

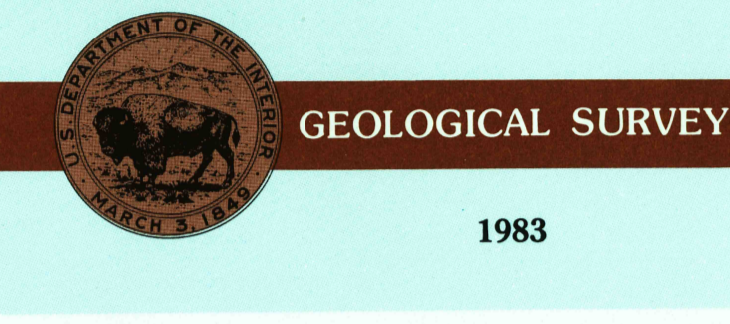
Grayling MICHIGAN

1:100 000-scale metric topographic map



30 X 60 MINUTE QUADRANGLE SHOWING

- Contours and elevations in meters
- Highways, roads and other manmade structures
- Water features
- Woodland areas
- Geographic names



Produced by the United States Geological Survey
 Compiled from USGS 1:24 000 and 1:62 500-scale topographic maps dated 1949-1978. Planimetry revised from aerial photographs taken 1981 and other source data. Revised information not field checked. Map edited 1983.
 Projection and 10 000-meter grid, zone 16, Universal Transverse Mercator
 25 000-foot grid ticks based on Michigan coordinate system, central zone
 1927 North American Datum
 To place on the predicted North American Datum 1983 move the projection lines 2 meters north and 2 meters west
 There may be private inholdings within the boundaries of the National or State reservations shown on this map

CONTOUR INTERVAL 20 METERS
 SUPPLEMENTARY CONTOUR INTERVAL 10 METERS
 NATIONAL GEODETIC VERTICAL DATUM OF 1929

ELEVATIONS SHOWN TO THE NEAREST METER

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

CONVERSION TABLE		DECLINATION DIAGRAM	ADJOINING MAPS		
Meters	Feet		1	2	3
1	3.2809		1	4	3
2	6.5617		4	5	
3	9.8426		5	6	8
4	13.1234				
5	16.4043				
6	19.6851				
7	22.9660				
8	26.2468				
9	29.5277				
10	32.8085				

To convert meters to feet multiply by 3.2808
 To convert feet to meters multiply by 0.3048

UTM grid convergence (GN and 1983 magnetic declination) at center of map. Diagram is approximate

1	Charlevoix
2	Pemansky
3	Alpena
4	Traverse City
5	Hubbard Lake
6	Cadillac
7	Houghton Lake
8	Tawas City

FOR SALE BY U.S. GEOLOGICAL SURVEY
 DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092

USGS NMD HISTORICAL MAP
 MAR 09 1989
 REC'D FILE COPY

Topographic Map Symbols

- Primary highway, hard surface
- Secondary highway, hard surface
- Light duty road, principal street, hard or improved surface
- Other road or street; trail
- Route marker: interstate; U.S.; State
- Route marker: standard gage, narrow gage
- Bridge: overpass; underpass
- Tunnel: road; railroad
- Built up area; locality; elevation
- Airport: landing field; landing strip
- National boundary
- State boundary
- County boundary
- National or State reservation boundary
- Land grant boundary
- U.S. public lands survey: range, township, section
- Range, township, section line: protracted
- Power transmission line: pipeline
- Dam; dam with lock
- Cemetery; building
- Woodmill; water well; spring
- Mine shaft; adit or cave; mine, quarry; gravel pit
- Campground; picnic area; U.S. location monument
- Ruin; cliff dwelling
- Distorted surface: strip mine, lava, sand
- Contours: index; intermediate; supplementary
- Bathymetric contours: index; intermediate
- Stream, lake: perennial; intermittent
- Rapids, large and small; falls, large and small
- Area to be submerged; marsh, swamp
- Land subject to controlled inundation; woodland
- Salt; mangrove
- Orchard; vineyard

A pamphlet describing topographic maps is available on request

