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**Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605856N / <i>Strategic Technical Support</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	0.000	2.501	3.258	3.597	-	3.597	4.349	4.407	4.452	4.523	Continuing	Continuing
0128: <i>Mgmt/Tech Supt Strategic</i>	0.000	1.128	1.181	1.215	-	1.215	1.239	1.264	1.290	1.316	Continuing	Continuing
1038: <i>Acoustic &amp; Non-Acoustic Analysis Supt</i>	0.000	1.373	2.077	2.382	-	2.382	3.110	3.143	3.162	3.207	Continuing	Continuing

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

This program element supports technical studies and analyses as directed by the Director for Submarine Warfare to support major policy and procurement decisions. This program is divided into two elements to support decision making in the areas of submarine and antisubmarine warfare and undersea surveillance.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>
Previous President's Budget	2.590	3.258	3.345	-	3.345
Current President's Budget	2.501	3.258	3.597	-	3.597
Total Adjustments	-0.089	0.000	0.252	-	0.252
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.090	0.000			
• Program Adjustments	0.000	0.000	0.900	-	0.900
• Rate/Misc Adjustments	0.001	0.000	-0.648	-	-0.648

**Change Summary Explanation**

The FY 2017 request was reduced by -\$0.069 million to account for the availability of prior year execution balances.

Technical: N/A

Schedule: N/A

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Navy										<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605856N / <i>Strategic Technical Support</i>				<b>Project (Number/Name)</b> 0128 / <i>Mgmt/Tech Supt Strategic</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
0128: <i>Mgmt/Tech Supt Strategic</i>	0.000	1.128	1.181	1.215	-	1.215	1.239	1.264	1.290	1.316	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

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

This project provides analytical support to the Director, Submarine Warfare Division as a basis for major policy, planning and acquisition program decisions. It supports the development of the Submarine Force strategic vision to guide research and development investment strategy and future planning. Additionally, this line supports studies in the area of submarine and undersea surveillance missions, force structure, payloads and sensors and force employment.

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

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
<b>Title:</b> MANAGEMENT AND TECHNICAL SUPPORT, STRATEGIC	1.128	1.181	1.215	0.000	1.215
<b>Articles:</b>	-	-	-	-	-
<b>FY 2015 Accomplishments:</b>					
- Examined specific applications for submarine mine countermeasures and develop a strategy for ensuring submarine access to contested areas of the world.					
- Assessed the strategic deterrence (conventional and nuclear) force structure, security, and capability in the Navy.					
- Performed an in-depth review of undersea warfare research and development requirements, past and present, and propose an investment strategy to maximize future capabilities.					
- Assessed implications of current and developing technologies on undersea warfare in both near and far term systems and develop strategic concepts to guide future acquisitions through partnership with the Naval Postgraduate School.					
- Assessed the submarine forces capabilities in view of emerging technologies and changes in joint and naval strategies. This will be used to develop capability based ideas and concepts to guide research and development and science and technology efforts.					
<b>FY 2016 Plans:</b>					
- Continue all efforts of FY15.					
<b>FY 2017 Base Plans:</b>					
- Continue all efforts of FY16					
<b>FY 2017 OCO Plans:</b>					
N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	1.128	1.181	1.215	0.000	1.215

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy Date: February 2016

<b>Appropriation/Budget Activity</b> 1319 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605856N / <i>Strategic Technical Support</i>	<b>Project (Number/Name)</b> 0128 / <i>Mgmt/Tech Supt Strategic</i>
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**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

This project supports studies in the area of undersea surveillance missions, sensor system, payloads, force employment, communications, acoustic performance prediction systems, environmental and medical effects of acoustics systems including installations/removals, operational security and future threat analysis. Project success is measured through analytical results and constant interaction with the contractors that enable the Director for Submarine Warfare to make decisions effectively.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Navy										<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605856N / <i>Strategic Technical Support</i>				<b>Project (Number/Name)</b> 1038 / <i>Acoustic &amp; Non-Acoustic Analysis Supt</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
1038: <i>Acoustic &amp; Non-Acoustic Analysis Supt</i>	0.000	1.373	2.077	2.382	-	2.382	3.110	3.143	3.162	3.207	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

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

This project provides analytical support to the Director, Intelligence, Surveillance, and Reconnaissance (ISR) Division, the Battlespace Awareness Division of DCNO Information Warfare, and the Integrated Undersea Surveillance System (IUSS) Branch as a basis for major policy, planning, and acquisition program decisions. It supports studies in the area of undersea surveillance missions, sensor system communications, and acoustic performance prediction systems, environmental and medical effects of acoustic systems, operational security, and future threat analysis. Supports synthetic mission lay down simulations for IUSS strategic planning and resource allocation. Supports continued development and documentation of architecture for future undersea surveillance capabilities and systems. Supports studies to determine long-term impact of IUSS active sensors on marine animals and development of Surveillance Towed Array Sensor system (SURTASS) Low Frequency Active (LFA), Compact LFA (CLFA) and the Supplemental Environmental Impact Statement (SEIS).

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

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
<b>Title:</b> ACOUSTIC AND NON-ACOUSTIC ANALYSIS SUPPORT	1.373	2.077	2.382	0.000	2.382
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> The increase from FY16 to FY17 reflects the requirement to conduct a full 5 year Environmental Impact Statement in 2022 based on 20 years of operating LFA and the changes in technology and scientific understanding of the environment. A full scoping of prior studies, enhanced capabilities, environmental compliance is a 5 year process that will also require an assessment of potentially expanding current operating areas under the prior EIS/SEISs.					
<b>FY 2015 Accomplishments:</b>					
-Executed the Surveillance Engineering Measurements Program (SEMP) providing critical analytic insight into engineering and operational performance components of the IUSS shore based and Mobile systems					
-Provided analytic insights to tactical Sound Navigation and Ranging (SONAR) advanced capability improvements to the Integrated Common Processor (ICP) tactical SONAR system enabling the Advanced Surveillance Build (ASB) spiral development process					
-Provided technical and operational analysis based feedback and input to fleet doctrine products and operator training systems					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Navy		<b>Date:</b> February 2016
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**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
<p>-Perform Data Set identification and production as the sole source for real-world data to enable these advanced development initiatives which span Defense Advanced Research Projects Agency (DARPA), Office of Naval Research (ONR), Integrated Warfare Systems (IWS), Space &amp; Naval Warfare Systems Command (SPAWAR), Naval Research Laboratory (NRL), and others to bring critically needed new capabilities and capability improvements to the IUSS community</p> <p>-Provide oversight of the Marine Mammal Monitoring Program</p> <p>-Provided environmental compliance documentation review, generation and revision of draft Supplemental Environmental Impact Statement (SEIS) statements enabling continuing fleet operations of Low Frequency Active systems</p> <p>-Provided analytic and Subject Matter Expertise (SME) support to facilitate Naval Litigation Office (NLO) efforts</p> <p><b>FY 2016 Plans:</b></p> <p>-Continue to execute the Surveillance Engineering Measurements Program (SEMP) providing critical analytic insight into engineering and operational performance components of the IUSS shore based and Mobile systems</p> <p>-Continue comprehensive case analyses to establish a basis for understanding what impact, both positive and negative, our legacy tactical SONAR systems and new ASB capability deliveries have on fleet operations</p> <p>-Continue Data Set identification and production as the sole source for real-world data to enable these advanced development initiatives which span Defense Advanced Research Projects Agency (DARPA), Office of Naval Research (ONR), Integrated Warfare Systems (IWS), Space &amp; Naval Warfare Systems Command (SPAWAR), Naval Research Laboratory (NRL), and others to bring critically needed new capabilities and capability improvements to the IUSS community</p> <p>-Continue oversight of the Marine Mammal Monitoring Program</p> <p>-Continue to provide environmental compliance documentation review, generation and revision of draft SEIS statements enabling continuing fleet operations of Low Frequency Active systems</p> <p>-Continue to provide analytic and Subject Matter Expertise (SME) support to facilitate Naval Litigation Office (NLO) efforts enabling ongoing Marine Mammal Mitigation litigation</p> <p>-Provide passive acoustic monitoring, which must occur whenever the SURTASS LFA sonar is operational, to support continued fleet Low Frequency Active operations worldwide</p> <p><b>FY 2017 Base Plans:</b></p> <p>-Continue to execute the Surveillance Engineering Measurements Program (SEMP) providing critical analytic insight into engineering and operational performance components of the IUSS shore based and Mobile systems</p> <p>-Continue comprehensive case analyses to establish a basis for understanding what impact, both positive and negative, our legacy tactical SONAR systems and new ASB capability deliveries have on fleet operations</p>					

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

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
-Continue Data Set identification and production as the sole source for real-world data to enable these advanced development initiatives which span Defense Advanced Research Projects Agency (DARPA), Office of Naval Research (ONR), Integrated Warfare Systems (IWS), Space & Naval Warfare Systems Command (SPAWAR), Naval Research Laboratory (NRL), and others to bring critically needed new capabilities and capability improvements to the IUSS community -Continue oversight of the Marine Mammal Monitoring Program -Continue to provide environmental compliance documentation review, generation and revision of draft SEIS statements enabling continuing fleet operations of Low Frequency Active systems -Continue to provide analytic and Subject Matter Expertise (SME) support to facilitate Naval Litigation Office (NLO) efforts enabling ongoing Marine Mammal Mitigation litigation -Provide passive acoustic monitoring, which must occur whenever the SURTASS LFA sonar is operational, to support continued fleet Low Frequency Active operations worldwide  <b>FY 2017 OCO Plans:</b> N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	1.373	2.077	2.382	0.000	2.382

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

N/A

**Remarks**

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

This project supports studies in the area of undersea surveillance missions, sensor systems, and acoustic performance prediction systems, environmental and medical effects of acoustic systems, and future threat analysis. In addition, it provides research and reports necessary to support SURTASS LFA and Compact Low Frequency Active (CLFA) sonar compliance with Federal, State and Local environmental laws required for continued SURTASS LFA and CLFA operations, analysis of undersea technology for application to future undersea surveillance capabilities, and assessment of current and future IUSS warfare areas and potential allied Navy contributions. To this end, research is conducted by prominent educational and research institutions recognized for their expertise in the area, and by marine mammal biologists with extensive background in specific areas of underwater acoustics. This approach is deemed the most cost effective and efficient course of action for the Navy.