Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

1319: Research, Development, Test & Evaluation, Navy I BA 7: Operational

PE 0101226N / Submarine Acoustic War Dev

Systems Development

COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO <sup>#</sup>	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	30.976	1.299	1.464	4.509	-	4.509	3.925	5.997	6.029	2.927	Continuing	Continuing
1265: Sub Defensive Warfare	30.976	1.299	1.464	4.509	-	4.509	3.925	5.997	6.029	2.927	Continuing	Continuing

<sup>&</sup>lt;sup>#</sup> The FY 2015 OCO Request will be submitted at a later date.

#### A. Mission Description and Budget Item Justification

This project supports the Submarine Acoustic Warfare System (SAWS) Program to maintain and improve the survivability of all U.S. Submarine classes. This program funds:

- 1. The Next Generation Countermeasure (NGCM), an ACAT III program, currently in Engineering and Manufacturing Development (E&MD). The key new capabilities for NGCM are adaptive countermeasure (ACM) technology with full duplex capability and mobility packaged in a three inch diameter body, bringing a superior capability to the fleet.
- 2. The Torpedo Defense Working Group (TDWG). A working group comprised of fleet, resource sponsor, and acquisition community representatives to assess countermeasure effectiveness against fleet threats, both known and projected, with associated studies, models, and simulations.
- 3. The Technical Direction Agent and In-Service Engineering Agent hardware and software development support for Acoustic Devices Countermeasure (ADC) (ADC MK 2, 3 & 4, NAE Beacon) as well as Countermeasures Set, Acoustic (CSA) MK 2, MK 3, MK 4 systems and Acoustic Augmentation Support Systems (AASS) in the Acoustic Augmentation Support Program (AASP), including obsolete unit-level technical insertion.
- 4. Research and development of new technologies and capabilities developed under the Future Naval Capabilities (FNC), Small Business and Innovative Research (SBIR), and other Research, Development, Test & Evaluation (RDT&E) initiatives. New and emerging hardware and software are evaluated in representative acoustic environments, against projected threats through both digital and hardware-in-the-loop simulations, to determine their effectiveness and how that improves submarine survivability. The technology is then incorporated into the appropriate countermeasure.

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R-1 Program Element (Number/Name)

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy

**Appropriation/Budget Activity** 

1319: Research, Development, Test & Evaluation, Navy I BA 7: Operational PE 0101226N I Submarine Acoustic War Dev

Systems Development

3. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	1.434	1.464	3.308	-	3.308
Current President's Budget	1.299	1.464	4.509	-	4.509
Total Adjustments	-0.135	-	1.201	-	1.201
<ul> <li>Congressional General Reductions</li> </ul>	-	-			
<ul> <li>Congressional Directed Reductions</li> </ul>	-	-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
Congressional Adds	-	-			
<ul> <li>Congressional Directed Transfers</li> </ul>	-	-			
<ul> <li>Reprogrammings</li> </ul>	-	-			
SBIR/STTR Transfer	-0.028	-			
<ul> <li>Program Adjustments</li> </ul>	-	-	1.264	-	1.264
Rate/Misc Adjustments	-	-	-0.063	-	-0.063
<ul> <li>Congressional General Reductions Adjustments</li> </ul>	-0.107	-	-	-	-

# **Change Summary Explanation**

Technical: Not applicable. Schedule: Not applicable.

Financial: Sequestration reduced FY13 funding. Reduced FY15 funding with the Department's 2012 decision to defer NGCM outside the (then) FYDP. In PB15 the department increased funds to accommodate NGCM to support NGCM program stabilization, modifications to the CSA MK4, and miscellaneous rate adjustments. The TDWG and WAF efforts were also stabilized to ensure ongoing assessment efforts remained a part of the submarine survivability assessment.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy										Date: March 2014			
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0101226N / Submarine Acoustic War Dev				Project (Number/Name) 1265 I Sub Defensive Warfare				
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO <sup>#</sup>	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost	
1265: Sub Defensive Warfare	30.976	1.299	1.464	4.509	-	4.509	3.925	5.997	6.029	2.927	Continuing	Continuing	
Quantity of RDT&E Articles	0.000	-	-	-	-	-	-	-	-	-			

<sup>\*</sup> The FY 2015 OCO Request will be submitted at a later date.

## A. Mission Description and Budget Item Justification

This project supports the Submarine Acoustic Warfare System (SAWS) Program to maintain and improve the survivability of all U.S. Submarine classes. This program funds:

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- 4. Research and development of new technologies and capabilities developed under the Future Naval Capabilities (FNC), Small Business and Innovative Research (SBIR), and other Research, Development, Test & Evaluation (RDT&E) initiatives. New and emerging hardware and software are evaluated in representative acoustic environments, against projected threats through both digital and hardware-in-the-loop simulations, to determine their effectiveness and how that improves submarine survivability. The technology is then incorporated into the appropriate countermeasure.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015	
Title: Sub Acoustic Warfare	1.299	1.464	4.509	
Articles:	-	-	-	
FY 2013 Accomplishments:				
- Continued NGCM integration of technology by 2 development contractors.				
- Began NGCM low level subsystems testing.				
- Held TDWG review and considered Threat Assessment for FY14 work.				
- NGCM Critical Design Reviews (CDR) delayed due to funding restriction, awaiting contracting modification.				

PE 0101226N: Submarine Acoustic War Dev

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy			Date: March 2014	
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	am Element (Number/Name) Project (N		
1319 / 7	PE 0101226N / Submarine Acoustic War	1265 I Sub	Defensive Warfare	
	Dev			

- NGCM program restructure effort started.				
FY 2014 Plans:  - Continue integration of technology by contractors and development towards NGCM milestones.  - Continue contractor testing of NGCM subsystems.  - Complete NGCM restructure.  - Conduct TDWG review.				
FY 2015 Plans: - Commence NGCM CDRs Conduct assessment of threat by TDWG and WAF.				
Accomplishments/Planned Programs Subtotals	1.299	1.464	4.509	

## C. Other Program Funding Summary (\$ in Millions)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

			FY 2015	FY 2015	FY 2015					Cost To	
<u>Line Item</u>	FY 2013	FY 2014	<b>Base</b>	OCO	<u>Total</u>	FY 2016	FY 2017	FY 2018	FY 2019	<b>Complete</b>	<b>Total Cost</b>
• OPN/221000/221005:	14.312	20.937	24.221	-	24.221	25.129	25.981	26.325	30.098	Continuing	Continuing
Submarine Acoustic Warfare											

#### Remarks

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## D. Acquisition Strategy

Submarine Acoustic Warfare System (SAWS) develops Undersea Defensive Warfare technologies to improve the survivability of all U.S. Submarine classes. The integration of technology into the Next Generation Countermeasure (NGCM) and the NGCM-Capable CSA MK 3/4 system will continue through FY19. The development is through a full and open competition for two cost-plus-fixed-fee (CPFF) contracts to deliver NGCM Engineering Development Models (EDMs) to the Navy. The NGCM development contracts were awarded in 1Q-FY11. NGCM contractor's subsystem testing will occur starting in FY14 through FY18 and Navy DT will be in FY17-19, with OT in FY19. Low Rate Initial Production (LRIP) Full Rate contracts are expected in FY23/24 time frame.

#### **E. Performance Metrics**

Progress Reviews
Execution Reporting and Reviews
Milestone Reviews

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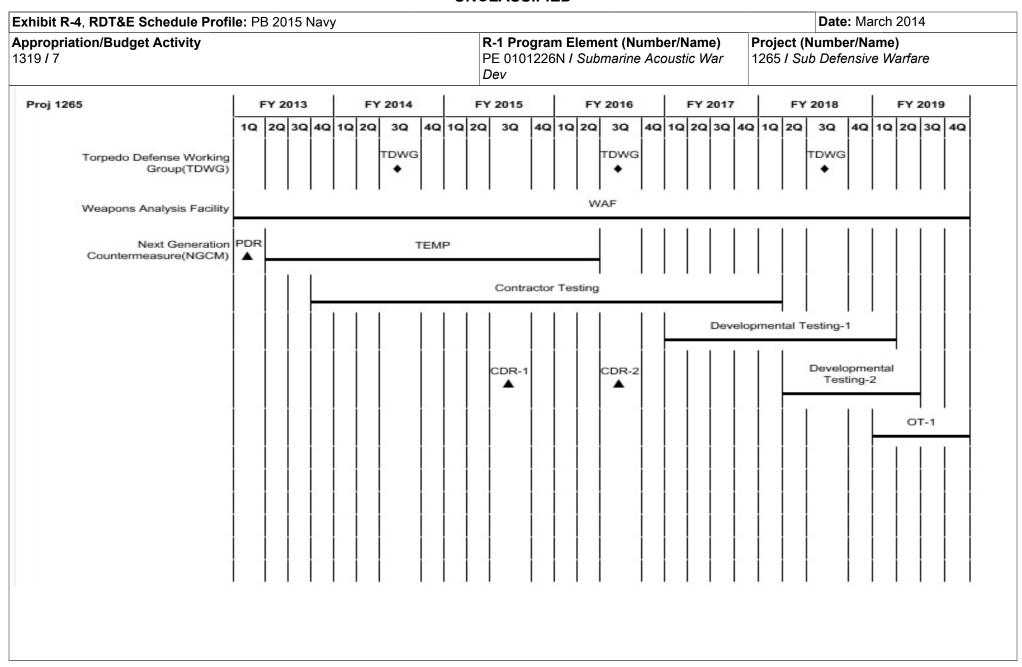
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**FY 2013** 

FY 2014

FY 2015



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