

# Surficial Geology of the Lewiston 1:100,000 Quadrangle, Maine

## Lewiston Quadrangle, Maine

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Funding for the preparation of this map was provided in part by the U.S. Geological Survey  
STATEMAP Program, Cooperative Agreement No. 07HQAG0079.



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**Open-File No. 08-49**  
**2008**

### EXPLANATION OF UNITS

Map units are labeled and grouped here by age:

H = Holocene (postglacial) deposits, formed mostly during the last 10,000 years)  
Q = Quaternary (age may vary from late Pleistocene to Holocene)  
P = Pleistocene (formed during most recent glacial episode, between about 25,000 and 10,000 years ago)

- Artificial fill** - Surficial sediments, rock fragments, and/or artificial materials, transported and dumped to build up highways, railroads, etc.
- Stream alluvium** - Sand, silt, gravel, and organic material deposited on floodplains of modern streams.
- Wetlands** - Peat, muck, and/or fine-grained inorganic sediments in poorly drained areas.
- Beach deposits on modern lake shores** - Composed of sand and gravel in varying proportions.
- Eolian deposits** - Sand deposited by wind action in late-glacial or postglacial time. May occur as dunes or irregular blanket deposits.
- Stream terraces** - Sand, gravel, and silt deposited on former floodplains as streams cut down to their present levels. This map unit usually occurs adjacent to modern floodplain surfaces (unit Ha).
- Stream alluvium** - Sand, gravel, and silt deposited on former river floodplains in late-glacial to postglacial time.
- Lake deposits** - Silty to sandy sediments adjacent to shores of modern ponds. Inferred to have been deposited into the ponds when they stood at a slightly higher level than today.
- Fan deposits** - Gravel and sand deposited near the mouths or along the lower reaches of brooks that drain steep upland terrain. The fans have accumulated where the stream gradients become gentler and the coarsest sediments cannot be carried farther downstream.
- Talus deposit** - Large accumulation of boulders at base of cliff on Bear Mountain in Waterford.
- Glaciolacustrine deposits** - Sediments deposited in temporary ice-dammed or sediment-dammed glacial lakes. Includes deltas consisting of sand and gravel, and lake-bottom sand, silt, and clay. Named glacial lakes are grouped below according to the valley or river basin in which they formed.
- Alluvial deposits** - Sand, gravel, and silt deposited in late-glacial time on the earliest (and highest) former floodplains along rivers.
- Marine regressive deposits** - Sand, gravel, and silt deposited in (or graded to) shallow marine waters during late-glacial regression of the sea. Includes large sand plains that commonly overlie marine mud of the Presumpscot Formation. Formed by a variety of fluvial and nearshore processes.
- Marine shoreline deposits** - Beach deposits ranging from sand to gravel. Formed during the late-glacial marine submergence.
- Marine nearshore deposits** - Sand, gravel, and silt deposited by wave and current action in shoreline and shallow nearshore environments. Formed during the regressive phase of late-glacial marine submergence. May be very thin in areas of bedrock-controlled topography.
- Presumpscot Formation** - Silt, clay, and sand deposited on the sea floor in late-glacial to early postglacial time.
- Submarine fans** - Sand and gravel deposited on the sea floor at the glacier margin.
- Glaciomarine deltas** - Flat-topped sand and gravel deposits graded to the contemporary late-glacial sea level and formed at or near the glacier margin.
- Marine deposits, undifferentiated** - Sand and gravel of uncertain origin, but thought to have been deposited in the sea.
- Glacial stream deposits** - Sand and gravel deposited by glacial meltwater streams at or near the ice margin. Map unit includes ice-contact and outwash sediments, as well as minor glaciolacustrine deposits.
- Eskers** - Ridges of sand and gravel deposited by meltwater streams in subglacial tunnels. May also include some fan deposits formed where tunnel streams ended in glacial lakes or the ocean.
- Hummocky moraine** - Glacial till with hummocky topography. Usually occurs in valley bottoms. Contains many boulders, and lenses of sand, gravel, and silt are locally abundant. Formed by melting and disintegration of debris-rich ice in the marginal zone of the last glacial ice sheet.
- Ribbed moraine** - Clusters of bouldery till ridges deposited on valley floors. May have formed in a subglacial environment.
- End moraine complexes** - Clusters of closely spaced end moraines deposited at the retreating (but still active) margin of the last glacial ice sheet. Most moraines trend generally east-west, parallel to the ice margin. Composed of till and/or sand and gravel, locally including submarine fan deposits.
- Till** - Loose to very compact, poorly sorted, massive to weakly stratified mixtures of sand, silt, and gravel-size rock debris deposited directly from glacial ice. Locally contains lenses of waterlain sediments.
- Thin drift** - Areas with abundant bedrock outcrops and generally less than 10 ft of surficial sediments.

#### Androscoggin River basin

- Pibe** Glacial Lake Bethel
- Pica** Glacial Lake Canton
- Piha** Glacial Lake Hanover
- Pimi** Glacial Lake Mill Brook
- Pims** Glacial Lake Mason
- Pipl** Glacial Lake Pleasant

#### Crooked River valley-Sebago Lake basin

- Pitr** Glacial Lake Crescent
- Pik** Glacial Lake Kooka
- Pis** Glacial Lake Sebago
- Piwa** Glacial Lake Waterford
- Piwb** Glacial Lake Willet Brook

#### Little Androscoggin River basin

- Pitw** Glacial Lake Twitchell

#### Saco River basin

- Pip** Glacial Lake Pigwacket
- Pist** Glacial Lake Stow

### EXPLANATION OF SYMBOLS

- Geologic contact
- County boundary
- Road
- State boundary
- Town boundary
- LEWISTON Township name

### RELATED MAPS

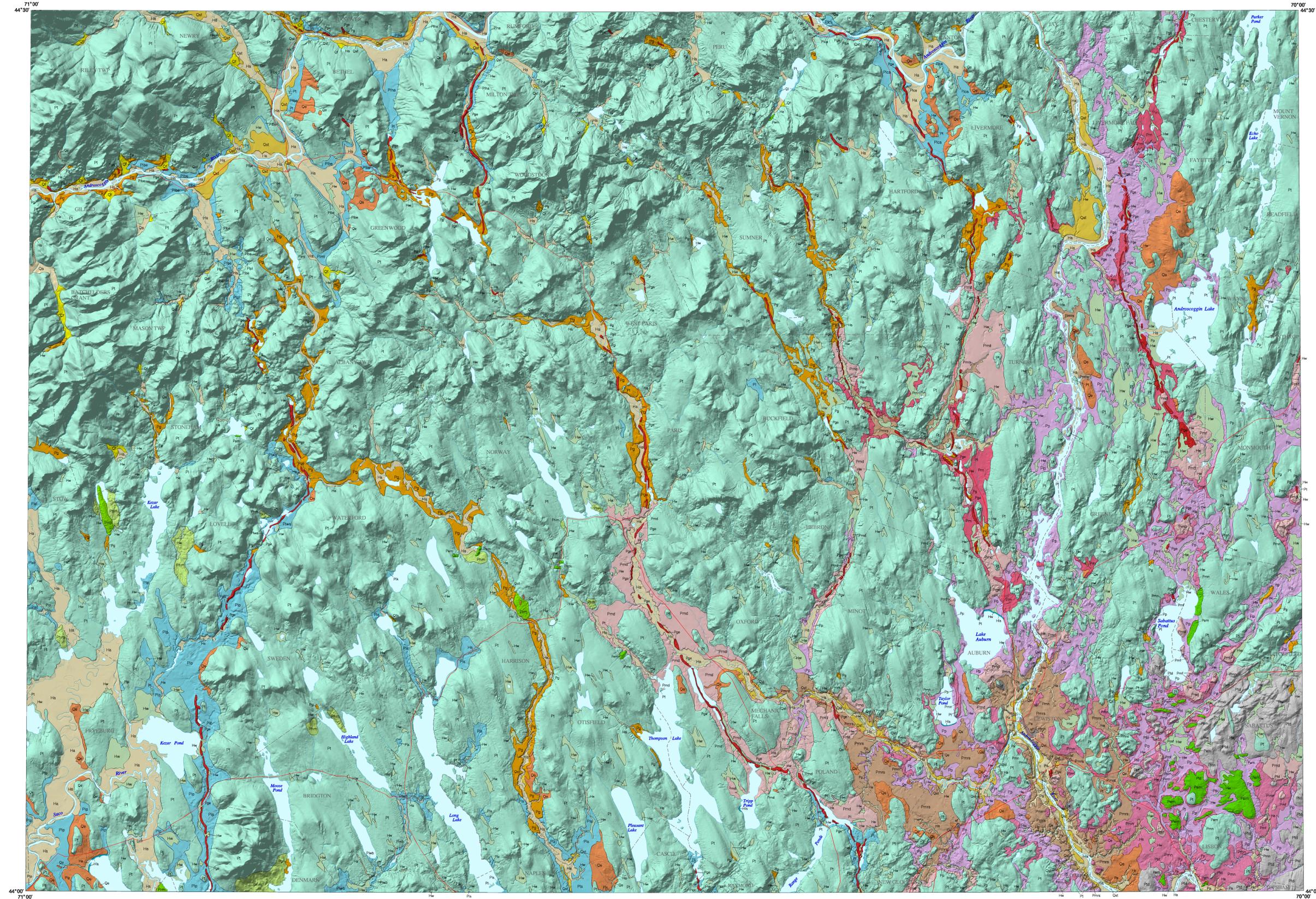
Tolman, S. S. (compiler), 2008. Deglaciation features in the Lewiston 1:100,000 quadrangle, Maine: Maine Geological Survey, Open-File Map 08-50.

Tolman, S. S. (compiler), 2008. Glacial ice-flow indicators in the Lewiston 1:100,000 quadrangle, Maine: Maine Geological Survey, Open-File Map 08-51.

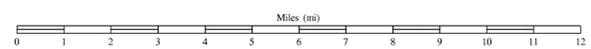
### INDEX TO SOURCES OF GEOLOGIC MAP DATA

1:24,000 Surficial geologic quadrangle maps, authors, and Maine Geological Survey Open-File numbers. In some cases the original map data have been supplemented with more recent observations.

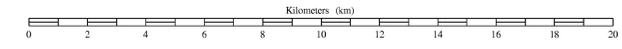
GRID	BETHEL	BRANT POND	MOUNT ZENON	WORTHLEY	CANTON	LIVERMORE	FAYETTE
02-87	W. Thompson	G. Smith	W. Thompson				
02-88	W. Thompson	W. Thompson	W. Thompson	C. Hildreth	J. Wadelle	G. Smith	W. Thompson
02-89	W. Thompson	G. Smith	W. Thompson				
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03-48	W. Thompson	G. Smith	W. Thompson				
03-49	W. Thompson	G. Smith	W. Thompson				
03-50	W. Thompson	G. Smith	W. Thompson				



Shaded relief base by Marc C. Loisele using a digital elevation model with a 10-meter grid, sun angle of 315°, and sun elevation of 45°.



Map Scale  
1:100,000



National geodetic vertical datum of 1929.