Geomorphology of Dune Sand Resources in Western Pierce County, North Dakota

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POTENTIAL USES OF SAND RESOURCE
Sand mined in the study area of this map could potentially be used for recreation, for construction of roads and railroads, and for landscaping purposes. Sand could also be used in the production of glass and other materials. The sand is suitable for use in the production of concrete and other construction materials.

STUDY AREA DESCRIPTION
The study area is located in western Pierce County, North Dakota. The area is characterized by high-relief dunes, which are typical of the region. The dunes cover an area of approximately 1,000 square miles.

DUNE GEOLOGY
High-relief dunes are typically characterized by their steep slopes and sharp crests. The dunes in the study area are composed of well-sorted sand and gravel, which are typically found in interdune areas.

DUNE ARCHITECTURE
The dunes are typically characterized by their steep slopes, which range from 30 to 45 degrees. The dunes are also characterized by their pronounced crests, which are typically oriented in the direction of the prevailing wind.

DUNE DYNAMICS
Dunes are dynamic features that are constantly changing due to the action of wind. The wind moves sand from one dune to another, which results in the migration of the dunes.

DUNE CHEMISTRY
Sand from the dunes is typically characterized by its high silica content. The sand is also characterized by its high porosity and low density.

DUNE BIOLOGY
The dunes support a diverse array of plant and animal life. The sand is home to a variety of insects, birds, and reptiles. The sand also serves as a habitat for a variety of small mammals.

DUNE HISTORY
The dunes in the study area are likely the result of eolian activity that occurred during the Pleistocene epoch. The sand was likely transported by wind from glacial Lake Souris to the northwest.

DUNE MANAGEMENT
The dunes are managed by the North Dakota Geological Survey. The survey conducts research on the dunes and provides information on their geology, geomorphology, and biology.

REFERENCES

PRELIMINARY DUNES MAP
The preliminary dunes map provides an overview of the dunes in the study area. The map shows the location of the dunes and their orientation.

EXPLANATION
The map legend includes symbols for the various features shown on the map. These symbols include symbols for the dunes, the sand, and the vegetation.

TOTAL DUNES (>457.5 m Elevation): 2,825,315 m³ (3,695,373 yd³)
Dunes of Low-Relief: 2,121,407 m³ (2,774,386 yd³)
Dunes of High-Relief: 703,908 m³ (920,677 yd³)

MAPPING ELEMENTS DESCRIPTION
The mapping elements include the symbols used on the map. These symbols include symbols for the dunes, the sand, and the vegetation.

GEOLOGIC FRAMEWORK
The geologic framework provides information on the geology of the study area. The framework includes information on the rock types and the structural features of the area.

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