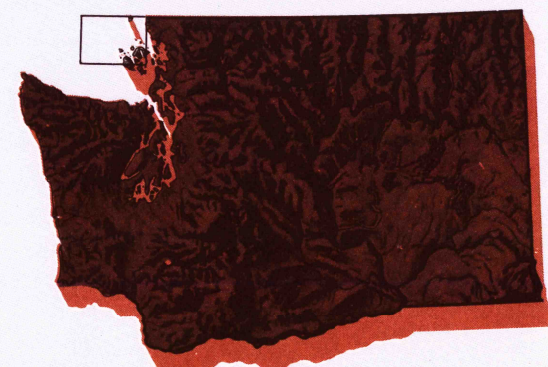


Roche Harbor

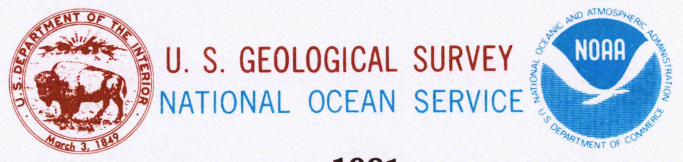
WASHINGTON-BRITISH COLUMBIA

1:100 000-scale metric
topographic-bathymetric map



30 X 60 MINUTE QUADRANGLE
SHOWING

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



1981

Produced by the United States Geological Survey and the National Ocean Service
U.S. portion compiled from USGS 1:24 000-scale topographic maps dated 1953-1981
Platimetry revised from aerial photographs taken 1979 and other source data. Revised information on field checked. Canadian portion compiled from 1:25 000-scale map, Victoria dated 1974-75; British Columbia Land Service, Department of Environment. Woodland compiled from 1:50 000-scale map, Vancouver dated 1960; and other sources. Bathymetry compiled by the National Ocean Service from tide-coordinated hydrographic surveys. This information is not intended for navigational purposes. Mean lower low water (MLLW) line and mean high water (MHW) solid line compiled by NOS from tide-coordinated aerial photographs. Apparent shoaling (lower edge of vegetation) shown by light solid line. Projection and 10 000-meter grid, zone 18 Universal Transverse Mercator 25 000-foot grid, based on Washington coordinate system, north zone 1957 North American Datum.
To place on the projected North American Datum 1983 move the projection lines 24 meters north and 96 meters east.
Limited revision and bathymetry added 1989
There may be private inholdings within the boundaries of National or State reservations shown on this map.
CONTAINER INTERVAL 50 METERS
SUPPLEMENTARY CONTAINER INTERVAL 25 METERS
NATIONAL GEODETIC VERTICAL DATUM OF 1989 IN U.S. ELEVATIONS SHOWN TO THE NEAREST METER
BATHYMETRIC CONTOUR INTERVALS 10 METERS TO 200 METERS DEPTH, WITH SUPPLEMENTARY 2-METER CONTOURS, THENCE 30 CONTOURS-DECAHED IN DEEPER LOW WATER. THE RELATIONSHIP BETWEEN THE THREE DATUMS IS VARIABLE.
U.S. PORTION OF BASE MAP COMPLETES WITH NATIONAL MAP
ACCURACY STANDARDS: BATHYMETRIC SURVEY DATA COMPLETES WITH INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO) SPECIAL PUBLICATION NO. 13, ACCURACY STANDARDS AND STANDARDS USED AS OF THE DATE OF THE SURVEY.

CONVERSION TABLE

Meters	Feet
1	3.2808
2	6.5616
3	9.8424
4	13.1232
5	16.4040
6	19.6850
7	22.9659
8	26.2467
9	29.5276
10	32.8084

To convert meters to feet multiply by 3.2808

To convert feet to meters multiply by 0.3048

DECLINATION DIAGRAM

The diagram illustrates the relationship between True North (GN), Magnetic North (MN), and Grid North (GN). True North is represented by a vertical line. Magnetic North is shown as a line deviating 11° 15' West from True North. Grid North is shown as a line deviating 7° Mils from True North. The distance between the Magnetic North and Grid North lines is indicated as 764 Mils.

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

ADJOINING MAPS

1	2	3
4	5	6
7	8	9

1 Bellingham
2 Cape Flattery
3 Port Angeles
4 Port Townsend

FOR SALE BY U.S. GEOLOGICAL SURVEY
DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
AND NATIONAL OCEAN SERVICE, ROCKVILLE, MARYLAND 20852

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, projected
- Power transmission line, pipeline
- Dam, dam with lock
- Cemetery, building
- Windmill, 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, levee, 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

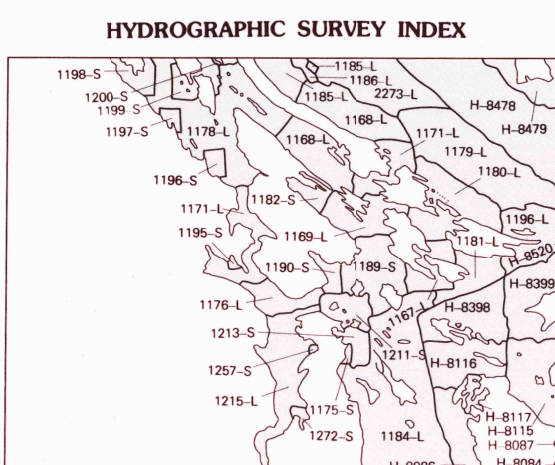
ROCHE HARBOR, WASHINGTON-BRITISH COLUMBIA

48123-E1-TB-100

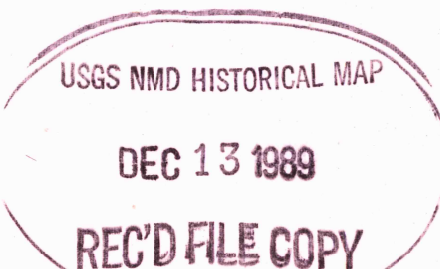
1981

BATHYMETRY ADDED 1989

HYDROGRAPHIC SURVEY INFORMATION					
SURVEY NUMBER	SURVEY DATE	SURVEY SCALE	SURVEY LINE SPACING (NAUT. MILES)	SURVEY NUMBER	SURVEY DATE
1167-L	1961-10	1:12 000	02-10	1168-S	1962
1168-L	1961-10	1:12 000	02-10	1169-S	1962
1169-L	1961-10	1:12 000	02-10	1170-S	1962
1170-L	1961-10	1:12 000	02-10	1171-S	1962
1171-L	1961-10	1:12 000	02-10	1172-S	1962
1172-L	1961-10	1:12 000	02-10	1173-S	1962
1173-L	1961-10	1:12 000	02-10	1174-S	1962
1174-L	1961-10	1:12 000	02-10	1175-S	1962
1175-L	1961-10	1:12 000	02-10	1176-S	1962
1176-L	1961-10	1:12 000	02-10	1177-S	1962
1177-L	1961-10	1:12 000	02-10	1178-S	1962
1178-L	1961-10	1:12 000	02-10	1179-S	1962
1179-L	1961-10	1:12 000	02-10	1180-S	1962
1180-L	1961-10	1:12 000	02-10	1181-S	1962
1181-L	1961-10	1:12 000	02-10	1182-S	1962
1182-L	1961-10	1:12 000	02-10	1183-S	1962
1183-L	1961-10	1:12 000	02-10	1184-S	1962
1184-L	1961-10	1:12 000	02-10	1185-S	1962
1185-L	1961-10	1:12 000	02-10	1186-S	1962
1186-L	1961-10	1:12 000	02-10	1187-S	1962
1187-L	1961-10	1:12 000	02-10	1188-S	1962
1188-L	1961-10	1:12 000	02-10	1189-S	1962
1189-L	1961-10	1:12 000	02-10	1190-S	1962
1190-L	1961-10	1:12 000	02-10	1191-S	1962
1191-L	1961-10	1:12 000	02-10	1192-S	1962
1192-L	1961-10	1:12 000	02-10	1193-S	1962
1193-L	1961-10	1:12 000	02-10	1194-S	1962
1194-L	1961-10	1:12 000	02-10	1195-S	1962
1195-L	1961-10	1:12 000	02-10	1196-S	1962
1196-L	1961-10	1:12 000	02-10	1197-S	1962
1197-L	1961-10	1:12 000	02-10	1198-S	1962
1198-L	1961-10	1:12 000	02-10	1199-S	1962
1199-L	1961-10	1:12 000	02-10	1200-S	1962



Photographic copies of the above and other surveys may be obtained at the cost of reproduction by addressing the Director, USGS, National Ocean Service, National Oceanic and Atmospheric Administration, Rockville, Maryland 20852



ROCHE HARBOR, WASHINGTON-BRITISH COLUMBIA



● INTERIOR GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092

SCALE 1:100 000

1 CENTIMETER ON THE MAP REPRESENTS 1 KILOMETER ON THE GROUND
CONTAINER INTERVAL 50 METERS
SUPPLEMENTARY CONTAINER INTERVAL 25 METERS

