

Lohman-sw-1938 MS

GEOLOGIC MAP OF NORTHEASTERN PENNSYLVANIA

Compiled by Geo. W. Stose and O. A. Ljungstedt

Geology from Geologic Map of Pennsylvania published by Pennsylvania Topographic and Geologic Survey, 1932.

With changes on Pocono Plateau by Bradford Willard after Norman S. Wagner.

Ground-water conditions described by S. W. Lohman.

EXPLANATION

GLACIAL BORDERS

Border of Wisconsin drift

Border of Illinoian drift

Border of Jerseyan drift

(includes some areas of questionable glacialism)

Glacial drift

(Wisconsin drift: Glacial till yields small supplies of good water; sand or gravel lenses yield larger supplies. Glacial outwash yields very large supplies of good water, but is not extensively exploited. Illinoian drift: yields large supplies in Carbon County, but is relatively unimportant elsewhere. Jerseyan drift: occurs only as isolated patches - unimportant as source of ground water.)

Post-Pottsville formations

(Sandstone and shale with several workable coals, some conglomerate, some limestone in Wyoming Valley. Yield small to large supplies of potable water locally but generally water is contaminated and hard (except by mining operations).)

Pottsville formation

(Chiefly coarse sandstone and conglomerate with irregular shale beds and some thin coals. Yields moderate to large supplies of excellent water in Luzerne and Schuylkill Counties, but unimportant elsewhere due to rugged outcrop. Many flowing wells.)

Mauch Chunk shale

(Chiefly red and green shale with red and green sandstone. One of the most important water-bearing formations in northeastern Pennsylvania. Adequately supplies shallow wells, and sandstones yield moderate to large supplies to deep wells. Water generally of excellent quality. Many flowing wells.)

Pocono sandstone

(Chiefly thick bedded, coarse, gray sandstone and conglomerate with some red shale in the lower part. Contains thin coals locally. Yields moderately large supplies in places where the strata are accessible, but not exploited as its more important strata. With few exceptions, water is of excellent quality. Several flowing wells.)

IX Catskill continental group

(Chiefly non-marine red and gray shale and sandstone, some conglomerate. Adequately supplies most of the drilled wells in northeastern Pennsylvania, moderate to large supplies obtainable from sandstones. Water generally of very good quality.)

VIII Chemung formation, Portage group, Hamilton formation, Marcellus shale and Onondaga formation

(Chemung: fossiliferous gray, sandy shale and sandstone. Yields small to moderate supplies of water. Portage: dark to light gray shale and thin-bedded sandstone. Yields small but generally adequate supplies; water generally potable but in some places it is hard and likely to be high in sulphate. Hamilton: very fossiliferous olive sandy shale and sandstone, limestone at top locally. Generally yields small to moderate supplies of water of good quality. Marcellus: black, friable shale, few fossils. Yields small but dependable supplies of good water in eastern counties, but water may be hard in western counties. Onondaga: thin, fossiliferous limestone, in east, non-cherty in west, sandstone in east by calcareous shale and in east by Esopus shale member (supplied with Oriskany), tough, gray, sandy shale. Unimportant as source of ground water except in Monroe county and in New Jersey, where limestone member yields small to moderately large supplies of slightly hard water to wells encountering solution channels.)

IV Lower sandstones of Clinton formation, Tuscarora sandstone and Juniata formation

(Includes lower part of Clinton along Kittatinny (Blue Mountain), Tuscarora (Silurian). Thick bedded quartzitic white sandstone, and coarse basalt conglomerate. Juniata (Upper Ordovician). Red sandstone and shale, present only in Dauphin County. These rocks are unimportant as sources of ground water due to their topographic position.)

III Oriskany sandstone

(Chiefly pure granular sandstone, notable in places for glass sand, fine conglomerate, with some sandy, fossiliferous limestone, chert and shale. Appears to be permeable but unimportant as source of ground water.)

II Helderberg, Tonoloway (in west) and Bossardville (in east) limestones

(Helderberg (Lower Devonian). Thick-bedded, blue fossiliferous cherty limestone, with some sandstone and calcareous shale. Tonoloway and Bossardville (uppermost formation of Cayuga group, Silurian). Platy, laminated limestone, quarried locally. In western counties, and to lesser extent in Monroe County, they yield moderately large supplies of hard water to wells encountering solution channels.)

I Devonian

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