



U.S. Department of Agriculture  
Forest Service

**National Mapping Program Technical Instructions**

# **Part 8**

# **Nonvegetative Surface Cover**

**Standards for USGS and USDA Forest Service  
Single Edition Quadrangle Maps**

Standards for USGS and USDA Forest Service Single Edition Quadrangle Maps  
Part 8: Nonvegetative Surface Cover

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8. NONVEGETATIVE SURFACE COVER

This part of the standard provides a description of the Nonvegetative Surface Cover features shown on USGS and USDA Forest Service single edition quadrangle maps.

**BARREN LAND** - Places composed of bare rock, sand, silt, gravel, or other earthen material with little or no vegetation and having limited ability to support life.

#### Characteristics

Show the following BARREN LANDS based on the material they are composed of:

Gravel	Unconsolidated, natural accumulation of rounded rock fragments, consisting predominantly of particles larger than sand but smaller than boulders, having a diameter in the range of 2 mm to 256 mm (0.5" to 10").
Lava	Consolidated rock produced by the solidification of molten rock from volcanic eruptions.
Sand	Unconsolidated rock particles that are larger than silt but smaller than gravel.
Unspecified	Does not have to be known or specified for the feature to be shown.

#### Delineation

The limit of a BARREN LAND is the extent of the non-vegetated surface.

#### Depiction Conditions

If a BARREN LAND is within or along open water, is  $\geq 0.2$ " (400 feet at 1:24,000 scale) along the longest axis, is  $\geq 0.05$ " (100 feet at 1:24,000 scale) along the shortest axis, and is not depicted as a FORESHORE,

Or

If a BARREN LAND is composed of sand, is in areas other than open water, is not depicted as DUNES, MORaine, PLAYA, or WASH, and is  $\geq 1.74$  square inches ( $\frac{1}{4}$  square mile at 1:24,000 scale),

Or

If BARREN LAND is composed of lava and is  $\geq 0.05$ " along the shortest axis, Then show. (See the Hydrography theme for FORESHORE, PLAYA and WASH.)

#### Source Interpretation Guidelines

All

If a BARREN LAND is composed of bare rock or silt, depict that material it is composed of as unspecified.

If a BARREN LAND is along open water, depict the material it is composed of as gravel, sand, or unspecified.

If a BARREN LAND is along open water and it coincides with a named BEACH, show the BARREN LAND and the BEACH name; otherwise, just show the BARREN LAND.

If a BARREN LAND is associated with a WASH (Hydrography theme), depict the material it is composed of as unspecified.

If a BARREN LAND coincides with an INCLINE/FLOW (Named Landforms theme) that is a named lava flow, show the BARREN LAND and the name of the INCLINE/FLOW.

**Graphic**

BARREN LANDS are symbolized with surface patterns or material of composition labels on previously published maps.

Depict all the brown sand areas that are shown within AREAS OF COMPLEX CHANNELS (Hydrography theme) on previously published maps as BARREN LAND.

Unnamed gravel beaches (BARREN LANDS) and MORAINES have both been shown with the same black USGS 22 pattern on previously published maps. Do not label either feature. The distinction between the two features is made by form and location.

Symbolization

Characteristics	Symbol	Label
Gravel	537.1 gravel beach	N/L
Lava	535.6	Lava
Sand	534.1 534.4 in open water	N/L
Unspecified	534.1	N/L

**BEACH**

**BEACH** - The gently sloping shore which is washed by waves, usually composed of sand and pebbles.

Characteristics

Show the names of BEACHES.

Delineation

The limit of a BEACH is the extent of the area identified by the name.

Depiction Conditions

If a BEACH is named,  
Then show the name.

Source Interpretation Guidelines

All

The feature BEACH is included in the Geographic Names Information System (GNIS) feature class "beach". According to GNIS, beaches can be described by about 22 generics. GNIS maintains a list of feature classes and related generics. Contact GNIS for more information.

If a BEACH coincides with a BARREN LAND, show the BEACH name and the BARREN LAND; otherwise, just show the BEACH name.

Graphic

N/A

Symbolization

Characteristics	Symbol	Label
N/A	N/A	N/L; Show name

**DUNES** - Hills or ridges of sand piled up by the wind.

Characteristics

Show the following DUNES based on the material they are composed of:

Sand	Unconsolidated rock particles that are larger than silt but smaller than gravel.
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Show names of DUNES if they are known.

Delineation

The limit of DUNES is the extent of the area of sand hills or ridges.

Depiction Conditions

If DUNES are  $\geq 0.5$ " (1,000 feet at 1:24,000 scale) along the shortest axis,  
Or  
If DUNES are named,  
Then show.

Source Interpretation Guidelines

All

The feature DUNES is not a GNIS feature class. According to GNIS, "Sand Dunes" is included in the GNIS feature class "area", and "Sand Dune" is included in the GNIS feature class "summit". However, not all GNIS "areas" or "summits" can be classified as the feature DUNES. GNIS maintains a list of feature classes and related generics. Contact GNIS for more information.

Graphic

Depict areas labeled "Shifting Sand" or "Sand Dunes" on previously published maps as DUNES. Extensive areas or groups of separate areas in close proximity are often intermittently labeled on previously published maps, so the sand pattern and labels must both be considered to determine the extent of the feature.

Depict shifting sand shown with the brown "broken" pattern (USGS 17A) on maps published before 1982 as DUNES. Shifting sand has been shown with a brown "unbroken" pattern (USGS 17) since December 1981.

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**DUNES**

Symbolization

Characteristics	Symbol	Label
Sand	534.2	Sand Dunes; Show name if known



**MORaine**

**MORaine** - An accumulation of earth and stones carried and deposited by a glacier.

Characteristics

Show the following MORAINES based on the material they are composed of:

Gravel	Unconsolidated, natural accumulation of rounded rock fragments, consisting predominantly of particles larger than sand but smaller than boulders, having a diameter in the range of 2 mm to 256 mm (0.5" to 10").
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Delineation

The limit of a MORaine is the edge of the glacial deposit.

Depiction Conditions

If a MORaine is not vegetated, is  $\geq 0.01$ " (20 feet at 1:24,000 scale) along the shortest axis, and is  $\geq 0.25$ " (500 feet at 1:24,000 scale) along the longest axis,

Then show.

Source Interpretation Guidelines

All

Although moraines exist in all areas where glaciers are or have been active, for mapping purposes, depict only those that are in areas with recent or active glaciation as MORAINES. They must have no vegetation and can be either within or outside of an active glacier. If an area name includes the descriptor "moraine", but does not meet the depiction conditions for MORaine, see the Named Landforms theme for the proper feature classification.

Graphic

MORAINES and unnamed gravel beaches (BARREN LANDS) have both been shown with the same black USGS 22 pattern on previously published maps. Do not label either feature. The distinction between the two features is made by form and location.

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**MORaine**

Symbolization

Characteristics	Symbol	Label
Gravel	537.2	N/L