THE NATIONAL MAPPING PROGRAM

The National Mapping Program publishes a variety of multipurpose maps to serve all map users. In addition to published maps, basic map data and open-file map byproducts are available. These include aerial photographs, satellite images, advance and reproducible map materials, geodetic control data, geographic-names data, status maps, microfilm map copies, and map data in digital form.

An *Index to topographic and other Map Coverage* and its companion *Catalog of topographic and other Published Maps* is available for each State.

TYPES OF MAPS:

Topographic Maps

A topographic map accurately represents the natural and manmade features of the land. USGS topographic maps are compiled to National Map Accuracy Standards using modern mapping techniques. The shape and elevation of the terrain are portrayed by contour lines and specific features such as roads, towns, water areas, and vegetation are portrayed by map symbols and colors. Standard quadrangle series maps are produced at the scale and formats shown.

Topographic-Bathymetric Maps

A topographic-bathymetric map provides topographic and planimetric detail of the land areas and bathymetric metric contours and depth gradients in the coastal water areas. These maps, covering selected coastal zone areas, are cooperatively produced by the U. S. Geological Survey and the National Ocean Survey at scales of 1:24,000, 1:100,000, and 1:250,000. Offshore protraction survey data compiled by the Bureau of Land Management are shown on 1:100,000- and 1:250,000-scale maps.

Land Use and Land Cover Maps

Standard land use and land cover maps at 1:250,000 or 1:100,000 scale are available for the entire United States. These maps depict the 9 level 1 and 37 Level II USGS catergories of data. Five associated overlays show political units, hydrologic units, Census county subdivisions, and Federal land ownership and state land ownership overlays for a limited number of states. Associated maps are made available in the form of diazo or photographic prints or film copies. Most of these products have to be ordered.

Orthophotoquads

An orthophotoquad portrays planimetric data by photoimage, but does not contain contours and has little or no symbolization or lettering within the mapped area. Most orthophotoquads are prepared in monocolor from black-and-white film, and are made available, upon request, in the form of diazo or photographic prints. There are a limited number printed in color, and available as published maps. Most of these products have to be ordered.

Orthophotomaps

An Orthphotomap is a multicolor orthophotoquad having extensive cartographic treatment including contours, lettering, and some symbols. Where conventional topographic line maps are ineffective in portraying terrain features, colored orthophotoimagery accentuates subtle detail. For some areas–predominately marshlands and coastal zones–the orthophotomap is the standard 1:24,000-scale map.

State Maps

State-format maps are generally available in three editions–base, topographic, and shaded relief–usually at a scale of 1:500,000. Some state base maps are also available at 1:750,000 and 1:1,000,000. The maps show urban areas, major communication routes, hydrographic features, and political boundaries.

County Maps

Produced at 1:50,000 or 1:100,000 scale, county maps show selected natural and cultural features. At the present time, county maps are available for a limited number of areas.

Special Maps

Special-purpose maps are usually derived from standard topographic maps. These include maps of specific cultural or geographic regions, satellite image maps, shaded relief maps, metropolitan area maps, and sets of maps illustrating special physiographic features.

United States Maps

There are several different U.S. Maps available in a variety of formats and scales. For this information see the matrix on "United States Maps."

National Park and Monument Maps

Maps of national parks, battlefields, and historic sites are prepared at various scales from standard topographic maps. Many are available with shaded-relief overprint which gives a three dimensional impression of the terrain

National Atlas Maps

Separate sheets of selected thematic and general reference National Atlas maps are available. The content ranges from physiographic information to enviromental and population trends. A set of maps (also available singly) covers the United States in 21 sections at 1:2,000,000 scale.

INFORMATION PAMPHLET

The U.S. Geological Survey has available a pamphlet titled "Topographic Maps", which includes symbols, to assist map users in selecting the kind and scale of map best suited to their needs. This pamphlet can be obtained without cost from Map Distribution, U.S. Geological Survey.

STATE MAP SERIES
1:500 000 AND 1:1 000 000 SCALE

MICHIGAN

PHYSIOGRAPHIC FEATURES MAPS (SET OF 100): These maps were selected to illustrate a wide variety of physiographic features within most of the 86 subdivisions shown on the Physical Divisions Map of the United States (Map 7-C). Size and scale of the maps vary.

NATIONAL PARK MAP:

Isle Royale National Park: This map shows the Isle Royale National Park in Keweenaw County. Latitude 47°47'30'' - 48°13'30'' and longitude 88°15' - 89°20'. Scale is 1:62,500 with a contour interval of 40 feet. Also published in a shaded-relief edition. Size, 39 by 54 inches.

NATIONAL LAKESHORE MAP:

Pictured Rocks National Lakeshore: This map shows the Pictured Rocks National Lakeshore in Alger County. Latitude 46°23'00'' and longitude 85°57'00''. Scale is 1:62,500 with a contour interval of 20 feet. Size, 27 by 40 inches.

PHYSIOGRAPHIC FEATURES MAPS (SET OF 25): Selected from the set of 100 maps shown above. These maps show physiographic features within most of the major physical division provinces.

SHADED RELIEF MAP: A map of the Delaware 1:24,000-scale quadrangle has been published in an edition on which the relief is shown both by brown contour lines and by shading in brown, which gives the map the appearance of a model of the surface with the light striking it from the northwest.

SECTIONAL MAP SERIES
1:2 000 000 SCALE

National Atlas Sheet 18-19: Northern Great Lakes States

STANDARD SERIES MAPS

Standard quadrangle maps cover systematically subdivided areas of latitude and longitude, and are published at various scales depending on the size of the area mapped

Standard quadrangle formats range from 7.5×7.5 minutes covering geographic areas of 49 to 71 square miles to 1×2 degrees covering areas of 4580 to 8669 square miles

Standard quadrangle map scales range from 1:24,000 (one inch on the map represents 2000 feet on the ground) to 1:250,000 (one inch on the map represents approximately 4 miles on the ground)

Other quadrangle maps are published at scales of 1:20,000 (Puerto Rico) to 1:63,360 (Alaska)

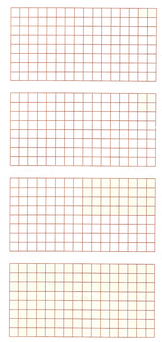
Special area maps are published at scales of 1:50,000 and 1:100,000 (County, Regional, and National Park Maps), and 1:500,000 (State Base Maps)

MAP SERIES COMPARISON

Illustrated opposite is the relative comparison of the size of the area covered by the various map series. Comparatively, the number of maps required to cover an area of 1 degree latitude by 2 degrees longitude is:

128–7.5 minute maps
64–7.5×15 minute maps
32–15 minute maps
4–30×60 minute maps
1–1×2 degree map

The amount of detail shown on a map is proportionate to the scale of the map; the larger the map scale, the more detail that is shown. For example, individual houses are shown on 1:24,000-scale 7.5-minute maps, whereas only landmark buildings are shown on 1:100,000-scale 30×60-minute maps.



7.5 MINUTE SERIES

Map scale[1]	1:24,000
Map to ground ratio	1 inch represents 2000 feet
Area covered	49–71 square miles
Paper size (approx.)	22"×27"
Contours and elevations[6]	shown in feet

7.5×15 MINUTE SERIES

Map scale	1:25,000
Map to ground ratio	1 inch represents 2083 feet
Area covered	100–140 square miles
Paper size (approx.)	24"×40"
Contours and elevations[6]	shown in feet

15 MINUTE SERIES

Map scale[3]	1:62,500
Map to ground ratio	1 inch represents about 1 mile
Area covered	197–282 square miles
Paper size (approx.)	18"×22"
Contours and elevations[6]	shown in feet

30×60 MINUTE SERIES

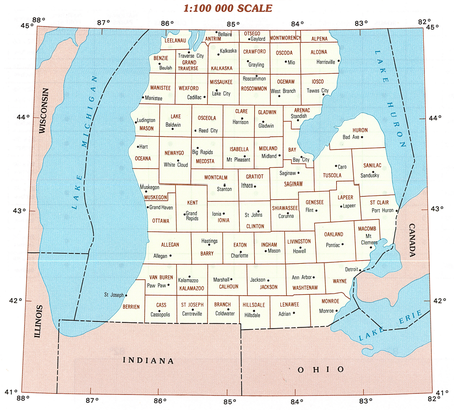
Map scale	1:100,000
Map to ground ratio	1 inch represents 1.6 miles
Area covered	1578–2167 square miles
Paper size (approx.)	29"×44"
Contours and elevations	shown in meters

1×2 DEGREE SERIES

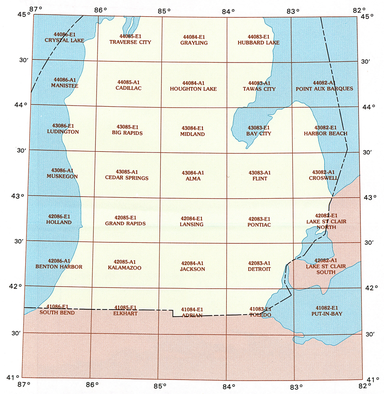
Map scale	1:250,000
Map to ground ratio	1 inch represents about 4 miles
Area covered	4580–8669 square miles
Paper size (approx.)	22"×32"
Contours and elevations[7]	shown in feet

[1]1:25,000 scale on selected maps
[6]Shown in meters on selected maps
[7]1:63,360 Alaska and 1:50,000 scale on selected maps

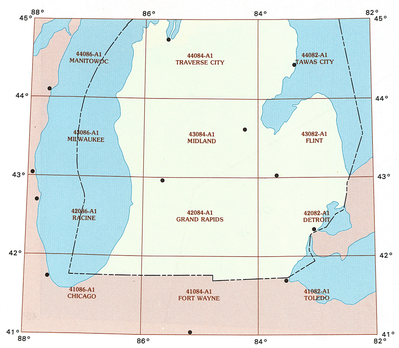
COUNTY MAP SERIES
1:100 000 SCALE



30 X 60 MINUTE SERIES
1:100 000 SCALE



1 X 2 DEGREE SERIES
1:250 000 SCALE



PRIMARY MAP SERIES, 1:24 000 SCALE
(SOUTH SECTION)

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1993

MICHIGAN
Index to topographic and other MAP COVERAGE

This Index is designed to inform map users of the various map series, special maps and map byproducts produced and distributed by the U.S. Geological Survey and to assist users in selecting and purchasing maps. The index identifies quadrangle areas by map name and scale. A map is usually named after the most prominent city, town or natural landmark shown on it.

To Purchase Maps

Refer to the companion *Catalog of topographic and other Published Maps* for names, dates and prices of maps currently available.

Published maps listed in the catalog may be purchased by mail or in person by contacting:

- **Commercial Map Dealers**
- **Open-File Map Users**
- **Catalog of Published Maps**
- **Map distribution**
- **Box 25286, Sales**
- **Building 810, National Center**
- **Denver, Colorado 80225**

Open-file maps and map products listed in the catalog may be purchased by mail or in person by contacting:

Public ESIC
U.S. Geological Survey
1400 Independence Road
Rolla, Missouri 65401

Order forms and instructions are contained in the catalog. Visa, MasterCard, and American Express are accepted for prepayment is required. Remittance payable to Department of the Interior - U.S.G.S.

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