

# Surface Geology

## Hunter Quadrangle, North Dakota

Fred J. Anderson

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### ANTHROPOCENE

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#### FILL DEPOSITS

Cut and fill materials consisting dominantly of silts, clays, and sands from adjacent nearsurface formations placed by artificial means. Used in construction of highway crossover ramps, wastewater ponds and drainage improvement embankments.

### QUATERNARY PERIOD

#### HOLOCENE EPOCH

#### OAAE FORMATION

Hwd

#### SLOPE WASHED ALLUVIUM

Brown to gray sand, silt, and clay deposited as slope wash within remnant drainages into glacial Lake Agassiz terminating at beach strand lines.

Hal

#### ALLUVIUM

Brown-gray, bedded to massive, sands, silts, gravels, and clays deposited as reworked and recent channel alluvium and overbank deposits within the south branch of the Elm River on the glacial Lake Agassiz plain.

Hln

#### GLACIOLACUSTRINE NEARSHORE SEDIMENT

Silt, sand, and gravel; moderately to well-sorted; planar to cross-bedded; deposited on the shoreline of glacial Lake Agassiz, ranging in thickness from zero to 15 feet (4.6 meters), shallow-water deposits, sand and gravel may occur in beach ridges along with spits, and offshore sand bars shown as line symbols.

#### SHERACK FORMATION

Hs

#### GLACIOLACUSTRINE OFFSHORE SEDIMENT

Yellow-gray, laminated to obscurely bedded, silt, clay, and silty-clay, cohesive. Ranges in thickness between 14 and 29 feet within the quadrangle. Glaciolacustrine sediments deposited in offshore environments of glacial Lake Agassiz.

#### Geologic Symbols

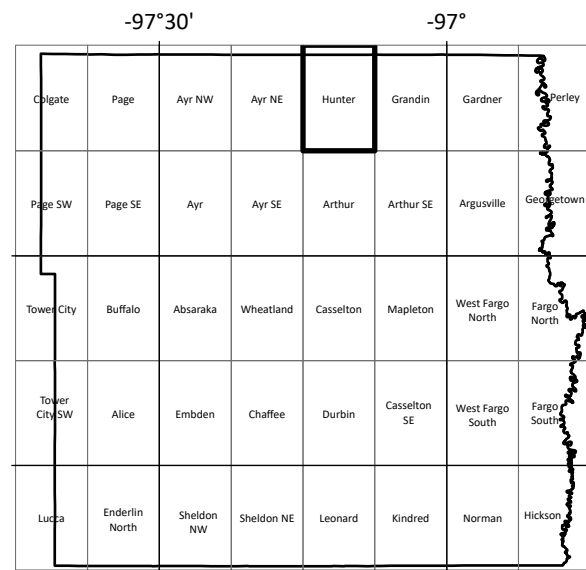
Geologic contact (Known)

#### BEACH RIDGES

Established from LiDAR maps; line indicates the crest of the ridge or wave washed high-water line; interpreted to be a beach ridge along the margin of a lake or high-water level; discernable on LiDAR maps and aerial image. Difficult to identify on the ground.

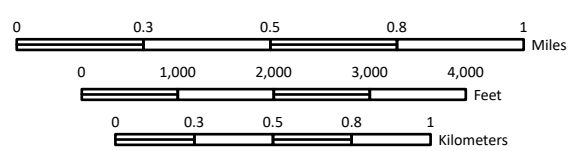
#### A—A' Line of Cross Section

Paleochannels on the glacial Lake Agassiz plain



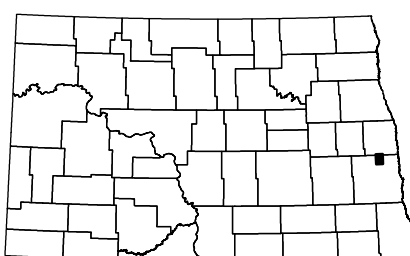
Index to 1:24,000 Quadrangles, Cass County

Scale 1:24,000



Lambert Conformal Conic Projection  
North American 1983 Datum  
USGS 7.5 Minute Topo Map

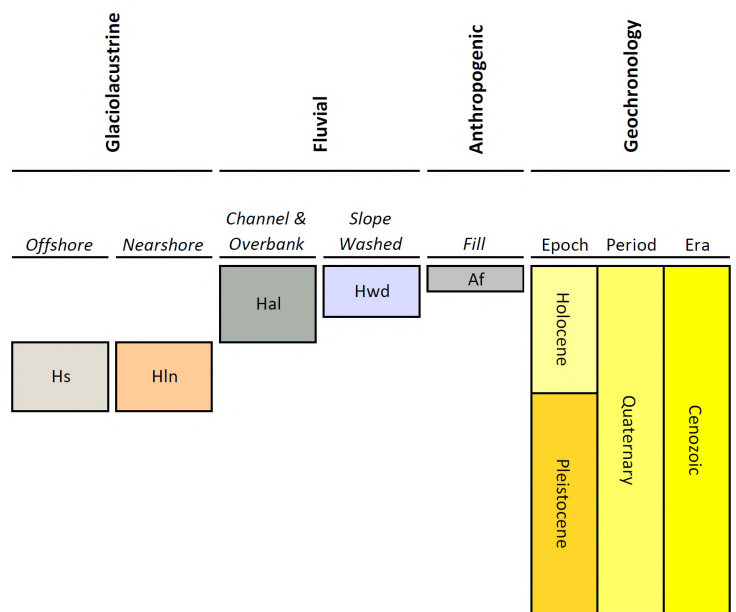
USGS Data Originator:  
International Water Institute, 2010.  
Red River Basin Mapping Initiative 2009-2010.  
NRCSS Research and ND State Water Commission, 2010.  
James River Basin LGAH 522.



Hunter Quadrangle, North Dakota

3°6' MN

2019 Magnetic North  
Declination at Center of Sheet



Cartographic Compilation: Navin Thapa

