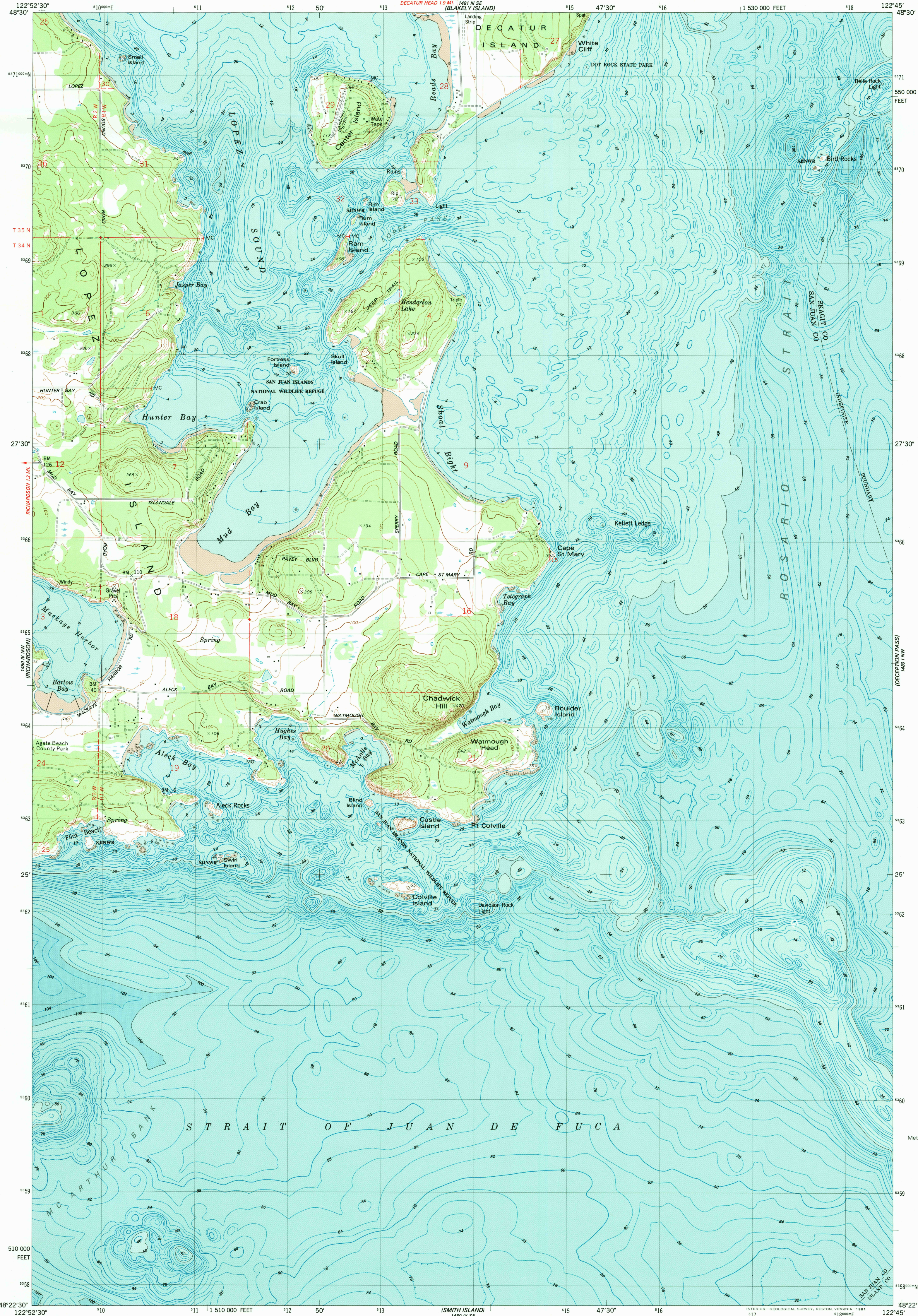


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOPEZ PASS QUADRANGLE
WASHINGTON
7.5 MINUTE SERIES (TOPOGRAPHIC-BATHYMETRIC)
NE 4 RICHARDSON 15' QUADRANGLE

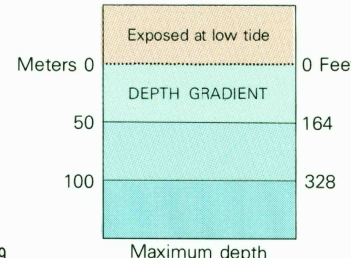


CONVERSION
SCALES

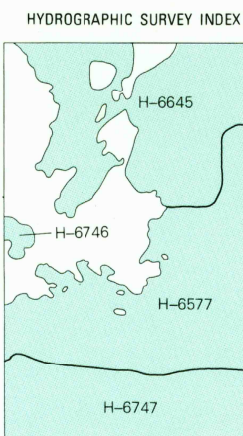


Feet	Meters
1	3048
2	6096
3	9144
4	12192
5	15240
6	18288
7	21336
8	24384
9	27432
10	30480

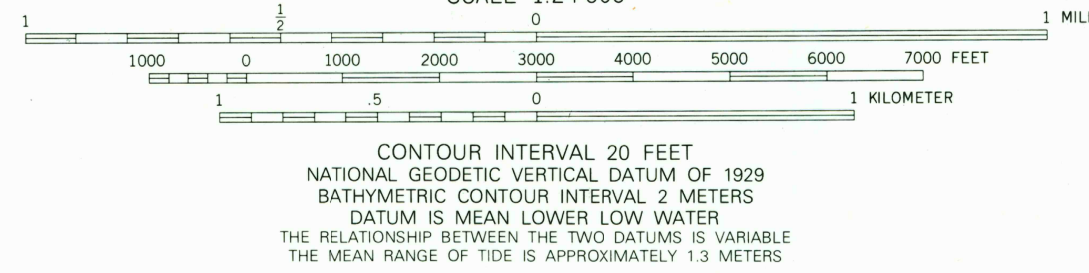
To convert feet to meters
multiply by .3048
To convert meters to feet
multiply by 3.2808



Mapped, edited, and published by the Geological Survey
and the National Ocean Survey
Control by USGS and NOS/NOAA
Topography by photogrammetric methods from aerial
photographs taken 1972. Field checked 1973.
Bathymetry compiled by the National Ocean Survey from
tide-coordinated hydrographic surveys. This information
is not intended for navigational purposes.
Mean lower low water (dotted) line and mean high water (solid) line
compiled by NOS from tide-coordinated aerial photographs.
Projection and 10,000-foot grid ticks: Washington coordinate
system, north zone (Lambert conformal conic).
1000-meter Universal Transverse Mercator grid, zone 10
1927 North American Datum.
To place on the predicted North American Datum 1983
move the projection lines 23 meters north and
95 meters east as shown by dashed corner ticks.
Where omitted, land lines have not been established.
Fine red dashed lines indicate selected fence lines.
There may be private inholdings within the boundaries of
the National or State reservations shown on this map.

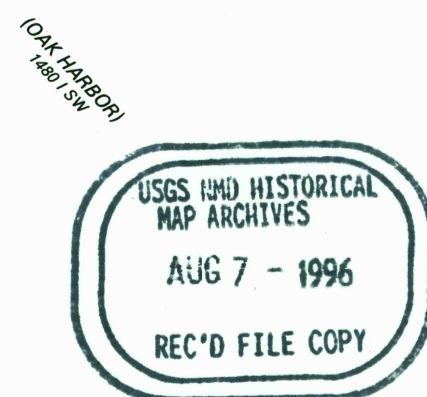
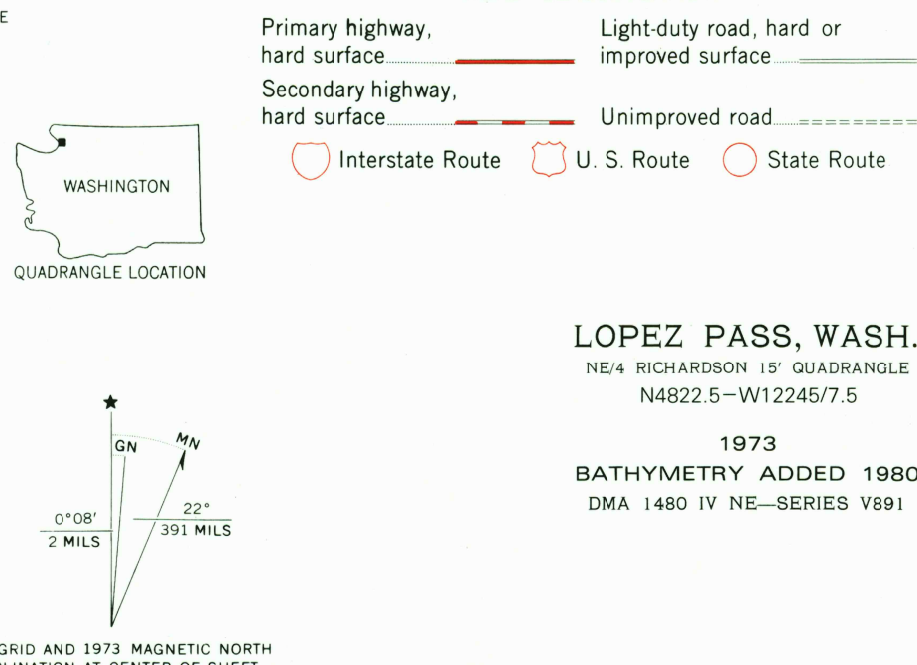


Survey Number	Survey Date	Survey Scale	Survey Line Spacing (Naut. Miles)
H-6577	1940	1:10,000	0.5-5.0
H-6645	1939	1:10,000	2.5-5.0
H-6746	1941-43	1:10,000	0.1-1.0
H-6747	1941	1:10,000	0.4-2.3



CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
BATHYMETRIC CONTOUR INTERVAL 2 METERS
DATUM IS MEAN LOWER LOW WATER
THE RELATIONSHIP BETWEEN THE TWO DATUMS IS VARIABLE
THE MEAN RANGE OF TIDE IS APPROXIMATELY 1.3 METERS

BATHYMETRIC SURVEY DATA COMPLIES WITH INTERNATIONAL HYDROGRAPHIC
ORGANIZATION (IHO) SPECIAL PUBLICATION 44 ACCURACY STANDARDS
AND/OR STANDARDS USED AT THE DATE OF THE SURVEY
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
AND NATIONAL OCEAN SURVEY, ROCKVILLE, MARYLAND 20852
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



LOPEZ PASS, WASH.
NE 4 RICHARDSON 15' QUADRANGLE
N4822.5-W12245.7/5
1973
BATHYMETRY ADDED 1980
DMA 1480 IV NE-SERIES V891

