



LEGEND

- Recent**
- Qal Alluvium  
(gravel, sand, silt, and clay deposited by present streams during high water)
  - Qd Sand dunes and wind-blown sand  
(clean, yellow-brown, unconsolidated, uniformly medium to fine-grained sand)
  - Qp Peat and muck  
(plant material with subordinate clay accumulated in marshes)
  - Qwb Backwater alluvium  
(sand and silt deposited by tributaries of Rock River in temporary lakes dammed by Wisconsin valley trains)
- Wisconsin**
- Qlv Late Wisconsin valley train  
(gravel and sand outwash from the Late Wisconsin ice sheet to the north; contains much Early Wisconsin valley train material which can not be differentiated; principal source of sand and gravel)
  - Qev Early Wisconsin valley train  
(gravel and sand from the Early Wisconsin ice sheet to the east; found only in Kyle River valley)
- Pleistocene**
- Qtm Iowan or Early Wisconsin terminal moraine  
(glacial till of variable composition)
  - Qie Grand Detour esker  
(water-deposited gravel and sand of Illinoian drift; preserved on upland; source of much sand and gravel)
  - Qim Illinoian ground moraine  
(chiefly sandy and gravelly clay till)

UNCONFORMITY

- Og Galena dolomite  
(buff, well crystallized, coarse-grained, cherty dolomite, carrying many poorly preserved fossils; weathers to a deep brown dolomite sand)
- Opg Plattville limestone and Glenwood shale  
(Plattville limestone - uppermost part (Lowell Park member), light buff to gray dolomite and argillaceous limestone interbedded, sparingly fossiliferous; middle part (Blue limestone member), dark blue fossiliferous glassy limestone weathering to chalky white; lowest part (Buff limestone), buff, sandy, argillaceous fossiliferous, massive limestone, weathering to deep brown; source of stone for cement manufacture; Glenwood shale, sandy, deep green, weathers brown; thin, can not be mapped separately; possible source of potash)
- Osp St. Peter sandstone  
(white, poorly cemented, non-fossiliferous, cross-bedded sandstone; pure quartz sand; source of glass sand and silica)

UNCONFORMITY

- Osh Shakopee formation  
(interbedded, buff sandy dolomites, bright variegated sandy shales, and thin quartz sandstones; few poorly preserved fossils)
- Onr New Richmond sandstone  
(White, poorly cemented, non-fossiliferous, cross-bedded sandstone; pure quartz sand)

Glacial striations and direction of ice movement (in cement quarry only)

ECONOMIC DATA

- Active quarry
- Abandoned quarry
- Sand and gravel pit
- Artesian well

Topographic base map surveyed in cooperation with the U. S. Geological Survey

Scale 62500  
1 1/2 0 1 2 3 4 Miles  
1 1/2 0 1 2 3 4 5 Kilometers  
Contour interval 20 feet.  
Datum is mean sea level.

APPROXIMATE MEAN DECLINATION N, 1912.

Geology by Russell S. Knappen  
Surveyed in 1918 and 1920