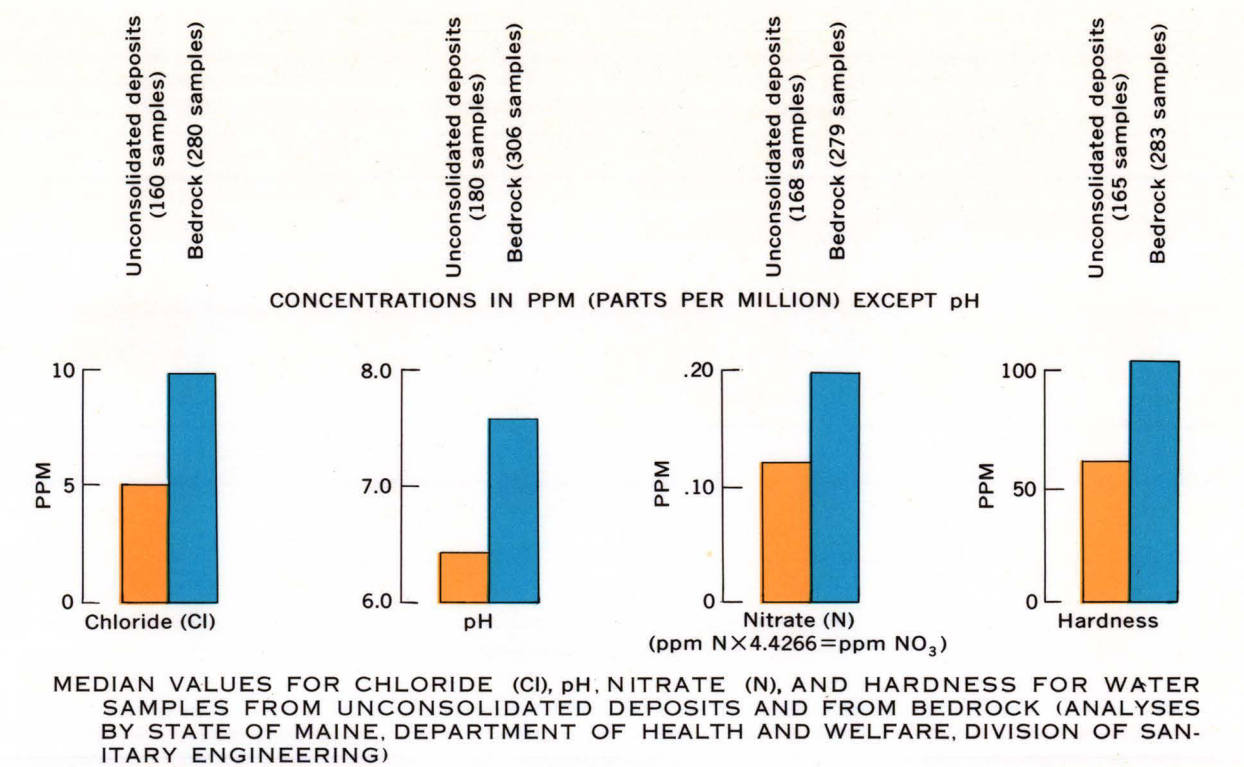
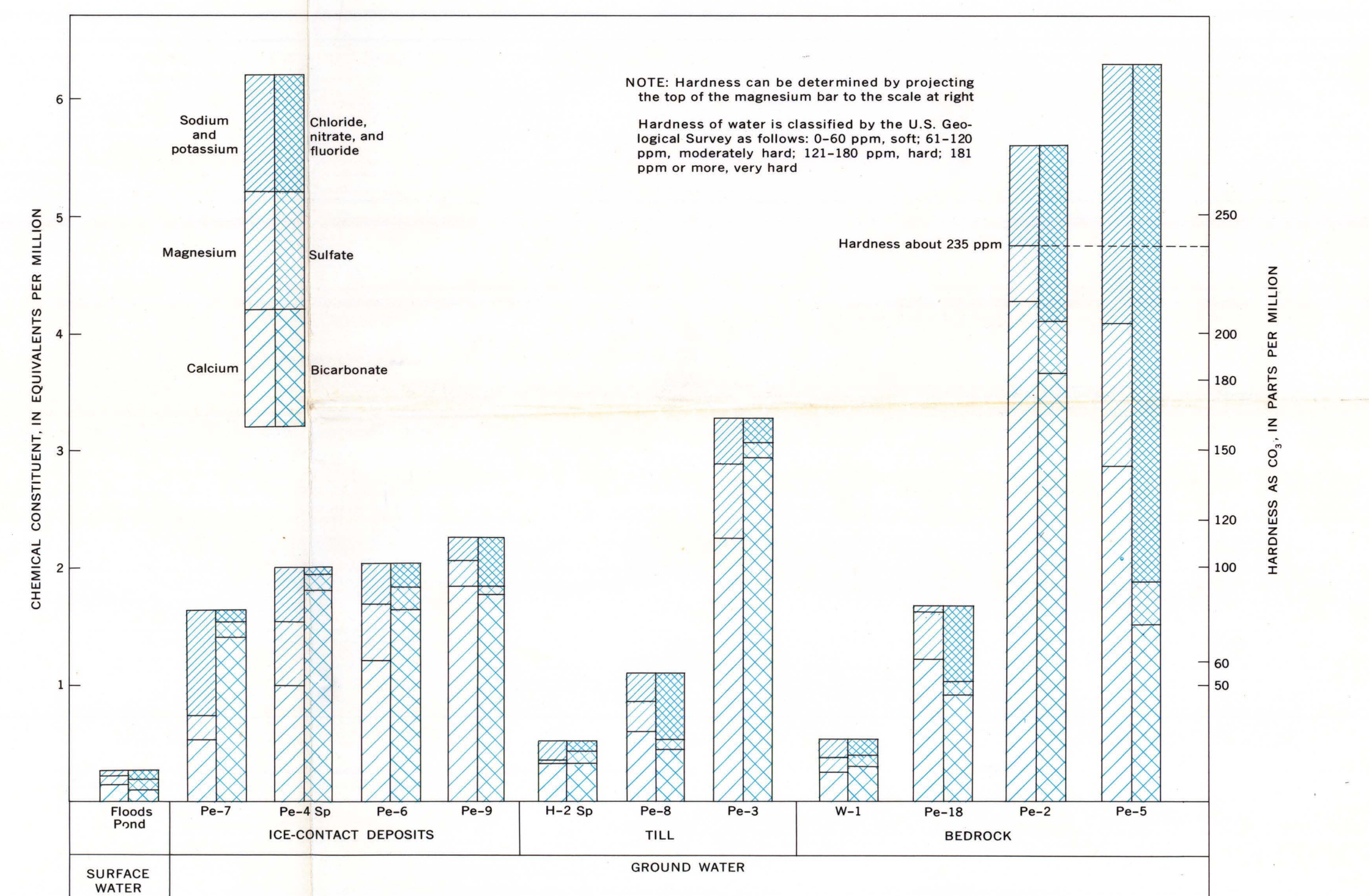


CORRELATION OF PRECIPITATION, GROUND-WATER LEVELS, AND STREAMFLOW IN THE UNION RIVER BASIN, 1944-63. (RELATIONS ARE CONSIDERED REPRESENTATIVE OF CONDITIONS IN THE ADJACENT LOWER PENOBSCOT RIVER BASIN)



MEDIAN VALUES FOR CHLORIDE (CL), PH, NITRATE (N), AND HARDNESS FOR WATER SAMPLES FROM UNCONSOLIDATED DEPOSITS AND FROM BEDROCK ANALYSES BY STATE OF MAINE DEPARTMENT OF HEALTH AND WELFARE DIVISION OF SANITARY ENGINEERING



CHEMICAL CHARACTER OF 11 SAMPLES OF GROUND WATER AND 1 SAMPLE OF SURFACE WATER FROM THE LOWER PENOBSCOT RIVER BASIN

EXPLANATION			Character	Water-bearing characteristics
System	Series	Geologic unit	Thickness (feet)	
QUATERNARY	Recent	Alluvium (Shows only where extensive)	0-15(7)	Silt, clay and sand of river flood plains. Deposits are thin and discontinuous and, though in places may contain some ground water, are not considered to be an aquifer. Subject to flooding. Do not form a mappable geologic unit, except for a few islands in the Penobscot River in the vicinity of Old Town.
		Swamp deposits (Shows only where extensive)	0-36	Occur in low lying and poorly drained areas. Not known to yield water to wells in lower Penobscot Basin though may supply a few springs. May be a source of recharge to underlying deposits and help to maintain dry weather flow of streams during or passing through them. Water may be acidic or highly colored.
		Estuarine sand deposits (Shows only where extensive)	0-20(7)	Area of occurrence very small. Probably yields small amounts of water to a few dug wells.
	Pleistocene	Glacial till deposits	0-100(7)	May be completely saturated but because of the grain size yield water very slowly. Supply water to some dug wells and possibly to a few drilled wells from sandy zones.
		Ice-contact deposits	0-125(7)	The largest supplies of ground water in the lower Penobscot Basin are obtainable from these deposits. Under most favorable conditions as much as 1000 gpm (gallons per minute) may be obtained from individual wells. However, large yields would be obtainable only where the deposits are in hydraulic continuity with a body of surface water. Many of the deposits are too high relative to nearby bodies of surface water to be important aquifers. The water is generally of good quality though locally contains excessive iron.
PRECAMBRIAN TO CARBONIFEROUS	Bedrock	Glacial till deposits	0-100(7)	Till is widespread and is the source of small quantities of water to many dug wells. A few drilled wells are reported to obtain water from till. One drilled well is reported to yield 6 gpm. Dug wells in till are likely to go dry in the summer. Water generally is of good quality.
		Bedrock outcrops (May have interbedded till deposits)		Rocks are dense and impermeable. Water occurs in joints, fractures, and cleavage or bedding planes. In some places is very sandy and resembles ice-contact deposits except for lack of stratification. In other areas is clay or silt predominates. Igneous rocks (chiefly granite) and metamorphosed sedimentary rocks (chiefly slate, schist, gneiss, argillite, quartzite, and some limestone).

SURFICIAL GEOLOGY AND AVAILABILITY OF GROUND WATER IN PART OF THE LOWER PENOBSCOT RIVER BASIN, MAINE

By
Glenn C. Prescott, Jr.

SCALE 1:62,500

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

1966

For sale by U.S. Geological Survey, price \$1.00