AREAS WITH POTENTIAL FOR CRUSHED STONE PRODUCTION IN WISCONSIN

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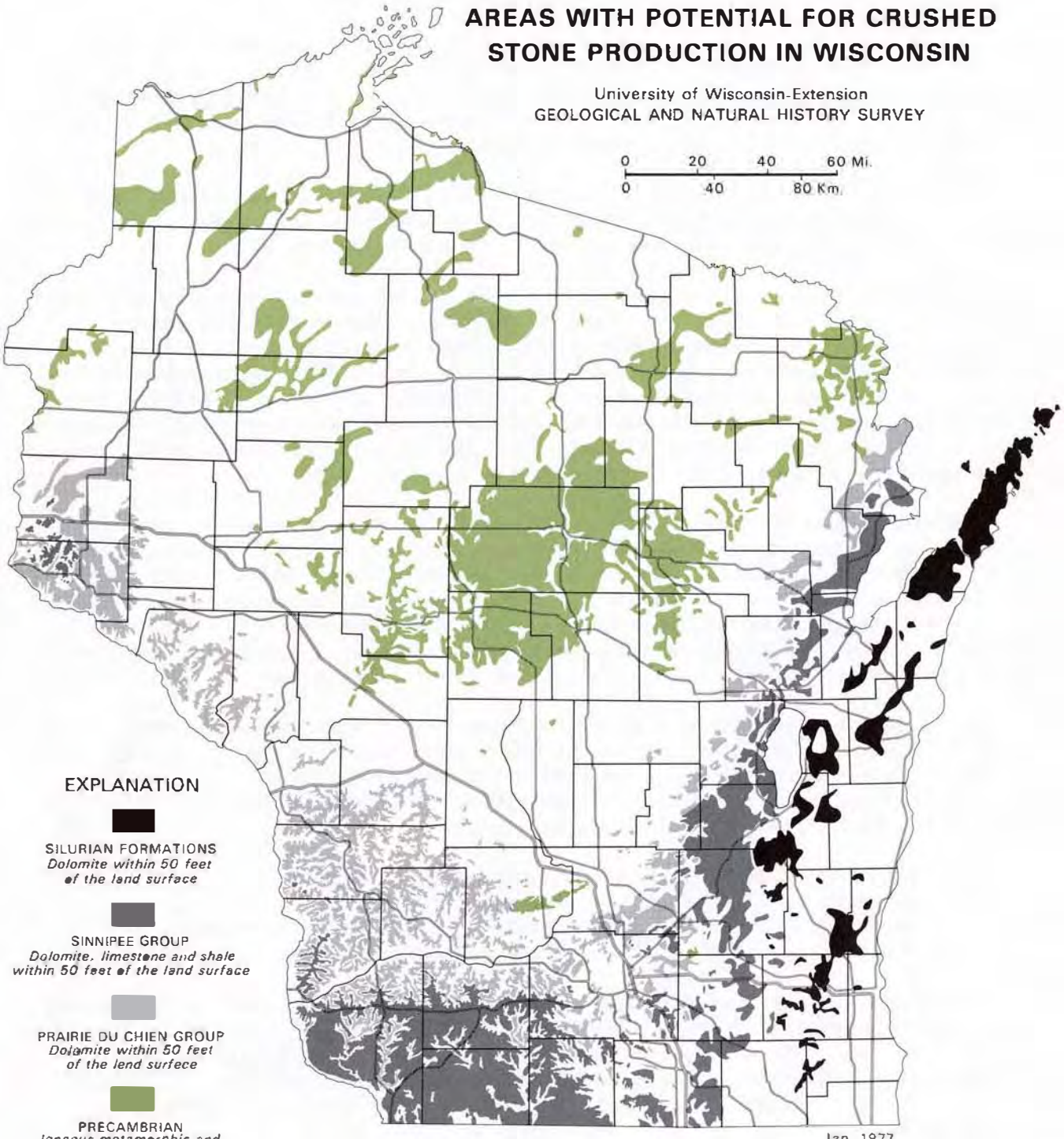
GEOLOGICAL AND NATURAL HISTORY SURVEY



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Certain rocks are ideally suited for use as aggregate, road stone, road base and other similar purposes. Because the natural rock is broken into irregular shapes and various sizes before its use, the product is known as crushed stone.

Crushed stone is quarried primarily for uses that depend upon its physical properties. This contrasts with some other mineral commodities for which the mineralogical and chemical properties of the rock are of primary importance. Most crushed stone is used in construction, whereas most other mineral production is used for manufacturing or chemical purposes.

The demand for crushed stone is high. The national production of crushed stone was slightly more than 10,700 pounds per person in 1973: Wisconsin's production for the same year was about 11,400 pounds per person.

A variety of rock types are quarried for use as crushed stone in Wisconsin. The most important of these is a form of limestone called dolomite, which normally constitutes more than 80% of the annual crushed stone production. Dolomite differs from ordinary limestone in its much higher magnesium content. Dolomite is used as concrete aggregate, in macadam, and as road base and road stone. Large amounts of dolomite are used as agricultural limestone. Miscellaneous uses include railroad ballast, flux for metallurgy, raw material for the production of lime, and riprap and jetty stone.

In addition to dolomite, other rocks used for crushed stone in Wisconsin are granite, basalt, quartzite, and marble. Soft and highly weathered granite in north central Wisconsin is quarried for use as road stone for local roads and for landscaping and decorative purposes. Basalt is produced primarily for use as roofing granules and as concrete aggregate. Quartzite is quarried for use as railroad ballast, grinding pebbles and abrasives. Marble has at times been used in the form of "marble chips" for decorative aggregate and in terrazo.

Although the bedrock geology of less than 5% of Wisconsin has been mapped in detail, the general distribution of the major rock units is known over much of the state. Four of these units have a high potential to contain rocks suitable for use as crushed stone. Most of the quarries in the state are located in one of them. The four units are:

1. Dolomite formations of the Silurian System of rocks.
2. Dolomite formations of the Sinnipee Group of rocks.
3. Dolomite formations of the Prairie du Chien Group of rocks.
4. Granites, basalts, quartzites and associated rocks of the Precambrian.

This map of "Areas with Potential for Crushed Stone Production in Wisconsin" shows areas in which the above four units lie within 50 feet of the land surface. Although the map points out those areas having the highest potential for crushed stone production, detailed geologic studies are necessary to confirm the occurrence of suitable rock types at any specific location within the indicated areas.

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