



Minnesota Bedrock Geology Glossary

From the Roadside Geology of Minnesota,
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Sedimentary Rock Types in Minnesota

Rocks that formed from the consolidation of loose sediment

Conglomerate: A coarse-grained sedimentary rock composed of pebbles, cobbles, or boulders set in a fine-grained matrix of silt and sand.

Dolostone: A sedimentary rock composed of the mineral dolomite, a calcium magnesium carbonate.

Graywacke: A sedimentary rock made primarily of mud and sand, often deposited by turbidity currents.

Iron-formation: A thinly bedded sedimentary rock containing more than 15 percent iron.

Limestone: A sedimentary rock composed of calcium carbonate.

Mudstone: A sedimentary rock composed of mud.

Sandstone: A sedimentary rock made primarily of sand.

Shale: A deposit of clay, silt, or mud solidified into more or less a solid rock.

Siltstone: A sedimentary rock made primarily of sand.

Igneous and Volcanic Rock Types in Minnesota

Rocks that solidified from cooling of molten magma

Basalt: A black or dark grey volcanic rock that consists mainly of microscopic crystals of plagioclase feldspar, pyroxene, and perhaps olivine.

Diorite: A plutonic igneous rock intermediate in composition between granite and gabbro.

Gabbro: A dark igneous rock consisting mainly of plagioclase and pyroxene in crystals large enough to see with a simple magnifier. Gabbro has the same composition as basalt but contains much larger mineral grains because it cooled at depth over a longer period of time.

Granite: An igneous rock composed mostly of orthoclase feldspar and quartz in grains large enough to see without using a magnifier. Most granites also contain mica and amphibole

Rhyolite: A felsic (light-colored) volcanic rock, the extrusive equivalent of granite. It contains quartz and feldspar in a very fine-grained matrix.

Metamorphic Rock Types in Minnesota

Rocks that derived from preexisting rock that changes mineralogically and texturally in response to changes in temperature and/or pressure usually deep in the earth.

Gneiss: A coarse-grained metamorphic rock with a streaky foliation due to parallel alignment of minerals, usually in bands of light- and dark-colored minerals.

Greenstone: A dark green, altered or metamorphosed basalt or gabbro. The green comes from the minerals chlorite, actinolite, or epidote.

Quartzite: A metamorphic rock composed of mainly quartz and formed by metamorphism of sandstone.

Schist: A metamorphic rock that is strongly foliated due to an abundance of platy minerals.

Slate: Slightly metamorphosed shale or mudstone that break easily along parallel surfaces.