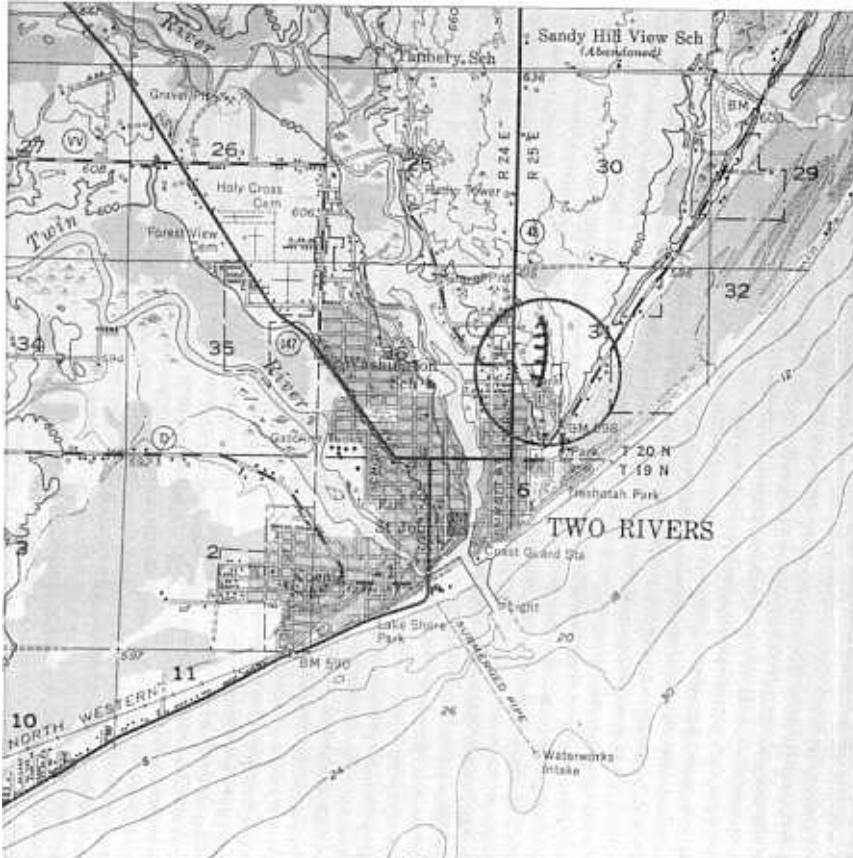


Title: Type locality of the Two Rivers Till

Location: NW 1/4, Sec. 31, T. 20 N., R. 24 E., Manitowoc 15' Quadrangle, Manitowoc County. Enter along north side of Chevrolet dealer on Hwy. 42 north of Two Rivers. Pit is difficult to drive into and if anyone is home in trailer, obtain permission there.



Author: David M. Mickelson

Description: The pit face shows red till over sand. About 50 feet of sand is present beneath the pit floor and below this is another red till. We are at the edge of the Two Rivers Moraine and the red till here, unlike those to the south, is not cut by the Glenwood shoreline. The till in the exposure shows differences from top to bottom. In the lower part silt and sand is interbedded with the till and the till becomes more uniform upward. These could mark two different glacial events but it seems more likely that as ice advanced down the basin in water, icebergs and the advancing ice margin dropped debris into water. Later, as the ice grounded because of lake level drop or ice thickening, more typical till was deposited.

Significance: Previous to 1973, it was believed by most workers that the most recent of the red till along Lake Michigan covered the Two Creeks Forest Bed (see description) and extended to Milwaukee. In 1973 Evenson noted that the Glenwood shoreline did not cut the red till north of Manitowoc (Two Rivers till) and that the last dated Glenwood stage was older than the Two Creeks Forest Bed. Thus he concluded that the red tills south of Manitowoc were older than the Two Creeks Forest Bed and thus older than the Two Rivers till. Mickelson and Evenson (1975) presented evidence from depth of carbonate leaching studies that the Two Rivers Till is much less leached than tills to the south of the Two Rivers Lowland. Acomb (1978) presents clay mineral evidence that agrees with this interpretation. Black (1977), however, has disagreed with Evenson's interpretation.

References: Thwaites and Bertrand, 1957