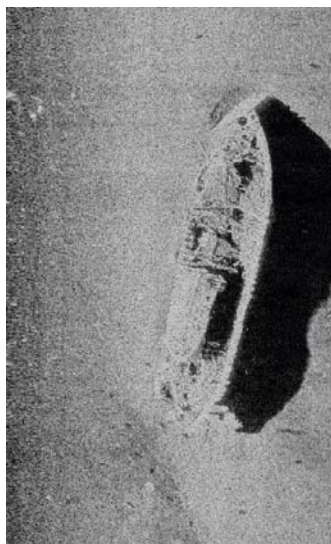




Office of Coast Survey
Hydrographic Surveys Division's



USS MONITOR

**AWOIS User's
Guide**

March 2006

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INTRODUCTION

This manual has been compiled to provide users of the Automated Wreck and Obstruction Information System (AWOIS) with instructions for obtaining and interpreting data from the system. Background is also available which explains the use of the system as a basic research tool.

EXPLANATION

Background

In 1981, the National Ocean Service (NOS) implemented the Automated Wreck and Obstruction Information System (AWOIS) to assist in planning hydrographic survey operations and to catalog and store a substantial volume of reported wrecks and obstructions that are considered navigational hazards within U.S. coastal waters. Today, over 10,000 reports have been received, which include unverified accounts of vessel casualties, as well as chronological history. As part of the hydrographic survey planning process, these records are reviewed and those wrecks or obstructions which require additional field investigation are assigned to specific field units. The results of these investigations eventually become part of the AWOIS file so that a permanent record of a wreck or obstruction is always available.

Besides functioning as a survey planning tool, AWOIS is of potential value to various users outside of NOS. The historical record of selected wrecks, the accessibility of information in a sorted format, and its reasonable cost make AWOIS an important information source for marine archaeologists and historians, fishermen, divers, salvage operators, and others in the marine community. Interested individuals are encouraged to use the system as a supplement to other sources of information. However, AWOIS has limitations that should be considered by potential users. Most notably, it is not a comprehensive record of wrecks in any particular area. Historical research is constantly being conducted to improve the quality of the file, but it will never completely address every known or reported wreck. The emphasis is constantly placed on wrecks which may be a hazard to navigation.

Purpose of User's Guide

The purpose of this guide is an aid to decipher the Automated Wreck and Obstruction Information System (AWOIS) information within a MS Access 2000 database. As Access 2000 is the current version of the master AWOIS database, previous versions of Access (such as version 7) will not function.

Figure 1: Sample of Form in MS Access:

RECRD	<input type="text" value="7611"/>	VESSTERMS	<input type="text" value="UNKNOWN"/>	CHART	<input type="text" value="11524"/>	AREA	<input type="text" value="G"/>
		CARTOCODE	<input type="text" value="0100"/>	SNDINGCODE	<input type="text" value=""/>	DEPTH	<input type="text" value="0"/>
NATIVLAT	<input type="text" value="32/49/42.00"/>	NATIVLON	<input type="text" value="079/58/01.00"/>	NATVDATUM	<input type="text" value="31"/>		
LAT83	<input type="text" value="32/49/42.00"/>	LONG83	<input type="text" value="079/58/01.00"/>	GPQUALITY	<input type="text" value="Med"/>		
LATDEC	<input type="text" value="32.8283333333333"/>	LONDEC	<input type="text" value="79.9669444444445"/>	GPSOURCE	<input type="text" value="Scaled"/>		
History	<p>HISTORY LNM48/78-A 75 X 200 FT BARGE IS SUNK IN APPROX. POS. LAT.32-49.7N. LONG.79-58.0W, ABOUT 20FT OUTSIDE THE CHANNEL. THE BARGE IS MARKED BY UNLIGHTED FLOATS AND IS COVERED AT HIGH TIDE. POSITION WAS ADJUSTED BY THE COMPILER TO PLACE WRECK OUTSIDE KNOWN CHANNEL LIMITS. (ENTERED 1/90 MCR)</p>						
REFERENCE:	<input type="text" value=""/>	YEARSUNK	<input type="text" value="1978"/>	SYSTEMNUM	<input type="text" value="6504"/>		

DATABASE STRUCTURE

Fields of the AWOIS table: The fields are listed below and are grouped by themes as reflected in rectangular groupings on the standard MS Access AWOIS form. SEE FIGURE 1.

1. Identifier Fields:

RECRD: Unique 5-digit AWOIS number. AWOIS numbers are assigned by the Hydrographic Surveys Division, Operations Branch.

VESSTERMS: A vessel name or the terms UNKNOWN, OBSTRUCTION, and SOUNDING.

CHART: The chart number entered here is that of either an NOS chart or a Defense Mapping Agency chart and is the largest scale chart on which the wreck, obstruction, or sounding is located.

AREA: A single capital letter designating a particular geographic zone will appear in this field. These letters are used to assign project numbers (e.g. OPR-**B**118-MI-85) See figure1 and 2 (part 1 & 2).

CARTOCODE: This 3-digit cartographic code with leading zero identifies the characteristic of the item. A list of the carto codes used in AWOIS is contained in appendix 2.

SNDINGCODE: This is essentially a cartographic code (appendix 2) which indicates the units; i.e., feet, fathoms, or meters in which the least depth over the feature has been determined.

DEPTH: Actual least depth or wire drag cleared depth over a feature that has been determined by hydrographic or wire drag survey methods. This depth will not be a reported or unverified depth. These depths originate primarily from National Ocean Service (NOS) hydrographic surveys.

2. Geographic Position Fields: The geographic position represents the most accurate position available found in documents at NOS. Other positions in the History memo field are for reference purposes only and will have generally been superseded by the Header Record position. Users should be aware that the AWOIS position may not agree with a charted position for a similar feature. Most of these differences are minor and due to the fact that the paper chart cannot always show a location as accurately as a digital list. Other more significant differences are generally due to a time lag in updating either the chart or AWOIS..

NATIVDATUM: This two-digit code refers to a specific horizontal datum (See appendix 3). The code will reference the original datum for source of the best known position of the item.

LAT83 and LONG83: This is the best available geographic position and reference position for the AWOIS item. It will always be in the NAD 83 datum. As with the NATIVDATUM fields, the position is to be entered into the fields with a space delimiter between degrees, minutes, and seconds with provision for recording tenths and hundredths of seconds. Place a leading zero in the longitude degree block for east coast, gulf coast, and Great Lakes positions. This is particularly important here as the "Update GP" function (see below) will not function properly with only two numbers entered for longitude degrees.

LATDEC: and LONGDEC: Decimal degrees created from the LAT83 and LONG83 fields.. This feature allows the AWOIS item to be plotted directly into GIS systems such as MapInfo, however a leading minus ("-") sign must be generated for the longitude column with the GIS. In MapInfo, add the leading "-" while using the "create points" feature.

GPQUALITY: Contains a drop down selection list for the relative position quality of the position shown in the fields LAT83 and LONG83. The position quality is to be categorized as follows:

High: A high quality position originating from a survey source or whenever there is a high level of confidence that the wreck or obstruction may be relocated without unreasonable difficulty. Although most positions in this category originate with NOS surveys, other sources may qualify. In evaluating these other positions, it is essential that the originating authority have the capability to do high quality work. Authorities such as the U.S. Army Corps of Engineers and private surveyors are selected examples. It is also important that the position be

appropriately reported. Survey field sheets or written documentation that clearly states that the position is of good quality should be available. As a general rule, it has been found that positions expressed without partial seconds may be classified with a lower quality accuracy code.

Med: A probable high quality position such as that originating with a survey but lacking supporting documentation or a lower quality survey position obtained by such means as see-field-sheet techniques. Positions originating from non-agency sources may also be in this category if the location is tightly controlled by adjacent features such as pier lines or fixed aids to navigation. A report that the wreck or obstruction has been actually located by the Coast Guard or Corps of Engineers will usually qualify a position for this category. In some cases, the item may be charted with an approximate position (PA) notation.

Low: A position of questionable or unverified quality. Most reports from Local Notice to Mariners and private observers are of this type. If the reported position is expressed as a GP or range and bearing from an identifiable fixed feature and is near shore relative to the position fixing method, it will probably be included in this category. If the position fixing method is unknown, it is assumed to be visual. The nautical chart should indicate an approximate position (PA) for this item.

Poor: A position of doubtful quality usually referenced to some general shoreline feature or portion of shoreline. The nautical chart may indicate an approximate position (PA) or a position doubtful (PD) for this item.

GPSOURCE: Contains a drop down selection list indicating the method in which the position was derived from the source document. The two selections available are as follows:

Scaled: Scaled from a hard copy or from a digital (vector / raster) image.

Direct: Transcribed directly as reported in the source document.

3. History Field:

This memo field contains information which is a byproduct of the NOS nautical chart revision system. Some of the entries in this category (e.g., USPS chart letters or USCG LMN's) are unverified and may be unreliable. Codes used here are restricted to document file numbers and designator. Common codes include hydrographic survey registry numbers (e.g., H-9872/79), shoreline manuscript registry numbers (e.g., TP-00278), and miscellaneous document numbers (e.g., CL980/76 and BP100234). The format for entry may be seen on the example shown on the cover page or on figure 1.

4. Reference Field:

This memo field will contain the code of various publications that describes the AWOIS item (see appendix 4 for a list of references). **Copyright information will be not be included in database subsets or printouts sent to the general public.**

5. Miscellaneous Fields:

YEARSUNK: If known, enter the year in which the vessel was sunk.

SYSTEMNUM: An internal system number to the database, not generally a concern to the database user.

INQUIRIES

For questions concerning the AWOIS database e-mail: HSD.Inquiries@noaa.gov

Figure 2 (Part 1)

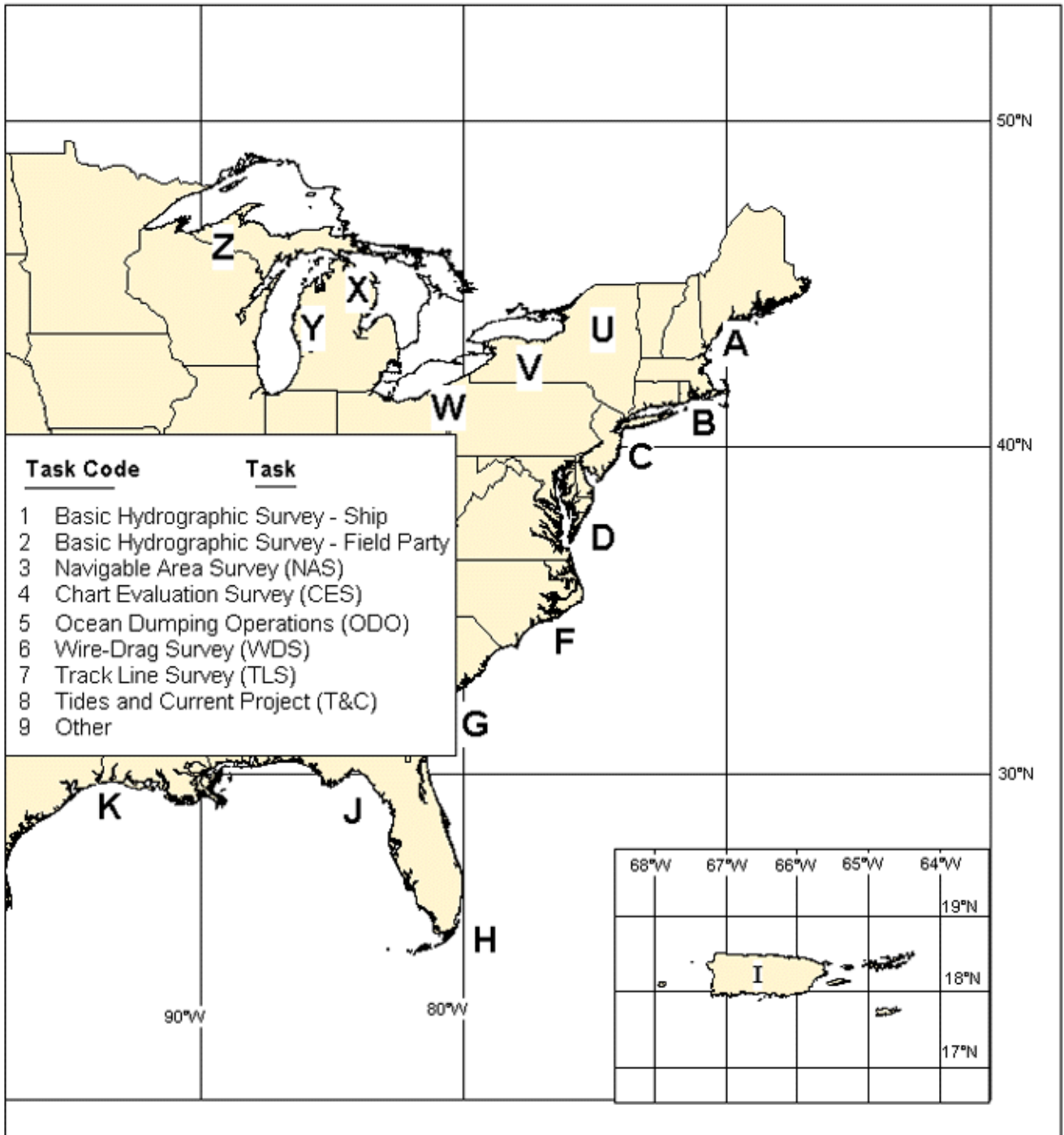


Figure 2 (Part 2)

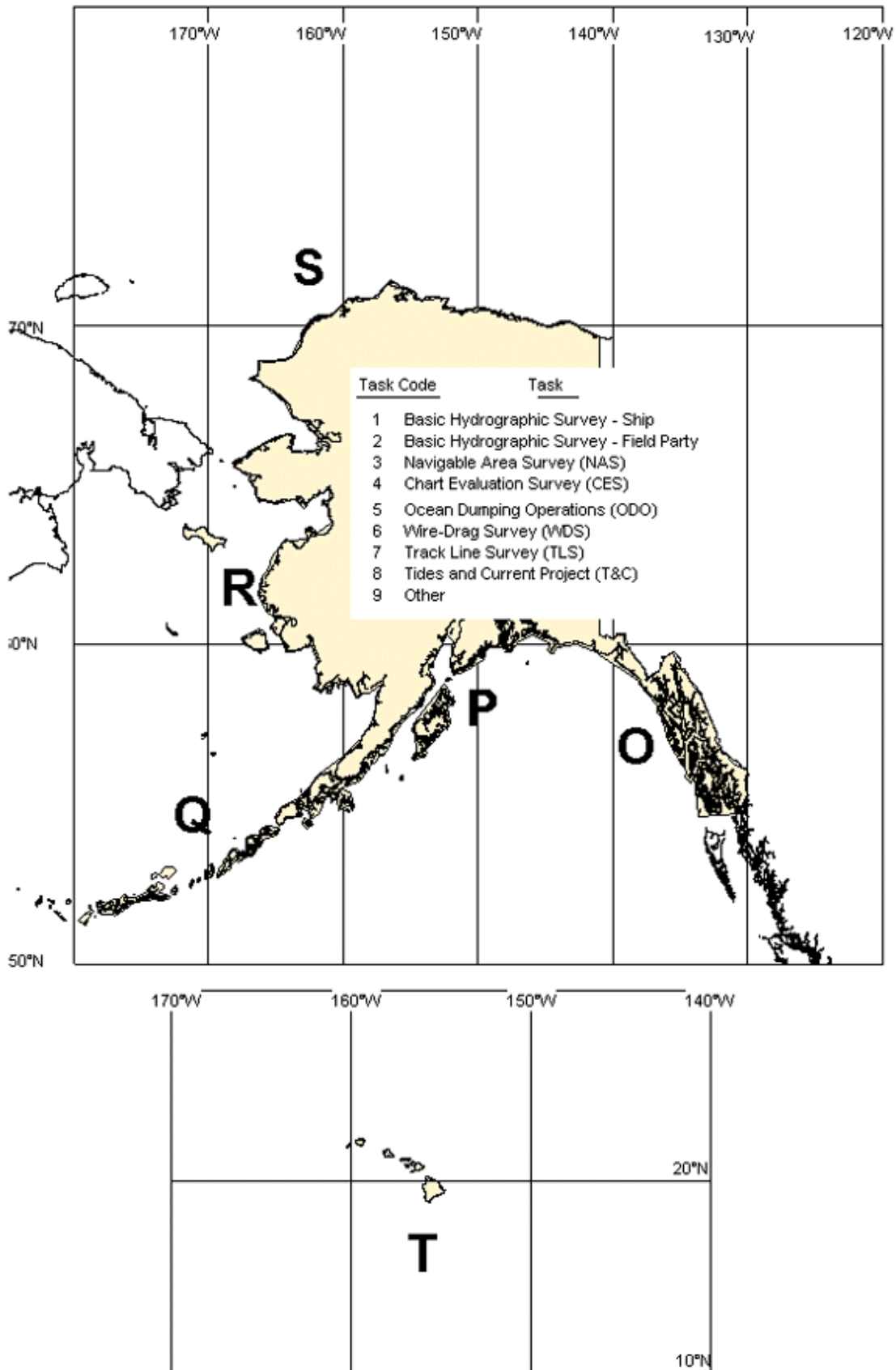
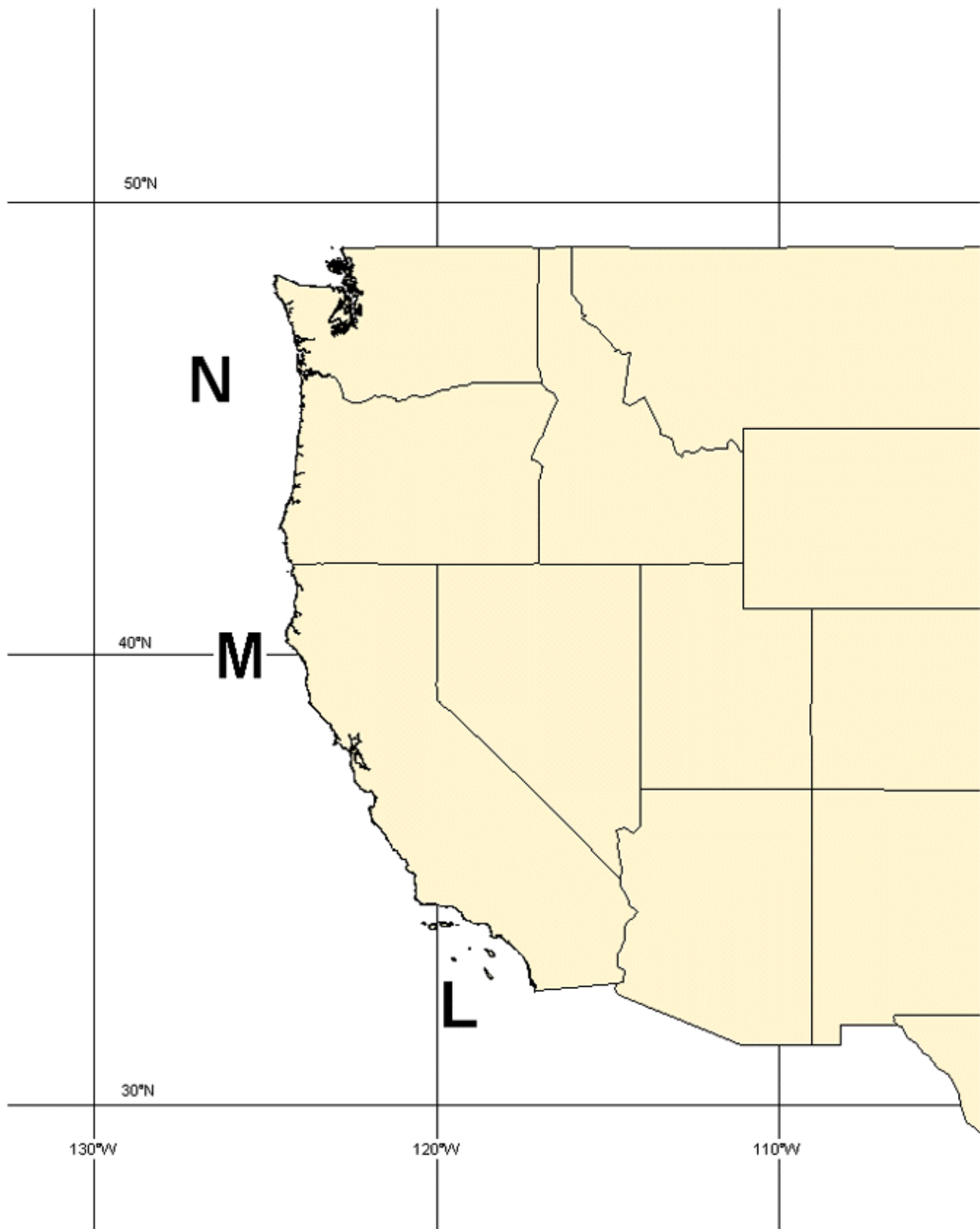












Figure 2 (Part 3)



Appendix 1

PROJECT AREA CODE	GENERAL	SPECIFIC
A	Atlantic Coast	Canadian Border to Cape Cod
B		Cape Cod to Sandy Hook (Includes Long Island Sound, New York Harbor, and the Hudson River below Troy)
C		Sandy Hook to Cape May (Includes south shore of Long Island)
D		Cape May to Cape Hatteras (Includes Delaware Bay)
E		Chesapeake Bay (Includes all charted tributary waters)
F		Cape Hatteras to Cape Fear
G		Cape Fear to Cape Canaveral (Including St. Johns River)
H		Cape Canaveral to Fort Myers
I		Puerto Rico and Virgin Islands
J		Gulf of Mexico
K	Mississippi River to Mexican Border	
L	Pacific Coast	Mexican Border to Point Reyes
M		Point Reyes to Yaquina Head
N		Yaquina Head to Canadian Border
O	Alaska	Canadian Border to Point Manby
P		Point Manby to Unimak Pass
Q		Aleutian Islands
R		Unimak Pass to Seward Peninsula
S		Seward Peninsula to Canadian Border
T	Pacific Ocean	Pacific Islands (Hawaii, Samoa, Guam, Marianas, etc.)
U		Inland Waters
V		Lake Champlain & New York State Barge Canal System
W		St. Lawrence River, Lake Ontario, & Lower Niagara River
X		Upper Niagara River, Lake Erie, Detroit River, Lake St. Clair, & St. Clair River
Y		Lake Huron & St. Marys River
Z		Lake Michigan, Lower Fox River, & Lake Winnebago
		Lake Superior, Lake of the Woods, Rainy Lake, & Minnesota-Ontario Border Lakes

Appendix 2
AWOIS CARTO CODES

CODE	SYMBOL	DESCRIPTION
		<u>Wrecks</u>
098		Visible
100		Submerged, dangerous to surface navigation
102		Submerged, nondangerous
		<u>Obstructions</u>
085		Visible at high water
284		Covers/uncovers (awash)
067		Submerged
		<u>Rocks</u>
094		Awash
104		Covered at low water
		<u>Soundings</u>
127		Feet and tenths
130		Fathoms and tenths
711		Meters and tenths
370		Wire-drag clearance, feet
372		Wire-drag clearance, fathoms

Appendix 3
HORIZONTAL DATUM CODES

Area Usage

General

- 01 Bessel Spheroid of 1841-1880 (Bessel Datum)
- 02 Clarke Spheroid of 1866 (Clark Datum)
- 03 Astronomic Datums (all astronomic datums unless specifically named)

Geodetic

- 04 United States Standard Datum 1901-1913
- 05 North American Datum 1913-1927
- 06 North American Datum of 1927 (NAD 27)

Limited Area Usage

Hawaiian Islands

- 07 Old Hawaiian Datum
- 08 Kauai Datum

Astronomic

- 09 Lisianski Island 1931
- 10 Laysan Island 1930
- 11 Gardners Pinnacles 1929
- 12 French Frigate Shoal 1928
- 13 Necker Island 1928
- 14 Nihoa Island 1928

Philippine Islands

- 15 Vigan Datum
- 16 Luzon Datum 1911

Atlantic

- 17 San Juan Astronomic Datum 1901
- 18 Puerto Rico Datum 1905

Panama Canal Zone

- 19 Limon Bay--Colon 1877
- 20 Panama Harbor--Panama Cathedral 1877
- 21 Panama--Colon Datum 1911

Alaska

- 22 Valdez Datum
- 23 Unalaska Datum
- 24 Southeast Alaska Datum

Independent Astronomic

- 25 Aleutian Islands
- 26 Nushagak Bay
- 27 Cape Newenham
- 28 Norton Sound
- 29 Port Clarence and Pribilof Islands

Additional Areas

Codes assigned since 1980

- 30 North American Datum of 1902
- 31 North American Datum of 1983 (NAD 83)
- 32 Guam 1963
- 33 World Geodetic System of 1972 (WGS 72)
- 34 World Geodetic System of 1984 (WGS 84)
- 35 Johnston Island 1961 Astronomic Datum
- 36 Maro Reef Astronomic Datum 1930
- 37 Bosun Astronomic Datum of 1941
- 38 Preliminary North American 1927 Datum
- 39 Palmyra Atoll--Astronomic Datum 1944

Other

- 99 Undetermined datum

Appendix 4

REFERENCES

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- 68 List of Neutral Ships Sunk by Germany
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Appendix 5

AWOIS ABBREVIATIONS

Ad.Wk.-Additional Work
AMC-Atlantic Marine Center
AOML-Atlantic Oceanographic and Meteorological Laboratory
APR-Air Photo Revision/Correction
AWOIS-Automated Wreck and Obstruction Information System
BNM-Broadcast Notice to Mariners
BD-Bottom Drag
BP-Blueprint
BGE-Barge
BS³-Bathymetric Swath Survey System
BW-Sinkings Before World War II
BWF-British Wreck File
CAS-Chart Adequacy Survey (Chart Number)
CES-Chart Evaluation Survey (Chart Number)
CG-U.S. Coast Guard
CGO-Cargo
CHS-Canadian Hydrographic Service
CGS-U.S. Coast and Geodetic Survey
CMP-Chart Maintenance Print
CL-Chart Letter
COE-U.S. Army Corps of Engineers
CPR-Coast Pilot Report (Chart number, if given)
CPS-Canadian Power Squadron
CT-Constant Tension Wire Drag
D-Special Purpose Hydrographic, Reconnaissance, or Evaluation/Test Surveys (followed by survey number)
DA- NOAA Ship DAVIDSON
DBN-Daybeacon
DEG-Degrees
DI-Diver Investigation
DM-Daily Memorandum HO Office
DM-Digital Maps (Shoreline)
DP-Detached Position
DPH-Depth
DR-Descriptive Report
D/R-Drilling Rig
DTD-Dated
FD-Effective Depth (Used in conjunction with wire drag)

ED-Existence Doubtful
ENT-Entered
ES-Echo Sounder
ESF-Eastern Sea Frontier Anti-Submarine Warfare Unit
EVAL-Marine Center Evaluation (evaluation and analysis of hydrographic surveys)
FA-NOAA Ship FAIRWEATHER
F/B-Fireboat
FE-Field Examination (followed by a number) - usually item investigations
FM-Fathom
FS-Field Sheet
FT-Feet
F/V-Fishing Vessel
GCLWD-Gulf Coast Low Water Datum
GLWD-Great Lakes Water Datum
GP-Geographic Position
GT-Gross Tonnage
H-Hydrographic (Followed by Survey Number)
HE- NOAA Ship HECK
HYDRO.-Hydrographer
H/B-House Boat
HDAPS-Hydrographic Data Acquisition and Processing System
HQ-Headquarters
HW-High Water
HWL-High Water Line
IWW-Intracoastal Waterway
L-Length
LAT-Latitude
LD-Least Depth
LHNM-Lighthouse Notice to Mariners
LL-Leadline
LLW-Lower Low Water
LNM-Local Notice to Mariners
LOA-Length Over All
LONG-Longitude
LST-Landing Ship (Any Type)
LT-Light
LTR-Letter
LW-Low Water
LWD-Low Water Datum
LWL-Low Water Line
M-Meters; Miles
MAR-Monthly Activities Report
MI-NOAA Ship MT. MITCHELL

MIN-Minutes or Minimum
MHW-Mean High Water Datum
MLW-Mean Low Water Datum
MLLW-Mean Lower Low Water Datum
M/V-Motor Vessel
NAD-North American Datum (followed by year)
NANCI-New Aeronautical and Nautical Charting Information
NAS-Navigable Area Survey
NAVOCEANO-U.S. Naval Oceanographic Office
ND-HQ-Naval District Headquarters
NM-HO/DMAHC Notice to Mariners; Nautical Miles
NMFS-National Marine Fisheries Service
NMR-Restricted Notice to Mariners, Hydrographic Office
NORDA-U.S. Naval Ocean Research and Development Activity
NOS-National Ocean Service
NT-Net Tonnage
NTH-Notes to Hydrographer
OBSTR-Obstruction
O/B-Outboard
OCGR-Old Coast Guard Records
OPR-Operation (Followed by Project No.)
OTEC-Ocean Thermal Energy Conversion
PA-Position Approximate
P/C-Pleasure Craft
PD-Position Doubtful
PE-NOAA Ship Peirce
PIDC-Pleasure Island Dive Center (Gulf Shores, AL)
PMC-Pacific Marine Center
PMEL-Pacific Marine Environmental Laboratory
PR-Preprocessing Report
PROJ-Project
PSR-Presurvey Review(Followed by Project No.)
QC-Quality Control Inspection
RA-NOAA Ship RAINIER
RCNWL-Royal Canadian Navy Wreck List
RECON-Reconnaissance
REG NO-Registry Number of Survey
REP-Report or Reported
RS-Revisory Survey (followed by year)
R/V-Research Vessel
REV-Review; Reviewed; Revised; Revision
RU-NOAA Ship RUDE
S-Special Project (followed by Project Number)

SCH-Schooner
SD-Sounding Datum; Salvage Documentation
SEC-Seconds
SHL-Shoal
SHL SNDG-Shoal Sounding
SPOR-Shoreline Plane of Reference (High Water Line)
SR-Survivor Reports
SS-Smooth Hydrographic Sheet
SSS-Side Scan Sonar
S2-200 percent Side Scan Sonar Coverage
S4-400 percent Side Scan Sonar Coverage
SUBM-Submarine or Submerged
S/V-Sailing Vessel
T-Topographic (followed by survey number, photo date, and field edit date)
TP-Shoreline Map (followed by number, photo date, and field edit date)
T/B-Tugboat
TELECON-Telephone Conversation
TNK-Tanker
TWR-Trawler
UP-Updated
USACE-U.S. Army Corps of Engineers
USCG-U.S. Coast Guard
USC&GS-U.S. Coast and Geodetic Survey
USCGAUX-U.S. Coast Guard Auxiliary
USGS-U.S. Geological Survey
USN-U.S. Navy
USPS-U.S. Power Squadrons
VIS-Visible
VS-Visual Search
W-Wide
WD-Wire Drag
WH-NOAA SHIP WHITING
WK-Wreck
YCT-Yacht

Release of National Ocean Service (NOS)
Automated Wreck and Obstruction System (AWOIS) Data

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