

**ANNUAL MISSION ACTIVITIES REPORT  
2013**

**FOR THE**

**NAVAL SURFACE WARFARE CENTER  
PANAMA CITY DIVISION (NSWC PCD) STUDY AREA**

**Submitted to:**

**Office of Protected Resources  
National Marine Fisheries Service  
1315 East-West Highway  
Silver Spring, MD 20910-3226**

**In accordance with:**

**21 January 2012 Letter of Authorization for NSWC PCD Mission Activities;  
50 Code of Federal Regulations Part 218, Subpart S; 2012 Biannual Biological  
Opinion for NSWC PCD Mission Activities; Incidental Harassment  
Authorization for Navy Use of the AN/AQS-20A Mine Reconnaissance Sonar  
System (Q-20) at NSWC PCD**



**September 2013**

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**SEPTEMBER 2013**

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**TABLE OF CONTENTS**

**LIST OF ACRONYMS AND ABBREVIATIONS..... ii**

**I. INTRODUCTION.....1**

**II. RDT&E ACTIVITIES INVOLVING MFAS/HFAS.....5**

**III. RDT&E ACTIVITIES INVOLVING UNDERWATER EXPLOSIVE  
DETONATIONS.....7**

**IV. RDT&E ACTIVITIES INVOLVING PROJECTILE FIRING.....8**

**V. ANNUAL FREQUENCIES AND LOCATIONS FOR NSWC PCD MISSION  
ACTIVITIES.....9**

**VI. LIST OF PREPARERS.....10**

**VII. REFERENCES.....11**

**LIST OF TABLES**

Table 1. Total hr of each type of MFAS and HFAS authorized annually in the 2012–2014  
LOA versus hr conducted in the NSWC PCD Study Area in territorial waters. ....5

Table 2. Total hr of each type of MFAS and HFAS authorized annually in the 2012–2014  
LOA versus hr conducted in the NSWC PCD Study Area in non-territorial waters. ....6

Table 3. Total hr of Q-20 sonar operations authorized in the 2012–2013 IHA versus hr  
conducted in the NSWC PCD Study Area in non-territorial waters. ....6

Table 4. Total number of each type of underwater explosive detonation authorized  
annually in the 2012–2014 LOA versus total number conducted in the NSWC PCD Study  
Area in territorial waters. ....7

Table 5. Total number of each type of underwater explosive detonation authorized  
annually in the 2012–2014 LOA versus total number conducted in the NSWC PCD Study  
Area in non-territorial waters. ....7

**LIST OF FIGURES**

Figure 1. NSWC PCD Study Area: Gulf of Mexico.....3

Figure 2. NSWC PCD Study Area: Nearshore and St. Andrew Bay.....4

**LIST OF ACRONYMS AND ABBREVIATIONS**

BE	Biological Evaluation
BO	Biological Opinion
CFR	Code of Federal Regulations
DON	Department of the Navy
EIS	Environmental Impact Statement
ESA	Endangered Species Act
HFAS	High-frequency Active Sonar
hr	hour(s)
IHA	Incidental Harassment Authorization
kHz	kilohertz
km	kilometer(s)
lb	pound(s)
LOA	Letter of Authorization
MFAS	Mid-frequency Active Sonar
MMPA	Marine Mammal Protection Act
NMFS	National Marine Fisheries Service
nmi	nautical mile(s)
NSWC PCD	Naval Surface Warfare Center Panama City Division
OEIS	Overseas Environmental Impact Statement
Q-20	AN/AQS-20A Mine Reconnaissance Sonar System
RDT&E	Research, Development, Test, and Evaluation
U.S.	United States

## I. INTRODUCTION

The United States (U.S.) Navy prepared this Annual Mission Activities Report covering the period from 02 August 2012 to 01 August 2013 pursuant to the National Marine Fisheries Service (NMFS) Marine Mammal Protection Act (MMPA) regulations (NMFS 2011a, 2012a, 2012b) for the Naval Surface Warfare Center Panama City Division (NSWC PCD) Study Area (50 Code of Federal Regulations [CFR] Part 218, Subpart S) and for the AN/AQS-20A Mine Reconnaissance Sonar System (Q-20) in the NSWC PCD Testing Range. The report also provides the information required by NMFS's Biological Opinion (BO) on NSWC PCD Mission Activities (NMFS 2012c) issued pursuant to the Endangered Species Act (ESA). The scope of NMFS's BO (2012c) includes the same research, development, test, and evaluation (RDT&E) activities using sonar systems, explosives, and projectiles as governed by the above MMPA regulations. **Figures 1 and 2** show the geographic extent of the NSWC PCD Study Area.

In the MMPA regulations (NMFS 2010a [50 CFR § 218.184]) and the Letters of Authorization (LOAs) for NSWC PCD Mission Activities (NMFS 2011a, 2012a), annual reports are required for the following mission activities in the NSWC PCD Study Area, which are presented in **Sections II-IV** of this report:

- 1) RDT&E Activities Involving Mid-frequency Active Sonar (MFAS)/High-frequency Active Sonar (HFAS).
- 2) RDT&E Activities Involving Underwater Explosive Detonations.
- 3) RDT&E Activities Involving Projectile Firing.

In NMFS's BO (NMFS 2012c [page 158]), the following *Terms and Conditions* listed in the Incidental Take Statement of the BO were specified and are addressed in **Section V** of this report:

- “The U.S. Navy shall submit reports that identify the general locations, timing, number of sonar hours, and other aspects of the RDT&E activities they conduct in the [NSWC] PCD Study Area from January 2012 through January 2014.”

The information contained in this report represents the best practical data collection as of 02 August 2013. The operational data are collected through the NSWC PCD Environmental Review Process, which is detailed in Chapter 5 *Mitigation and Protective Measures* of the NSWC PCD Mission Activities Environmental Impact Statement (EIS)/Overseas Environmental Impact Statement (OEIS) (DON 2009). The data provided in the following tables indicates that the U.S. Navy is not exceeding the average annual allotment of authorized RDT&E events as of 02 August 2013. Future activities conducted under the NMFS-issued NSWC PCD Mission Activities LOA will continue to ensure that the 5-year total allotment is not exceeded. U.S. Navy RDT&E events are variable within any given year based on the evolving nature of RDT&E test plans and the current status of operating systems undergoing RDT&E, as well as scheduling, budgeting, and environmental conditions. Therefore, the data on the amount of activities conducted in the NSWC PCD Study Area may vary annually, potentially resulting in higher or lower amounts of reported NSWC PCD RDT&E mission activities in future annual mission

activities reports. Activities conducted under the NMFS-issued Q-20 Incidental Harassment Authorization (IHA) are requested on an annual basis, as needed, and will not exceed the yearly allotment authorized.



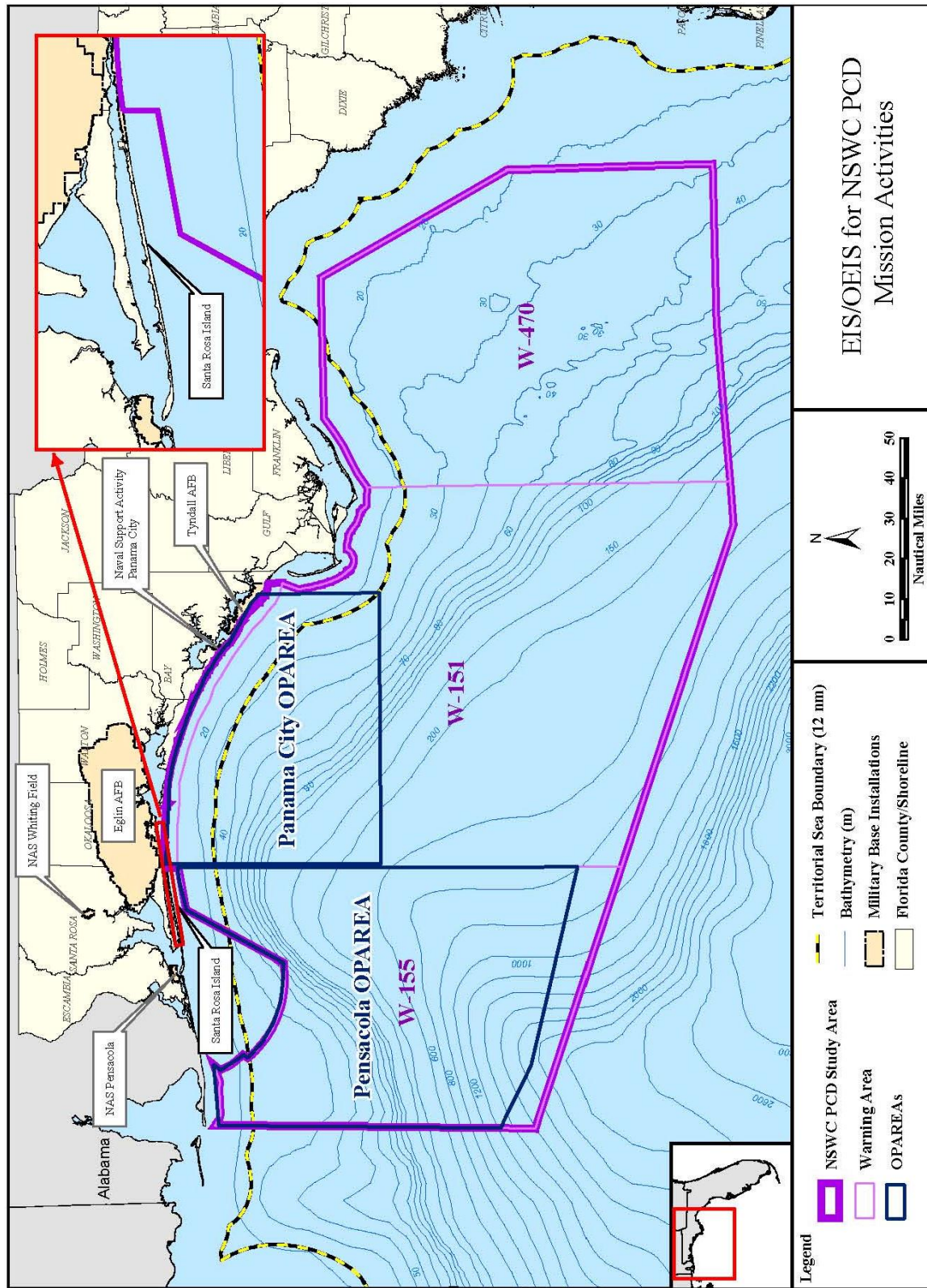


Figure 1. NSWC PCD Study Area: Gulf of Mexico.

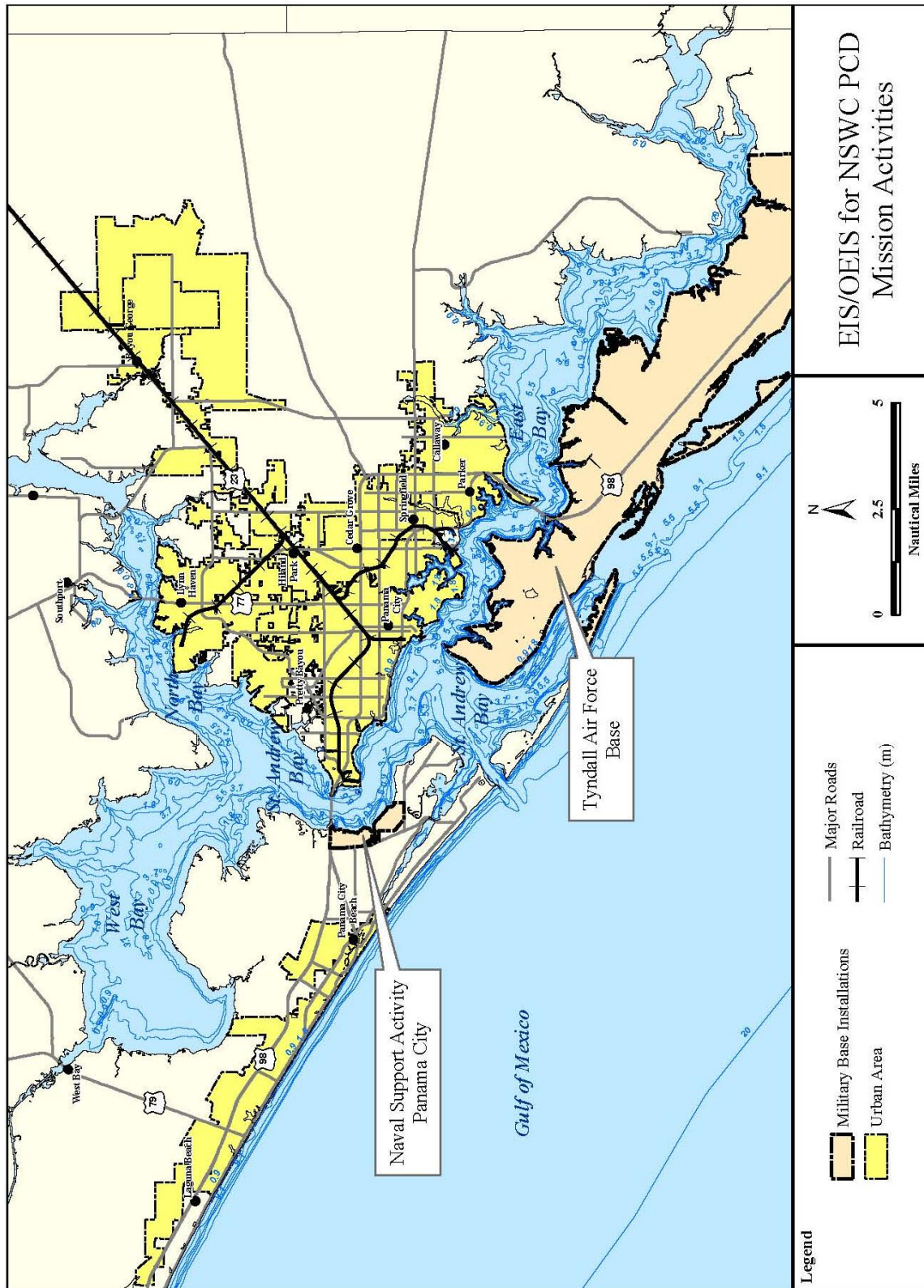


Figure 2. NSWC PCD Study Area: Nearshore and St. Andrew Bay.

## II. RDT&E ACTIVITIES INVOLVING MFAS/HFAS

**Tables 1 and 2** below provide a summary of the use of MFAS and HFAS in the NSWC PCD Study Area related to the NSWC PCD Mission Activities EIS/OEIS. During this time period, NSWC PCD conducted 404.75 hours (hr) of sonar RDT&E activities, including 262.85 hr in territorial waters (0-22 kilometers [km] [0-12 nautical miles [nmi]]) (**Table 1**) and 141.90 hr in non-territorial waters (> 22 km [>12 nmi]) (**Table 2**). During these sonar RDT&E events, the U.S. Navy employed the appropriate mitigation measures as outlined in the NSWC PCD Mission Activities EIS/OEIS (DON 2009).

**Table 1. Total hr of each type of MFAS and HFAS authorized annually in the 2012–2014 LOA versus hr conducted in the NSWC PCD Study Area in territorial waters.**

Sonar System	Hr Authorized*	Hr Conducted
AN/SQS-53/56 Kingfisher	3	0
Sub-bottom Profiler (2-9 kilohertz [kHz])	21	21
REMUS SAS-LF (~15 kHz)	12	9.85
REMUS Modem	25	12
Sub-bottom Profiler (2-16 kHz)	24	23.45
AN/SQQ-32	30	1
REMUS-SAS-LF (~25 kHz)	20	18.5
SAS-LF	35	12
AN/WLD-1RMS-ACL	33.5	15.6
BPAUV Sidescan (~75 kHz)	25	25
TVSS	15	9.85
F84Y	15	0
BPAUV Sidescan (~102.5 kHz)	25	21.6
REMUS-SAS-HF	10	10
SAS-HF	11.5	11.5
AN/AQS-20	545	63
AN/WLD-11 RMS Navigation	15	0
BPAUV Sidescan (~120 kHz)	30	8.5
<b>Total for all sonar systems</b>	<b>895</b>	<b>262.85</b>

\*Source: NMFS 2012a

**Table 2. Total hr of each type of MFAS and HFAS authorized annually in the 2012–2014 LOA versus hr conducted in the NSWC PCD Study Area in non-territorial waters.**

Sonar System	Hr Authorized*	Hr Conducted
AN/SQS-53/56 Kingfisher	1	0
Sub-bottom Profiler (2-9 kHz)	1	0
REMUS Modem	12	12
Sub-bottom Profiler (2-16 kHz)	1	1
AN/SQQ-32	1	0
SAS-LF	15	15
AN/WLD-1RMS-ACL	5	5
BPAUV Sidescan (~75 kHz)	38	15.1
TVSS	16.5	16.5
F84Y	15	4.9
REMUS-SAS-HF	25	25
SAS-HF	15	15
AN/AQS-20	15	15
BPAUV Sidescan (~120 kHz)	25	17.4
<b>Total for all sonar systems</b>	<b>185.5</b>	<b>141.9</b>

\*Source: NMFS 2012a

### *Q-20 Operations in Non-territorial Waters*

A portion of Q-20 activities at NSWC PCD occurring within non-territorial waters (> 12 nmi) occurred under the NMFS-issued Q-20 IHA (NMFS 2012b). The Q-20 IHA (NMFS 2012b) was required in addition to the NSWC PCD Mission Activities LOA because additional operational hours were needed to conduct Q-20 RDT&E events in non-territorial waters beyond the hours identified in the NSWC PCD Mission Activities EIS/OEIS (DON 2009). Activities authorized under the Q-20 IHA during the reporting year extend from 27 July 2012 through 26 July 2013. During this time period, NSWC PCD conducted 83.3 hr of Q-20 sonar RDT&E in non-territorial waters. The NMFS-issued Q-20 IHA has authorized up to 420 hr of Q-20 operations to be conducted from July 2012 to July 2013 (**Table 3**). During these Q-20 sonar RDT&E events, the U.S. Navy employed the appropriate marine observer requirements as outlined in the Q-20 Overseas Environmental Assessment (DON 2012a).

**Table 3. Total hr of Q-20 sonar operations authorized in the 2012–2013 IHA versus hr conducted in the NSWC PCD Study Area in non-territorial waters.**

Q-20 Hr Authorized*	Q-20 Hr Conducted
420	83.3

\*Source: NMFS 2012b

### III. RDT&E ACTIVITIES INVOLVING UNDERWATER EXPLOSIVE DETONATIONS

**Tables 4 and 5** provide a summary of the use of underwater explosive detonations (1-10 pounds (lbs), 11-75 lb, and 76-600 lb charges, as well as line charges) in the NSWC PCD Study Area. During this time period, NSWC PCD conducted 11 underwater explosive detonations, including 11 detonations in territorial waters (**Table 4**) and 0 detonations in non-territorial waters (**Table 5**).

**Table 4. Total number of each type of underwater explosive detonation authorized annually in the 2012–2014 LOA versus total number conducted in the NSWC PCD Study Area in territorial waters.**

Explosive	Number Authorized*	Number Conducted
1-10 lbs	51	11
11-75 lbs	3	0
76-600 lbs	0	0
Line Charge	3	0
<b>Total for all explosives</b>	<b>57</b>	<b>11</b>

\*Source: NMFS 2012a

**Table 5. Total number of each type of underwater explosive detonation authorized annually in the 2012–2014 LOA versus total number conducted in the NSWC PCD Study Area in non-territorial waters.**

Explosive	Number Authorized*	Number Conducted
1-10 lbs	0	0
11-75 lbs	0	0
76-600 lbs	16	0
Line Charge	0	0
<b>Total for all explosives</b>	<b>16</b>	<b>0</b>

\*Source: NMFS 2012a

During these underwater explosive RDT&E events, the U.S. Navy employed the appropriate mitigation measures as outlined in the NSWC PCD Mission Activities EIS/OEIS (DON 2009).

#### **IV. RDT&E ACTIVITIES INVOLVING PROJECTILE FIRING**

NSWC PCD did not conduct any RDT&E mission activities involving projectile firing during the reporting period.

## **V. ANNUAL FREQUENCIES AND LOCATIONS FOR NSWC PCD MISSION ACTIVITIES**

U.S. Navy RDT&E mission descriptions, frequencies, and locations for the NSWC PCD Study Area have not changed from those described in the U.S. Navy's Biological Evaluation (BE) for NSWC PCD Mission Activities (DON 2008), the U.S. Navy's Final EIS/OEIS for NSWC PCD Mission Activities (DON 2009), and the U.S. Navy's 2013–2014 Q-20 IHA Application (DON 2012b). RDT&E mission activities conducted in the NSWC PCD Study Area have not changed since NMFS issued the BOs (NMFS 2010b, 2011b, 2012c). The type, manner, and frequency of RDT&E activities in the NSWC PCD Study Area for the next 12 months are described in the U.S. Navy's BE (DON 2008) and the U.S. Navy's 2013–2014 Q-20 IHA Application (DON 2012b) and are not repeated in this report.

## VI. LIST OF PREPARERS

**Carmen Ferrer**

Environmental Branch Head  
NSWC PCD

**Jennifer N. Latusek-Nabholz**

Project Manager and Author  
HDR Environmental, Operations, and Construction

**Dagmar Fertl**

Technical Reviewer  
HDR Environmental, Operations, and Construction

**Daniel Engelhaupt, PhD**

Technical Reviewer  
HDR Environmental, Operations, and Construction

**Christopher McJeters**

Technical Editor  
HDR Environmental, Operations, and Construction

**Cheryl Myers**

Document Formatting and Production  
HDR Environmental, Operations, and Construction

**Bob Kenney, PhD**

Technical Reviewer  
University of Rhode Island



## VII. REFERENCES

- Department of the Navy (DON). 2008. Biological Evaluation for Naval Surface Warfare Center Panama City Division (NSWC PCD) Mission Activities. Submitted to NMFS, Office of Protected Resources, Silver Spring, Maryland by NSWC PCD, Panama City, Florida. November 2008.
- DON. 2009. Naval Surface Warfare Center Panama City Division (NSWC PCD) Mission Activities Environmental Impact Statement (EIS)/Overseas Environmental Impact Statement (OEIS). NSWC PCD, Panama City, Florida. September 2009.
- DON. 2012a. Testing the AN/AQS-20A Mine Reconnaissance Sonar System in the NSWC PCD Testing Range, 2012-2014 Overseas Environmental Assessment. Program Executive Office for Littoral Combat Ships, San Diego, California. August 2012.
- DON. 2012b. Incidental Harassment Authorization (IHA) Application for Testing the AN/AQS-20A Mine Reconnaissance Sonar System (Q-20) in the Naval Surface Warfare Center, Panama City Division (NSWC PCD) Study Area. Submitted to NMFS, Office of Protected Resources, Silver Spring, Maryland by NSWC PCD, Panama City, Florida.
- National Marine Fisheries Service (NMFS). 2010a. Letter of Authorization for U.S. Navy (Navy) Research, Development, Test, and Evaluation (RDT &E) activities conducted in the Naval Surface Warfare Center Panama City Division (NSWC PCD) Study Area in the Gulf of Mexico (GOM). Period from 21 January 2010 through 20 January 2011. Issued 21 January 2010. NMFS, Office of Protected Resources, Silver Spring, Maryland.
- NMFS. 2010b. Biological Opinion on the Permits Division's Proposal to Issue a Letter of Authorization for the U.S. Navy to "Take" Marine Mammals Incidental to Research, Development, Test, and Evaluation Activities at the Naval Surface Warfare Center in Panama City, Florida, from January 2010 through January 2011. Issued 14 January 2010. NMFS, Office of Protected Resources, Silver Spring, Maryland.
- NMFS. 2011a. Letter of Authorization to Take Marine Mammals Incidental to U.S. Naval Surface Warfare Center Panama City Division Mission Activities. Period from 21 January 2011 through 20 January 2012. Issued 13 January 2011. NMFS, Office of Protected Resources, Silver Spring, Maryland.
- NMFS. 2011b. Biological Opinion on the Permits Division's Proposal to Issue a Letter of Authorization for the U.S. Navy to "Take" Marine Mammals Incidental to Research, Development, Test, and Evaluation Activities at the Naval Surface Warfare Center in Panama City, Florida, Period from January 2011 through January 2012. Issued 7 January 2011. NMFS, Office of Protected Resources, Silver Spring, Maryland.
- NMFS. 2012a. Letter of Authorization for U.S. Navy Research, Development, Test, and Evaluation (RDT&E) activities conducted in the Naval Surface Warfare Center Panama City Division (NSWC PCD) Study Area in the Gulf of Mexico (GOM). Period 21

January 2012 through 20 January 2014. Issued 9 February 2012. NMFS, Office of Protected Resources, Silver Spring, Maryland.

NMFS. 2012b. Incidental Harassment Authorization for Navy Use of the AN/AQS-20A Mine Reconnaissance Sonar System (Q-20) at the Naval Surface Warfare Center, Panama City Division (NSWC PCD). Period from 27 July 2012 through 26 July 2013. Issued 16 August 2012. NMFS, Office of Protected Resources, Silver Spring, Maryland.

NMFS. 2012c. Biological Opinion on the Permits Division's Proposal to Issue a Letter of Authorization for the U.S. Navy to "Take" Marine Mammals Incidental to the Conduct of RDT&E Activities at the U.S. Naval Surface Warfare Center, Panama City, Florida, from January 2012 to January 2014. Issued 11 January 2012. NMFS, Office of Protected Resources, Silver Spring, Maryland.