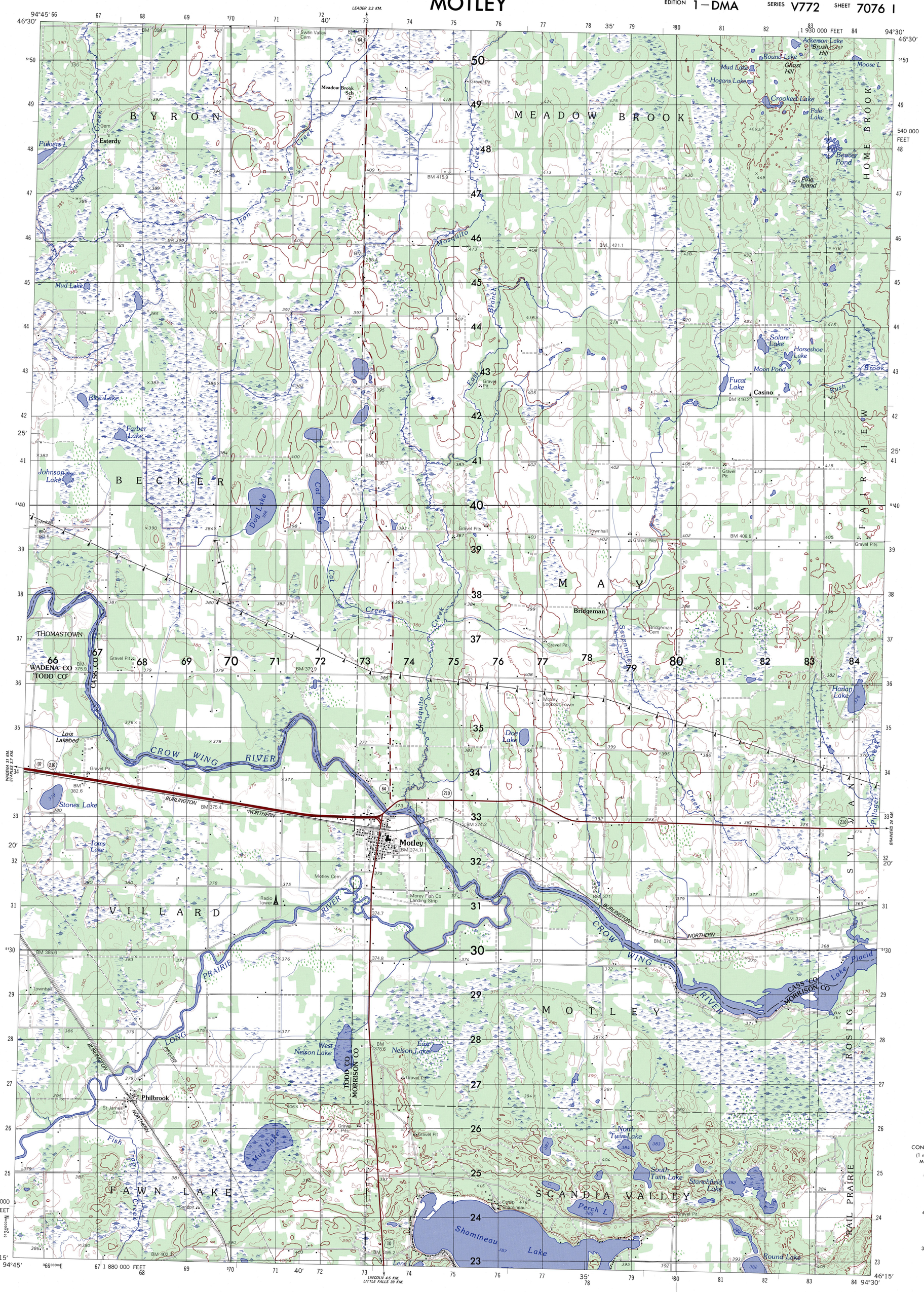
MINNESOTA 1:50,000

MOTLEY

EDITION 1—DMA SERIES V772 SHEET 7076 I



Prepared by the U.S. Geological Survey for publication by the Defense Mapping Agency Hydrographic/Topographic Center, Washington, D.C.

LEGEND

MAP INFORMATION AS OF 1977

ON THIS MAP, A LANE IS GENERALLY CONSIDERED AS BEING A MINIMUM OF 2.5 METERS (8 FEET) IN WIDTH. IN DEVELOPED AREAS, ONLY THROUGH ROADS ARE CLASSIFIED.

ROADS

- Divided highway with median strip
- Primary, all weather, hard surface
- Secondary, all weather, hard surface
- Light duty, all weather, hard or improved surface
- Fair or dry weather, unimproved surface
- Trail
- Route markers: Interstate; Federal; State
- Bridge: With superstructure; Without superstructure
- RAILROADS (Standard gauge 1.44m.-4'8½")
- Single track
- Multiple track — 3 TRACKS
- Nonoperating
- Railroad station: Location known; Location unknown
- Car line
- Railroad bridge: With superstructure; Without superstructure
- Tunnel: Highway; Railroad
- BOUNDARIES
- National, with monument
- State, territory
- County, parish
- Civil township, town
- Incorporated city, village, town
- Reservation: National; State; Military — MIL RES
- Power transmission line
- Buildings
- Structures
- Church; School
- Power substation
- Windmill; Watermill
- Well; Tank
- Mine shaft
- Open pit mine or quarry
- Horizontal control station
- Bench mark, monumented — BM × 246
- Bench mark, non-monumented — × 301
- Spot elevations in meters — ×133
- Levees, rims, dikes
- Bluffs, cliffs
- Woodland
- Scattered trees; Scrub
- Vineyard; Orchard, plantation
- Intermittent lake; Dam: Earthen; Masonry
- Stream: Perennial; Intermittent
- Marsh, swamp
- Small rapids; Small falls — Falls
- Large rapids; Large falls — Rapids

Scale 1:50,000

Meters 1000 500 0 1 2 3 4 5 Kilometers
1 ½ 0 1 2 3 Statute Miles
1 ½ 0 1 2 3 Nautical Miles

ELEVATIONS IN METERS

CONTOUR INTERVAL 10 METERS
SUPPLEMENTARY CONTOURS 5 METERS

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SPHEROID ..... CLARKE 1866
GRID ..... 1,000 METER UTM ZONE 15 (BLACK NUMBERED LINES)
10,000 FOOT STATE GRID TICKS: MINNESOTA, CENTRAL ZONE
PROJECTION ..... UNIVERSAL TRANSVERSE MERCATOR
VERTICAL DATUM ..... NATIONAL GEODETIC VERTICAL DATUM OF 1929
HORIZONTAL DATUM ..... 1927 NORTH AMERICAN DATUM
CONTROL BY ..... USGS AND NOS/NOAA
PREPARED BY ..... U.S. GEOLOGICAL SURVEY
PRINTED BY ..... DMAHTC 2-79

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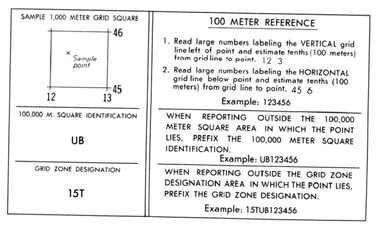
SAMPLE 1,000 METER GRID SQUARE



100,000 M. SQUARE IDENTIFICATION: UB

GRID ZONE DESIGNATION: 15T

100 METER REFERENCE

1. Read large numbers labeling the VERTICAL grid line left of point and estimate tenths (100 meters) from grid line to point. 12 3
2. Read large numbers labeling the HORIZONTAL grid line below point and estimate tenths (100 meters) from grid line to point. 45 6

Example: 123456

WHEN REPORTING OUTSIDE THE 100,000 METER SQUARE AREA IN WHICH THE POINT LIES, PREFIX THE 100,000 METER SQUARE IDENTIFICATION.

Example: UB123456

WHEN REPORTING OUTSIDE THE GRID ZONE DESIGNATION AREA IN WHICH THE POINT LIES, PREFIX THE GRID ZONE DESIGNATION.

Example: 15TUB123456

GRID CONVERGENCE 1°10′ (21 MILS) FOR CENTER OF SHEET

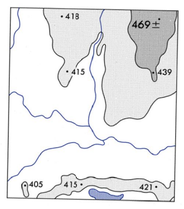
TO CONVERT A MAGNETIC AZIMUTH TO A GRID AZIMUTH ADD G-M ANGLE

TO CONVERT A GRID AZIMUTH TO A MAGNETIC AZIMUTH SUBTRACT G-M ANGLE

CONVERSION GRAPH
(1 meter = 3.28 feet)

Meters	Feet
500	1600
	1500
	1400
400	1300
	1200
	1100
300	1000

ELEVATION GUIDE

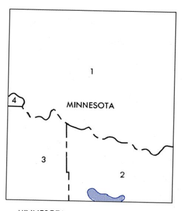


High
Medium
Low

ADJOINING SHEETS

7077 III	7077 II	7177 III
7076 IV	7076 I	7176 IV
7076 III	7076 II	7176 III

BOUNDARIES



MINNESOTA
1. Cass Co.
2. Morrison Co.
3. Todd Co.
4. Wadena Co.

THIS MAP IS RED-LIGHT READABLE

USERS SHOULD REFER CORRECTIONS, ADDITIONS, AND COMMENTS TO THE NGA OPERATIONAL HELP DESK; 1-800-455-0899; COMMERCIAL 314-263-4864; DSN 693-4864; OR WRITE TO: DIRECTOR, NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY, ATTN.: ES, MAIL STOP L-88, 4600 SANGAMORE ROAD, BETHESDA, MD 20816-5003.

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