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 nutric 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 Service 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 categories 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 Orthophotomap 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.

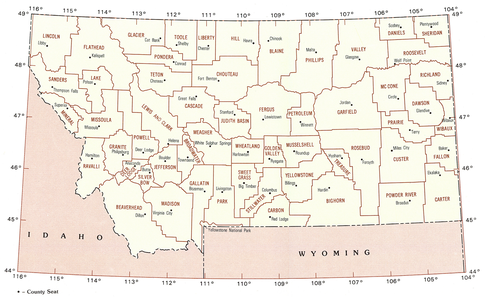
National Atlas Maps

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

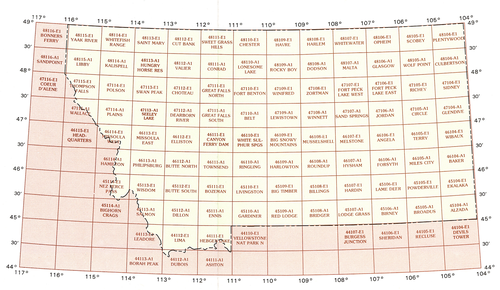
INFORMATION PAMPHLET

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.

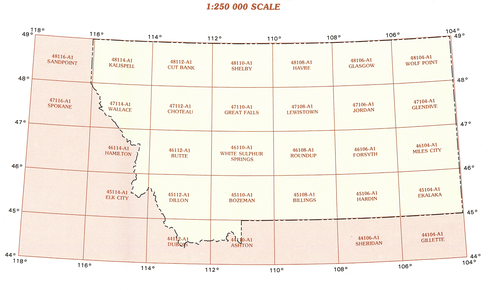
COUNTY MAP SERIES
1:50 000 SCALE



30 X 60 MINUTE SERIES
1:100 000 SCALE



1 X 2 DEGREE SERIES
1:250 000 SCALE



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

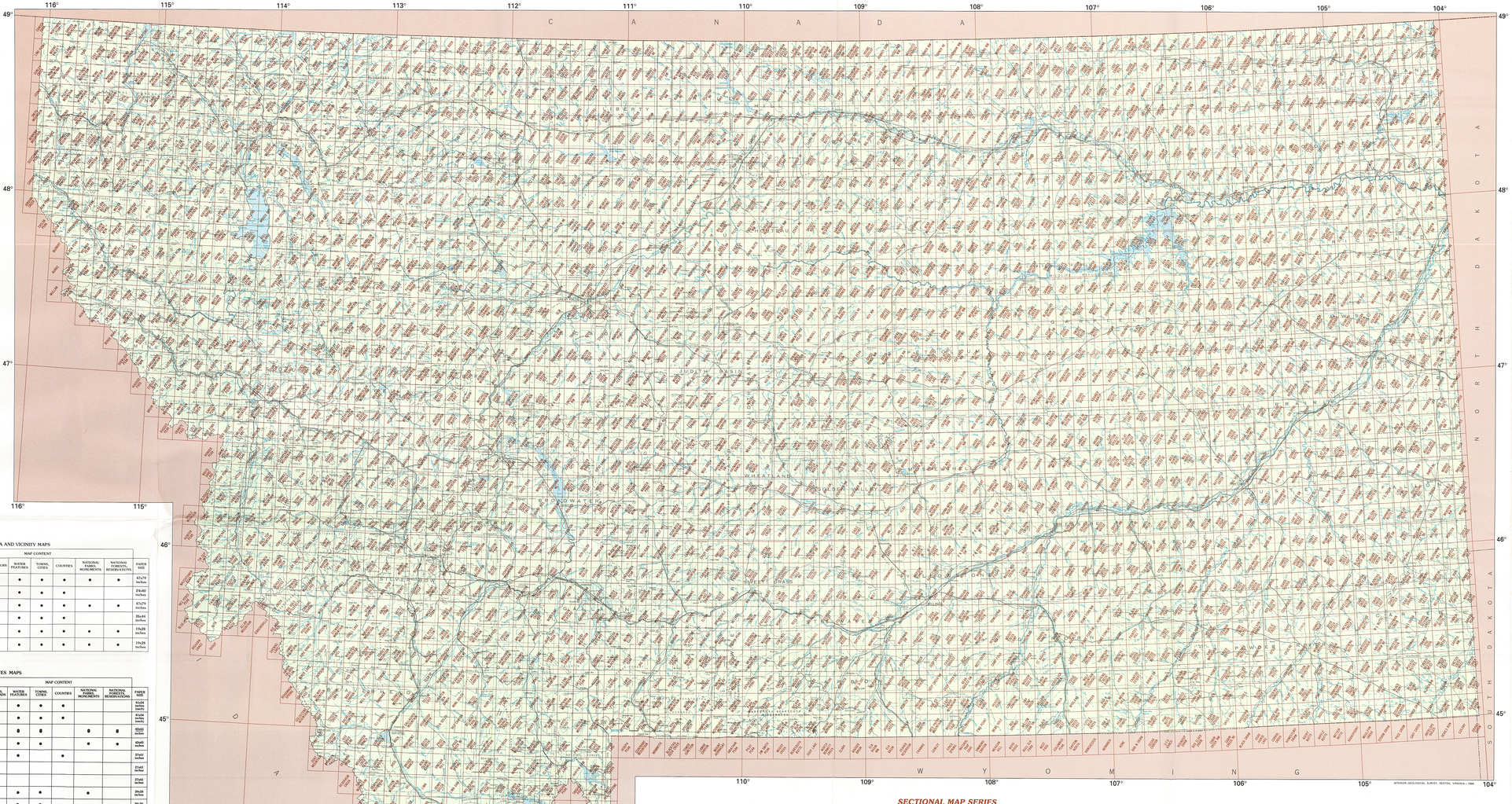
15 MINUTE SERIES
Map scale 1:62,500
Map to ground ratio..... 1 inch represents about 1 mile
Area covered ..... 197–282 square miles
Paper size (approx.) ..... 18" × 22"
Contours and elevations* ..... shown in feet

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* ..... shown in feet

*1:25,000 scale on selected maps
†Shown in meters on selected maps
‡1:63,360 Alaska and 1:50,000 scale on selected maps

PRIMARY MAP SERIES, 1:24 000 SCALE



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.

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

SHADED-RELIEF MAPS: In addition to the regular topographic maps, the Ennis, Helena and Portage quadrangles have been published in an edition on which the relief is shown both by brown contour lines, as on the regular topographic map, and by shading in brown, which gives the map the appearance of a 3-dimentional model of the surface with the light striking it from the northwest. Ennis, 45111-C5-TR, contour interval, 40 feet, 1949; Helena, 46112-E1-TR, contour interval, 40 feet, 1950; Portage, 47111-E1-TR, contour interval, 20 feet, 1948.

NATIONAL PARK AND MONUMENT MAPS:

Big Hole National Battlefield: Shown on the Big Hole Battlefield quadrangle map. Scale 1:24,000. Contour interval, 40 feet. 1966. 45113-F6-TF.

Custer Battlefield National Monument: This map shows the Custer Battlefield and the adjacent area in Big Horn County. Located at 45°33' latitude, 107°25' longitude. Scale 1:24,000. Contour interval, 25 feet. Size, 19 by 22 inches. An inset on this sheet shows the Custer Battlefield Reservation, without contours, at the scale of 1:5,280, or 440 feet to 1 inch. 1891. 43107-E8-PF.

Glacier National Park: (Part of Waterton-Glacier International Peace Park). This map shows Glacier National Park and the adjacent area. Limiting parallels, 48°13' and 49°. Limiting meridians, 113°10' and 114°30'. Scale, 1:100,000. Contour interval 80 feet. Size, 38 by 42½ inches. 1968. 48113-E8-PF).

National Bison Range: This map shows the National Bison Range in Lake and Sanders Counties. Limiting parallels, 47°17'30" and 47°22'30". Limiting meridians, 114°09'55" and 114°16'40". Scale 1:31,680, or ½ mile to 1 inch. Contour interval 20 feet. Size, 11 by 12 inches. 1932. 47114-C3-TF.

Yellowstone National Park: This map shows Yellowstone National Park. Limiting parallels, 44°08' and 45°07'. Limiting meridians, 109°48' and 111°10'. Scale, 1:125,000, or about 2 miles to 1 inch. Contour interval, 80 feet. Size, 38 by 41 inches. 1961. 44110-H6-PF. Also published in a shaded-relief edition. 44110-H6-PR.

SMALL-SCALE MONTANA AND VICINITY MAPS

REFERENCE CODE	MAP NAME	MAP SCALE	MAP COLORS	MAP CONTENT: ROADS	RAILROADS	CONTOURS	WATER FEATURES	TOWNS, CITIES	COUNTIES	NATIONAL FOREST, MONUMENTS	NATIONAL FOREST, RESERVATIONS	PAPER SIZE
46112-E1 MT-000	State of Montana (Base)	1:500 000	4	●	●		●	●	●		●	47x79 inches
46112-E1 MT-036	State of Montana (Base)	1:1 000 000	1		●		●	●	●			24x40 inches
46112-E1 MT-037	State of Montana (Topographic)	1:500 000	5	●	●	●	●	●	●	●	●	47x79 inches
46112-E1 MT-038	State of Montana (Shaded Relief)	1:1 000 000	4		●		●	●	●			26x44 inches
42000-A6 NA-DPR SHEET 20-21	Northern Plains States (National Atlas)	1:2 000 000	6	●	●		●	●	●	●	●	19x28 inches
42110-A6 NA-DPR SHEET 34-35	Northwestern States (National Atlas)	1:2 000 000	6	●	●		●	●	●	●	●	19x28 inches

UNITED STATES MAPS

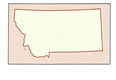
REFERENCE CODE	DESCRIPTION	MAP SCALE	MAP COLOR	MAP CONTENT: ROADS, RAILROADS	WATER FEATURES	TOWNS, CITIES	COUNTIES	NATIONAL FOREST, MONUMENTS	NATIONAL FOREST, RESERVATIONS	PAPER SIZE
38077-E1 CL-0200-24 (Map 2-E)	Two sheet wall map with half local time boundaries. Alaska, Hawaii, and other outlying areas of the United States are shown.	1:2 500 000	5		●	●	●			41x54 inches
38077-E1 CL-0200-25 (Map 2-F)	Same as Map 2-A without land tint.	1:2 500 000	4		●	●	●			41x54 inches
38077-E1 CL-0200-26 (Map 2-G)	One sheet wall map. Insets show Alaska, Hawaii, and other outlying areas of the United States.	1:3 168 000	2		●	●		●	●	42x65 inches
38077-E1 CL-0200-28 (Map 2-I)	Same as Map 2-A, showing historical boundaries and public land surveys.	1:3 168 000	7		●	●		●	●	42x65 inches
38077-E1 CL-0200-29 (Map 3-D)	One sheet. Insets show Alaska, Hawaii, and other outlying areas of the United States.	1:5 000 000	2		●		●			27x41 inches
38077-E1 CL-0200-30 (Map 3-E)	One sheet outline map. Insets show Alaska, Hawaii, and other outlying areas of the United States.	1:5 000 000	1							27x41 inches
38077-E1 CL-0200-31 (Map 3-F)	Same as above except without state name.	1:5 000 000	1							27x41 inches
38077-E1 CL-0200-32 (Map 3-G)	One sheet wall map. Alaska and Hawaii shown in their proper size and position relative to the conterminous 48 States.	1:6 000 000	4	●	●	●		●		29x38 inches
38077-E1 CL-0200-33 (Map 3-H)	One sheet showing the conterminous 48 States only.	1:7 000 000	2		●	●				29x30 inches
38077-E1 CL-0200-34 (Map 3-I)	Same as Map 3-A with contours in feet at lesser intervals.	1:7 000 000	3		●	●				29x30 inches
38077-E1 CL-0200-35 (Map 7-C)	One sheet physical divisions map. Physical divisions outlined in red with explanations in the margin.	1:7 000 000	3		●	●				29x32 inches
38077-E1 CL-0200-36 (Map 9-C)	Map of conterminous U. S. showing routes of transcontinental railroads, 1883 to 1884. State boundaries are shown.	1:8 000 000	6		●	●				25x34 inches
38077-E1 CL-0200-53 (Map 10-A)	One sheet. Alaska and Hawaii shown in their proper size and position relative to the conterminous 48 States.	1:10 000 000	4	●	●	●		●		20x26 inches
38077-E1 CL-0200-54 (Map 10-B)	One sheet. North American continent showing State and national boundaries.	1:10 000 000	2		●	●				23x26 inches
38077-E1 CL-0200-55 (Map 11-A)	One sheet showing the conterminous 48 States only.	1:11 875 000	2		●	●				17½x20 inches
38077-E1 CL-0200-56 (Map 10-A)	One sheet showing the conterminous 48 States only.	1:16 500 000	2		●	●				9½x13 inches
38077-E1 CL-0200-57 (Map 12)	Same as 38077-E1 CL-0200-02 plus National parks, all forestate and defense highways, and Federal-aid primary highway system.	1:3 168 000	5	●	●	●		●	●	42x65 inches

SECTIONAL MAP SERIES
1:2 000 000 SCALE

National Atlas Sheet 20-21: Northern Plains States
National Atlas Sheet 34-35: Northwestern States

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

MONTANA



INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1986

To Purchase Maps

Refer to the companion *Catalog of topographic and other Published Maps* for names, dates, and prices of Published maps listed in the catalog and other books, maps, and charts. Published maps listed in the catalog and other books, may be purchased by mail or in person by contacting:

• Commercial Map Dealers
• Map Information Offices
Catalog of Published Maps

• USGS Information Services
Box 25286, Federal Center
Denver, Colorado 80225
(800) HELP-MAP

Order forms and instructions are contained in the catalog. Payment may be made by cash, check, or money order. Prepayment is required. Prices are $4.00 per copy. Subscriptions to series of topographic maps are accepted on mail orders. Remittance payable in U.S. dollars is required. Checks should be made payable to Department of the Interior—U.S.G.S.

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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 map products. The index identifies map coverage and is usually named after the most prominent city, town, or natural landmark shown on it.

MONTANA
Index to topographic and other MAP COVERAGE

USGS SCIENCE FOR A CHANGING WORLD

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY