PROHIBITED AREAS

Johnston Atoll, Midway Islands and Kingman Reef are Naval Defensive Sea Areas and Air Space Reservations and are closed to the public. No vessels or aircraft except those authorized by the Secretary of the Navy, shall be navigated in or above the areas within the three-mile limit.

For prohibited areas on Oahu see Chart 19357.

Note: The restriction imposed upon the use of the Naval Air-space Reservations has been suspended subject to reinstatement without notice at any time.

HAWAIIAN ISLANDS NATIONAL WILDLIFE REFUGE

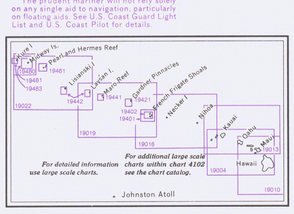
Islands or island groups in the refuge, progressing from east to west, are Nihoa, Necker, French Frigate Shoals, Gardner Pinnacles, Maro Reef, Laysan, Lisianski, and Pearl and Hermes Reef. All intervening reefs and shoals are included.

Johnston Island is also a Wildlife Refuge administered through Hawaiian Islands National Wildlife Refuge.

Landing on the islands of the refuge is prohibited, except under permit signed by the Wildlife Administrator, Bureau of Sport Fisheries and Wildlife, 337 Uluniu Street, Kailua, Oahu, Hawaii 96734 (phone 808-262-5486). Entry upon Tern Island must also be by approval of Commander, 14th U.S. Coast Guard District, 677 Ala Moana Blvd., Honolulu, Oahu, Hawaii 96813 (phone 808-546-7180).

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.



NEW CHART NUMBERING SYSTEM

The National Ocean Survey, in cooperation with the Defense Mapping Agency Hydrographic Center, is in the process of adopting a new national chart numbering system. See Notice to Mariners No. 19, May 11, 1974, or Nautical Chart Catalog for cross references of old and new chart numbers.

Chart Number	
New System	Old System
19004	4102
19010	4179
19013	4180
19016	4181
19019	4182
19022	4183
19401	4172
19402	4171
19421	4173
19441	4174
19442	4186
19461	4175
19480	4185
19481	4188
19483	4177

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Notice to Mariners.

AUTHORITIES

Hydrography and topography by the National Ocean Survey (formerly the Coast and Geodetic Survey) with additional data from the Defense Mapping Agency, U.S. Coast Guard, and other sources.

For Symbols and Abbreviations see Chart No. 1

CAUTION

Only marine radiobeacons have been calibrated for surface use. Limitations on the use of certain other radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and Defense Mapping Agency Hydrographic Center Publication 117 (A & B).

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:

⊙(Accurate location) *(Approximate location)

HEIGHTS

Heights in feet above Mean High Water.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 7 for important supplemental information.

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

NOAA

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NATIONAL OCEAN SURVEY

UNITED STATES

HAWAIIAN ARCHIPELAGO

Mercator Projection
Scale 1:3,121,170 at Lat. 20°00'

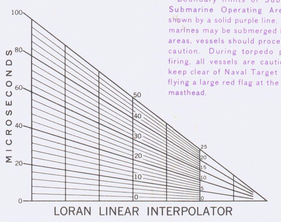
Old Hawaiian Datum

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

1st Ed., May 1925

NOTE A

Boundary limits of Submerged Submarine Operating Areas are shown by a solid purple line. As submarines may be submerged in these areas, vessels should proceed with caution. During torpedo practice firing, all vessels are cautioned to keep clear of Naval Target Vessels flying a large red flag at the highest masthead.



LORAN-C
GENERAL EXPLANATION

LORAN-C FREQUENCY ..... 100kHz.
PULSE REPETITION INTERVAL
4990 ..... 49,900 Microseconds
STATION TYPE DESIGNATORS: (Not individual station letter designators)
M ..... Master
W ..... Secondary
X ..... Secondary
Y ..... Secondary
Z ..... Secondary
EXAMPLE: 4990-X

RATES ON THIS CHART

4990-X 4990-Y

This chart has been prepared for use with ground wave signals. Sky wave corrections are not provided. The Loran-C lines of position on this chart are compensated for propagation delay.
*Group repetition interval 4990 was formerly designated S1.

SOUNDINGS IN FATHOMS

Nautical Chart Catalog No. 2, Panels B, D, E, Q, R

540 (formerly C&GS 4000) LORAN-C OVERPRINTED

540 (formerly C&GS 4000) LORAN-C OVERPRINTED

179° 178° 177° 176° 175° 174° 173° 172° 171° 170° 169° 168° 167° 166° 165° 164° 163° 162° 161° 160° 159° 158° 157° 156° 155° 154°

30° 29° 28° 27° 26° 25° 24° 23° 22° 21° 20° 19° 18° 17° 16° 15° 14° 13° 12° 11° 10° 9° 8° 7° 6° 5°

HAWAIIAN ARCHIPELAGO

PACIFIC OCEAN

JOHNSTON ATOLL

PALMYRA ATOLL

OAHU

MAUI

HAWAII

Kingman Reef

Pearl and Hermes Reef

Lisianski

Laysan

Maro Reef

Gardner Pinnacles

French Frigate Shoals

Necker I.

Nihoa

Kaua'i

Ni'ihau

Honolulu

Pearl Harbor

Kaneohe

Kailua

Wahiawa

Waianae

Lahaina

Kahului

Wailuku

Hilo

Kailua-Kona

Kawaihae

Kamuela

Kohala

Hamakua

Kau

Puna

Kona

Ka Lae

Mauna Kea 13784

Mauna Loa 13680

Haleakala 10023

Lanaihale 3370

Kohala Mt. 5480

Waialeale 5148

Kaala 4025

Konahuanui 3150

Tern Island

Sand Island

Midway Islands

Submarine ridge

Nero Bank

Salmon Bank

Pioneer Bank

Maro Reef

Ralita Bank

Northampton Seamounts

Gardner Pinnacles

St Rogatien Bank

Brooks Banks

French Frigate Shoals

Dangerous tide rips reported 5 m SW (true) from Palmyra Island

Schletman Reef (ED) Searched for in 1945 within radius of 20 miles of charted position, but not found.

Wilder Shoal Reported 1919

PROHIBITED AREA (see note)

RESTRICTED AREA

DUMPING AREA

SUBMARINE OPERATING AREA

EXPLOSIVES DUMPING AREA

SUBMARINE TRANSIT LANE

PROCEED WITH CAUTION

BASELINE EXTENSION 4990-X 38000.0

Var 12°E (1975)

Var 11°E (1975)

Var 10°E (1975)

Var 10°45'E (1975)

Var 10°E (1975)

ANNUAL INCREASE 2'

ANNUAL INCREASE 1'

LORAN LINEAR INTERPOLATOR

MICROSECONDS

12th Ed., Dec. 6/ 75
540
(formerly C&GS 4000)
LORAN-C OVERPRINTED

CAUTION

This chart has been corrected from the Notice to Mariners published weekly by the Defense Mapping Agency Hydrographic Center and the Local Notice to Mariners issued periodically by each U.S. Coast Guard district to the print date shown in the lower left hand corner.

SOUNDINGS IN FATHOMS

For LORAN-A coverage see reverse side

Published at Washington, D. C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

VHF-FM WEATHER BROADCAST FOR MARINERS

The National Weather Service Office in Honolulu, Oahu, broadcasts weather advisories, forecasts, and warnings continuously, 24 hours daily, from transmitting antennas at the following locations:

Oahu	90 mile range	KBA-99	162.55 MHz
Hawaii	100 mile range	KBA-99	162.55 MHz
Maui	130 mile range	KBA-99	162.40 MHz
Kauai	90 mile range	KBA-99	162.40 MHz

Reception in some areas will be poor or even impossible due to obstruction of the FM radio signal by mountains.

FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102
METERS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

(Hawaiian Archipelago)
SOUNDINGS IN FATHOMS – SCALE 1:3,121,170

540
(formerly C&GS 4000)
LORAN-C OVERPRINTED