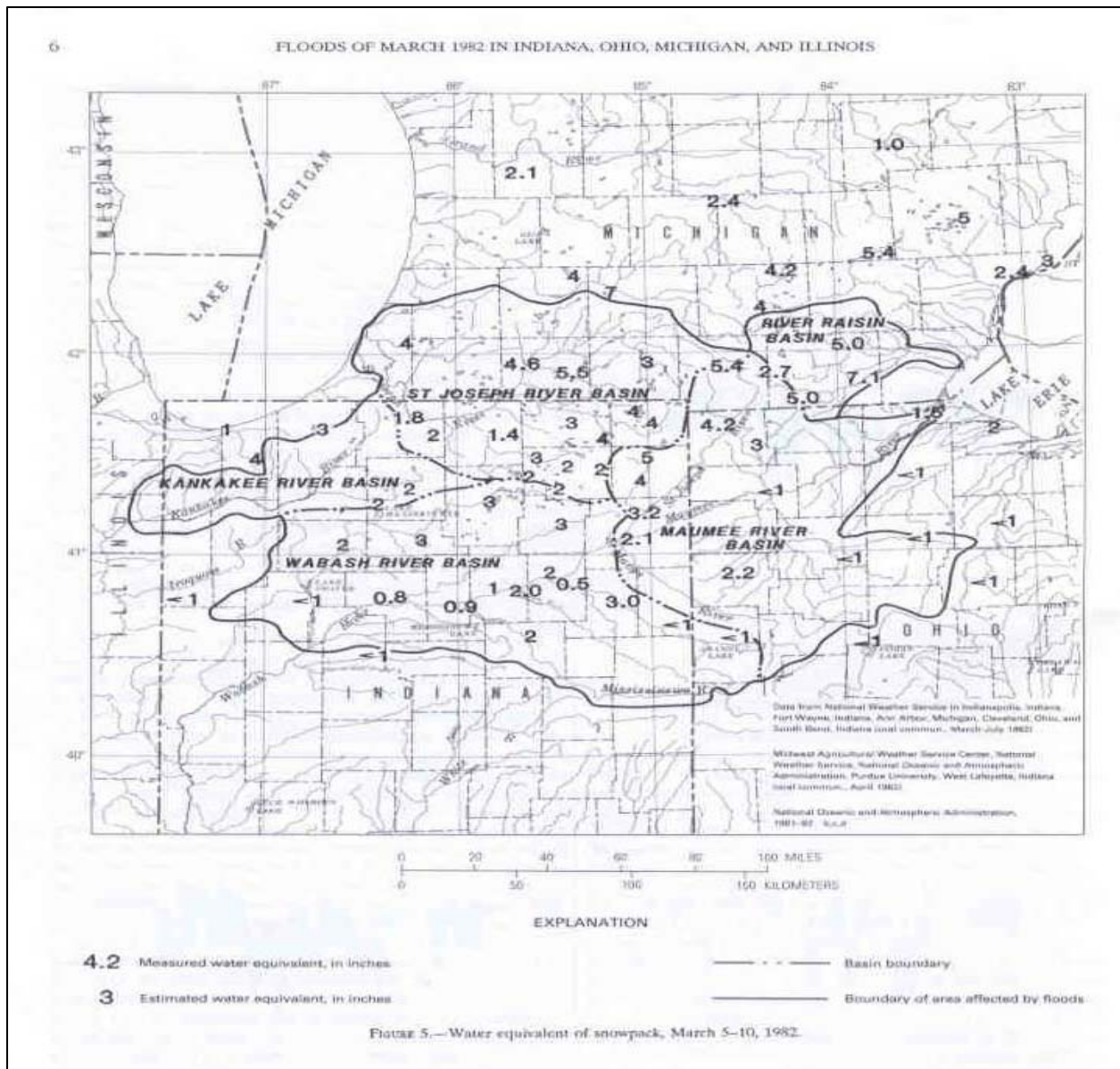


2. Water Equivalent of Snowpack

This report is an excerpt from the United States Geological Survey (USGS) and National Oceanic and Atmospheric Administration (NOAA) report titled "Floods of March 1982 in Indiana, Ohio, Michigan, and Illinois". The map is directly from this report.

Water equivalent measurements of snowpacks are uncommon in the region however; supplemental snow surveys were made by the National Weather Service (NWS) to determine flood potential. A snow survey made on February 9, 1982, indicated a water equivalent of 1.1 inches at Hicksville, Ohio, 1.5 inches at Van Wert, Ohio, 3.5 inches at Montpelier, Ohio, and 4.2 inches at Fort Wayne, Indiana and at Wauseon, Ohio. Snow cover ranged from 1 to 3 feet across the area at this time. Another snow survey made on February 17th indicated a water equivalent of 3.0 inches at Hicksville, 1.7 inches at Van Wert, 2.3 inches at Napoleon, Ohio, 2.9 inches at Defiance, Ohio, 4.0 inches at Montpelier Ohio, and at Fort Wayne.



Rainfall and rising temperatures produced a partial snowmelt during the last two weeks in February, 1982. Snowmelt was more significant over the southern areas than elsewhere and produced bankfull stages on some streams. Water equivalent had decreased to 1.4 inches at Van Wert, 1.5 inches at Fort Wayne and 2.2 inches at Wauseon by February 26. However the northern snowpack still contained excessive moisture. For example, a 4.7 inch water equivalent was reported at Montpelier on February 26.

Rain and snow during the first week of March increased the water equivalent of the snowpack by 1 to 2 inches at most locations. Runoff into rivers and streams was minimal because of the absorption by the snowpack. As much as 15 inches of snow and at least 1 inch of ice covered frozen, saturated ground was reported by the NWS from the period of March 5-10, 1982. Water equivalent was highest in the Saint Joseph Ohio and River Raisin basins namely, 7.1 inches at Blissfield, 5.5 at Nottawa, and 5.4 inches at Hillsdale, all in Michigan. Because of the small number of measurements, a ratio of 1 inch of water to 3 inches of snow was used to estimate additional water equivalents for locations reporting only snow cover. This ratio was determined at locations where both snow cover and snow water equivalent were measured.