVEL DEPOSITS: Mostly gravelly sand and pebbles to cobble gravel, but includes some till and boulders.
- Qt** TILL, UNDIFFERENTIATED: Mostly clay rich till with minor amount of sand and gravel. Locally fluted. Includes significant amounts of sand, gravel, and debris flow deposits in morainal uplands.
- Qtmim** MORAINAL UPLANDS: Associated with the Lake Michigan Lobe.
- Qtmss** MORAINAL UPLANDS: Associated with the Saginaw Lobe.
- Qsw** SWAMP AND MARSH DEPOSITS: Mostly decaying freshwater plants mixed with sand and silt. Some standing water.
- Qls** GLACIAL LAKE SPENCER DEPOSIT: Horizontally bedded lacustrine silt and clay with occasional drop stones. Locally includes bedded sand deposits as well as lenticular beds of gravel.
- Qcc** COOPER CREEK CHANNEL DEPOSIT: Horizontally bedded and cross-bedded, fine-to-coarse sand, pebbles, and cobbles; associated with eastward draining of Glacial Lake Cedar Springs into Glacial Lake Spencer.
- Qfl** LONG LAKE FAN DEPOSIT: Mostly fine-to-coarse horizontally bedded and cross-bedded sand with lenticular beds of gravel; includes lenses of bedded silt and clay.
- Qoml** MASTON LAKE OUTWASH DEPOSIT: Horizontally bedded and cross-bedded, fine-to-coarse sand and gravel
- Qtt** THORNAPPLE RIVER TERRACE DEPOSIT: Mostly horizontally bedded and cross-bedded, fine-to-coarse sand and gravel; produced by incision of the Thornapple River Valley.



Map Location