

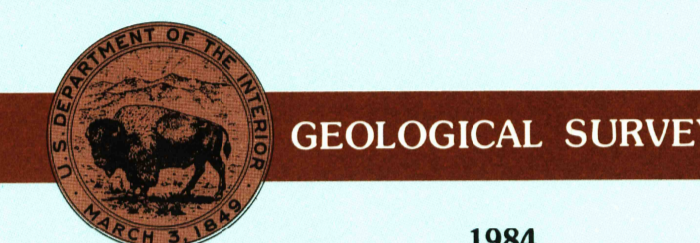
# Alpena MICHIGAN

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



1984

Produced by the United States Geological Survey  
 Compiled from USGS 1:24 000 and 1:62 500-scale topographic maps dated 1955-1971. Planimetry revised from aerial photographs taken 1982 and other source data. Revised information not field checked. Map edited 1984.  
 Projection and 10 000-meter grid, zone 17, 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 5 meters west  
 There may be private inholdings within the boundaries of the National or State reservations shown on this map

CONTOUR INTERVAL 10 METERS  
 NATIONAL GEODETIC VERTICAL DATUM OF 1929  
 ELEVATIONS SHOWN TO THE NEAREST METER

THIS MAP COMPLES WITH NATIONAL MAP ACCURACY STANDARDS

Meters	Feet
1	3.2808
2	6.5617
3	9.8425
4	13.1234
5	16.4043
6	19.6852
7	22.9660
8	26.2469
9	29.5278
10	32.8084

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

Declination	Miles
1° 00'	1.47
1° 30'	1.47
2° 00'	1.47
2° 30'	1.47
3° 00'	1.47
3° 30'	1.47
4° 00'	1.47
4° 30'	1.47
5° 00'	1.47
5° 30'	1.47
6° 00'	1.47
6° 30'	1.47
7° 00'	1.47
7° 30'	1.47
8° 00'	1.47
8° 30'	1.47
9° 00'	1.47
9° 30'	1.47
10° 00'	1.47
10° 30'	1.47
11° 00'	1.47
11° 30'	1.47
12° 00'	1.47
12° 30'	1.47
13° 00'	1.47
13° 30'	1.47
14° 00'	1.47
14° 30'	1.47
15° 00'	1.47
15° 30'	1.47
16° 00'	1.47
16° 30'	1.47
17° 00'	1.47
17° 30'	1.47
18° 00'	1.47
18° 30'	1.47
19° 00'	1.47
19° 30'	1.47
20° 00'	1.47
20° 30'	1.47
21° 00'	1.47
21° 30'	1.47
22° 00'	1.47
22° 30'	1.47
23° 00'	1.47
23° 30'	1.47
24° 00'	1.47
24° 30'	1.47
25° 00'	1.47
25° 30'	1.47
26° 00'	1.47
26° 30'	1.47
27° 00'	1.47
27° 30'	1.47
28° 00'	1.47
28° 30'	1.47
29° 00'	1.47
29° 30'	1.47
30° 00'	1.47
30° 30'	1.47
31° 00'	1.47
31° 30'	1.47
32° 00'	1.47
32° 30'	1.47
33° 00'	1.47
33° 30'	1.47
34° 00'	1.47
34° 30'	1.47
35° 00'	1.47
35° 30'	1.47
36° 00'	1.47
36° 30'	1.47
37° 00'	1.47
37° 30'	1.47
38° 00'	1.47
38° 30'	1.47
39° 00'	1.47
39° 30'	1.47
40° 00'	1.47
40° 30'	1.47
41° 00'	1.47
41° 30'	1.47
42° 00'	1.47
42° 30'	1.47
43° 00'	1.47
43° 30'	1.47
44° 00'	1.47
44° 30'	1.47
45° 00'	1.47
45° 30'	1.47
46° 00'	1.47
46° 30'	1.47
47° 00'	1.47
47° 30'	1.47
48° 00'	1.47
48° 30'	1.47
49° 00'	1.47
49° 30'	1.47
50° 00'	1.47
50° 30'	1.47
51° 00'	1.47
51° 30'	1.47
52° 00'	1.47
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54° 00'	1.47
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56° 00'	1.47
56° 30'	1.47
57° 00'	1.47
57° 30'	1.47
58° 00'	1.47
58° 30'	1.47
59° 00'	1.47
59° 30'	1.47
60° 00'	1.47
60° 30'	1.47
61° 00'	1.47
61° 30'	1.47
62° 00'	1.47
62° 30'	1.47
63° 00'	1.47
63° 30'	1.47
64° 00'	1.47
64° 30'	1.47
65° 00'	1.47
65° 30'	1.47
66° 00'	1.47
66° 30'	1.47
67° 00'	1.47
67° 30'	1.47
68° 00'	1.47
68° 30'	1.47
69° 00'	1.47
69° 30'	1.47
70° 00'	1.47
70° 30'	1.47

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

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

## 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
- Railroad: 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
- Mine shaft; adit or cave; mine, quarry; gravel pit
- Compass; picnic area; U.S. location monument
- Ruin; cliff dwelling
- Dissected 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
- Scrub; mangrove
- Orchard; vineyard

A pamphlet describing topographic maps is available on request

