

Geologic map of the Ferryville and Lansing 7.5-minute quadrangles, Crawford County, Wisconsin

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Explanation

Paleozoic chronologic subdivisions are from Gradstein and others (2020). The subdivision of the Cambrian into Middle and Late Cambrian epochs and the position of the Cambrian-Ordovician boundary are based on Runkel and others (2007). Ordovician unit names and lithologic divisions follow Agnew and others (1956). Cambrian unit names and lithologic divisions follow Wisconsin Geological and Natural History Survey (2011). For brief historical backgrounds on nomenclature of the Paleozoic units, see Stewart and others (2025). Quaternary chronologic subdivisions are after Carson and others (in press).

A supplemental report, which includes detailed unit descriptions and a discussion on slope failures, and GIS data that accompany this map, can be found at: <https://doi.org/10.54915/rjk4646>

Map Units

Quaternary

Quaternary units are mapped where thicknesses are estimated to exceed 10 ft (3 m).

- Alluvial**
- Qal** **Alluvium.** Sand, gravelly sand, and silt in channel bottoms. Broad, flat, marshy floodplain underlain by organic muck and fine sand.
 - Qaf** **Alluvial fan deposits.** Fan-shaped deposits of poorly sorted sand with silt and cobbles. Occur where steep drainages meet gently sloping terraces or valley bottoms.

- Terraces**
- Qtb** **Sediment of the Bagley Terrace.** Sand and gravelly sand deposits along the main stem of Mississippi River.
 - Qtv** **Sediment of the Savanna Terrace.** Laminated, alternating fine sand, silt and clay deposits in valleys of tributaries to the Mississippi River.

- Colluvial**
- Colu** **Colluvium.** Angular pebble to boulder diamicton in cone-shaped debris fan deposits. Coarse material is derived from cliff-forming Paleozoic bedrock units. Extremely variable proportions of clasts to matrix.

- Aeolian**
- Lo** **Loess.** Windblown silt forming deposits on gently-sloping bedrock bluff tops.

Paleozoic

- Ordovician**
- Oa** **Sinnipee Group, undivided.** Maximum preserved thickness of 40 ft (12 m). Known only from well construction reports and surface float of gray and tan, fine- to medium-grained, crystalline dolomite.
 - Ol** **Ancell Group, undivided on map.** Contains the Glenwood Formation: 2–4 ft (0.6–1.2 m) of pale to dark green, variably sandy shale and the St. Peter Formation: 50–115 ft (12–35 m) of quartz sandstone with shaly residuum and weathered/silicified dolomite debris at unconformable basal contact.
 - Opc** **Prairie du Chien Group, undivided.** 190–260 ft (69–79 m) thick. Lithologically and texturally heterogeneous dolomite with sparse green shale partings and minor quartz sandstone. Most commonly gray and tan, fine- to coarse-grained crystalline dolomite, variably porous, wuggy, and cherty. Occasionally brecciated. Stromatolitic in lower part. Contains sandy and oolitic dolomite in basal 20–30 ft (6–9 m).

- Cambrian**
- Cj** **Jordan Formation of the Trempealeau Group.** 100–120 ft (30–37 m) thick. Cross-bedded quartz sandstone commonly with dolomitic cement. Contains two members of subequal thickness: upper, coarser grained Van Oser and lower, finer grained Norwalk. Calcite cemented concretion horizon commonly present at member boundary. Distinctive upper 5–10 ft (1.5–3 m) of interbedded white fine-grained cross bedded sandstone with green shale interbeds, and gray-pink dolomitic sandstone.
 - Csl** **St. Lawrence Formation of the Trempealeau Group.** 20–30 ft (6–9 m) thick. Thin to very thin bedded, laminated, tan-yellow to white, very fine-grained sandstone and dolomitic siltstone with of tan brown dolomitic shale partings.
 - Ctc** **Tunnel City Group, undivided.** 140–160 ft (43–49 m) thick. Only the top 80–90 ft of the Tunnel City Group is exposed. Thin to medium bedded, white to tan gray, fine grained, bioturbated, glauconitic, dolomitic sandstone.
 - Ce** **Elk Mound Group, undivided.** Cross section only. Uncertain thickness (600+ ft, 180+ m) fine- to medium-grained sandstone, silty/shaly and dolomitic in part.

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