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

| | |
|---|---|
| Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development</i> | R-1 Program Element (Number/Name) PE 0101226N / <i>Submarine Acoustic War Dev</i> |
|---|---|

| 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 | 33.705 | 4.366 | 4.700 | 9.329 | - | 9.329 | 12.100 | 9.412 | 9.516 | 13.678 | Continuing | Continuing |
| 1265: <i>Sub Defensive Warfare</i> | 33.705 | 4.366 | 3.900 | 9.329 | - | 9.329 | 12.100 | 9.412 | 9.516 | 13.678 | Continuing | Continuing |
| 9999: <i>Congressional Adds</i> | 0.000 | 0.000 | 0.800 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.800 |

A. Mission Description and Budget Item Justification

The Submarine Acoustic Warfare Development program element is comprised of the Submarine Defensive Warfare Program and a Congressional ADD for Compact Rapid Attack Weapon Program (CRAW). The objective is to maintain and improve the survivability of all U.S. submarine classes in response to torpedo attack. Efforts include on the Next Generation Countermeasure (NGCM) program, the Torpedo Defense Working Group (TDWG), Technical Direction Agent (TDA) and In-Service Engineering Agent (ISEA) hardware and software development support for Acoustic Devices Countermeasures (ADCs), Countermeasures Set, Acoustic (CSA) systems and Acoustic Augmentation Support Systems (AASS) in the Acoustic Augmentation Support Program (AASP), including component level technical insertion. Also, this program transitions the 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.

Project 9999/Congressional Add for Compact Rapid Attack Weapon Program (CRAW) will identify the program requirements for a CRAW Program, to determine and justify a new start program based on employing the 6" diameter Countermeasure Anti-Torpedo (CAT) in the submarine force.

| B. Program Change Summary (\$ in Millions) | FY 2015 | FY 2016 | FY 2017 Base | FY 2017 OCO | FY 2017 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget | 4.509 | 3.900 | 5.969 | - | 5.969 |
| Current President's Budget | 4.366 | 4.700 | 9.329 | - | 9.329 |
| Total Adjustments | -0.143 | 0.800 | 3.360 | - | 3.360 |
| • Congressional General Reductions | - | - | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | 0.800 | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | - | - | | | |
| • SBIR/STTR Transfer | -0.143 | 0.000 | | | |
| • Program Adjustments | 0.000 | 0.000 | 3.491 | - | 3.491 |
| • Rate/Misc Adjustments | 0.000 | 0.000 | -0.131 | - | -0.131 |

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 9999: *Congressional Adds*

| FY 2015 | FY 2016 |
|---------|---------|
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| Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development</i> | R-1 Program Element (Number/Name) PE 0101226N / <i>Submarine Acoustic War Dev</i> |
|---|---|

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Congressional Add: *Combat Rapid Attach Weapon Program*

Congressional Add Subtotals for Project: 9999

Congressional Add Totals for all Projects

| | FY 2015 | FY 2016 |
|--|---------|---------|
| | 0.000 | 0.800 |
| | 0.000 | 0.800 |
| | 0.000 | 0.800 |

Change Summary Explanation

Schedule: After restructuring the NGCM program in FY 15, the schedule reflects an accelerated IOC of FY23, from the FY27 date. The developmental efforts will include torpedo threat analysis and integration, Concept of Operations (CONOPS) for fleet tactics evaluation, Test and Evaluation Master Plan (TEMP) completion, Tactical Decision Aid (TacDA) development, and sabot development for External Countermeasure Launcher (ECL) capability. A single, new development contract resulting in fully functional EDM device variants will be awarded in FY 17. The developmental contract will consist of a 4 year development effort and the 5th year will provide Low-Rate Initial Production (LRIP) units for accomplishing operational testing (OT) in FY22-23. Milestone C is notionally planned for FY21.

Financial:

Decrease in Submarine Acoustic War Dev RD TEN by \$.227M as required for the Department of the Navy to comply with the Bipartisan Budget Act of 2015.

FY 2017 funding request was reduced by \$0.282 million to account for the availability of prior years execution balance.

FY 2016 \$0.800 million was added for the Compact Rapid Attack Weapon Program.

FY 2017 base budget increase of \$3.360M to stabilize the Next Generation Countermeasure (NGCM) program and associated SAWS research and development efforts.

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|--|--------------------|----------------|----------------|---------------------|---|----------------------|----------------|----------------|---|----------------------------|-------------------------|-------------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy | | | | | | | | | | Date: February 2016 | | |
| Appropriation/Budget Activity 1319 / 7 | | | | | R-1 Program Element (Number/Name) PE 0101226N / <i>Submarine Acoustic War Dev</i> | | | | Project (Number/Name) 1265 / <i>Sub Defensive Warfare</i> | | | |
| 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 |
| 1265: <i>Sub Defensive Warfare</i> | 33.705 | 4.366 | 3.900 | 9.329 | - | 9.329 | 12.100 | 9.412 | 9.516 | 13.678 | Continuing | Continuing |
| Quantity of RDT&E Articles | | - | - | - | - | - | - | - | - | - | | |

A. Mission Description and Budget Item Justification

The increase in FY2017 funding is for the NGCM development contract that will be awarded in FY 17, through a full and open competition, Cost Plus Fixed Fee (CPFF) contract.

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

1. The Next Generation Countermeasure (NGCM) program, (ACAT III) currently in Engineering and Manufacturing Development (E&MD). The key new capabilities NGCM brings are: adaptive countermeasure (ACM) technology with full duplex capability and mobility packaged in a three inch diameter body. Milestone C is nominally 2023.
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 (TDA) and In-Service Engineering Agent (ISEA) 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 component 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 impact on improving submarine survivability. The technology is then incorporated into the appropriate countermeasure.

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

| | FY 2015 | FY 2016 | FY 2017 Base | FY 2017 OCO | FY 2017 Total |
|--|----------------|----------------|---------------------|--------------------|----------------------|
| Title: Sub Acoustic Warfare | 4.366 | 3.900 | 9.329 | 0.000 | 9.329 |
| Articles: | - | - | - | - | - |
| FY 2015 Accomplishments: - Prepare for the NGCM developmental contract solicitation. | | | | | |

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| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each) | FY 2015 | FY 2016 | FY 2017 Base | FY 2017 OCO | FY 2017 Total |
|--|----------------|----------------|---------------------|--------------------|----------------------|
| <ul style="list-style-type: none"> - Start NGCM TEMP. - Start Modeling and Simulation (M&S) development and assessment for known torpedo threats. - Continue NGCM TEMP, SAMP, PLCCE, and acquisition documentation. - Begin development of Concept of Operations and TacDA for fleet tactics. - Begin sabot development for external launch. - Conduct assessment of threat by TDWG and WAF with updated vulnerability assessment. - Conduct phase 2.5 assessment of SBIR development of AASP HLF-IF Transducer. <p>FY 2016 Plans:</p> <ul style="list-style-type: none"> - Continue NGCM TEMP - Continue preparing for the NGCM developmental contract. - Continue M&S for known and projected torpedo threats - Continue development of required program documentation - Continue development of CONOPS and TacDA for fleet tactics - Continue sabot development for external launch - Conduct review TDWG and WAF with updated reliability assessments. <p>FY 2017 Base Plans:</p> <ul style="list-style-type: none"> - Complete NGCM TEMP - Award NGCM development contract - Continue M&S for known and projected torpedo threats - Continue development of required program documentation - Continue development of CONOPS and TacDA for fleet tactics - Continue sabot development for external launch - Continue assessment of threat by TDWG and WAF with updated vulnerability assessments <p>FY 2017 OCO Plans: N/A</p> | | | | | |
| Accomplishments/Planned Programs Subtotals | 4.366 | 3.900 | 9.329 | 0.000 | 9.329 |

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

| Line Item | FY 2015 | FY 2016 | FY 2017 | FY 2017 | FY 2017 | FY 2018 | FY 2019 | FY 2020 | FY 2021 | Cost To | Total Cost |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|------------|------------|
| | | | Base | OCO | Total | | | | | Complete | |
| • OPN/221000/221005: <i>Submarine Acoustic Warfare</i> | 22.721 | 19.718 | 21.291 | - | 21.291 | 22.263 | 24.076 | 26.212 | 26.722 | Continuing | Continuing |

Remarks

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 FY23. The NGCM development contract will be awarded in FY 17, through a full and open competition, Cost Plus Fixed Fee (CPFF) contract. Engineering Development Model (EDM) variants, Technical Data Packages (TDP), and LRIP units for accomplishing Operational Testing, will be delivered to the Navy under this contract. NGCM contractor subsystem testing will occur in FY 18 through FY 20 and joint contractor/Navy Developmental Testing (DT) will be in FY 19 through FY 21, with Navy Operational Testing (OT) in FY 22 through FY 23. Milestone C is nominally in FY 21. Initial Operational Capability (IOC) is nominally FY 23 for both the Internal Countermeasure Launcher (ICL) and ECL capability of NGCM. The production contract solicitation will be issued in FY22, after successfully completing OT and Full Rate Production decision review (FRP DR) approval, for an award in FY23, as a full and open competition, build to print approach with either a single producer or leader/follower production contract.

E. Performance Metrics

- Progress Reviews
- Execution Reporting and Reviews
- Milestone Reviews

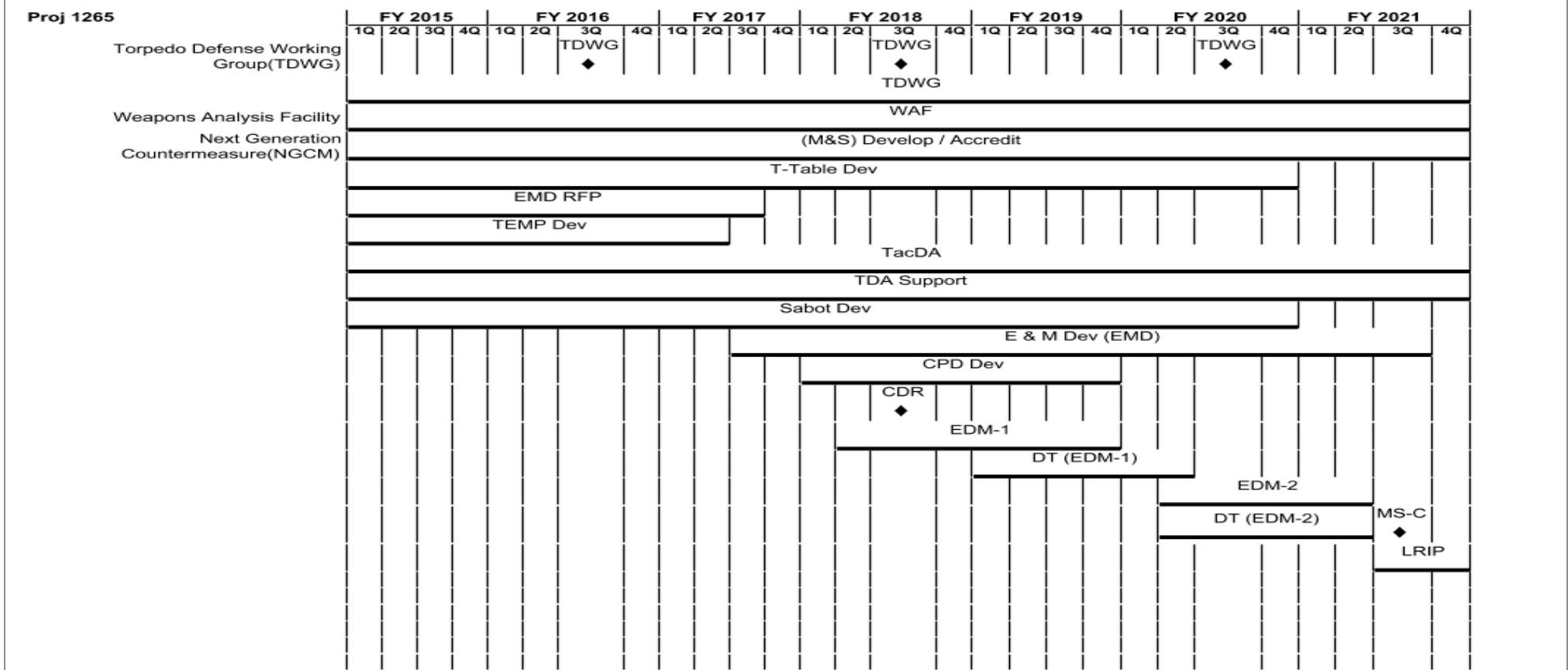
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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy | | | | | | | | | | | | Date: February 2016 | | | |
|--|------------------------|--------------------------------|-------------|--|------------|---------|------------|---|------------|----------------|------------|---------------------|------------------|------------|--------------------------|
| Appropriation/Budget Activity 1319 / 7 | | | | R-1 Program Element (Number/Name) PE 0101226N / Submarine Acoustic War Dev | | | | Project (Number/Name) 1265 / Sub Defensive Warfare | | | | | | | |
| Product Development (\$ in Millions) | | | | FY 2015 | | FY 2016 | | FY 2017 Base | | FY 2017 OCO | | FY 2017 Total | | | |
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| WAF ANALYSIS TDWG | WR | NUWC : NEWPORT, RI | 11.392 | 0.175 | Dec 2014 | 0.275 | Dec 2015 | 0.275 | Dec 2016 | - | | 0.275 | Continuing | Continuing | Continuing |
| NGCM SYSYTEM ENGINEERING | WR | NUWC : NEWPORT, RI | 8.374 | 0.966 | Dec 2014 | 0.600 | Dec 2015 | 0.474 | Dec 2016 | - | | 0.474 | Continuing | Continuing | Continuing |
| NGCM New Development | C/CPFF | TBD : TBD | 0.000 | 0.000 | | 0.000 | | 5.000 | Aug 2017 | - | | 5.000 | Continuing | Continuing | Continuing |
| CSA MK5 SYSTEM ENGINEERING | WR | NUWC : KEYPORT, WA | 1.031 | 0.464 | Mar 2015 | 0.500 | Dec 2015 | 0.400 | Dec 2016 | - | | 0.400 | Continuing | Continuing | Continuing |
| Modeling And Simulation | WR | NUWC : NEWPORT, RI | 0.000 | 1.437 | Mar 2015 | 1.225 | Dec 2015 | 1.200 | Dec 2016 | - | | 1.200 | Continuing | Continuing | Continuing |
| Tactical Decision Aid | WR | NUWC : NEWPORT, RI | 0.000 | 0.000 | | 0.600 | Dec 2015 | 1.100 | Dec 2016 | - | | 1.100 | Continuing | Continuing | Continuing |
| Sabot Development | WR | NUWC : NEWPORT, RI | 0.000 | 0.479 | Mar 2015 | 0.400 | Dec 2015 | 0.400 | Dec 2016 | - | | 0.400 | Continuing | Continuing | Continuing |
| NGCM DEVELOPMENT 1 | C/CPAF | Argon ST : Fairfax, VA | 5.757 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 5.757 | - |
| NGCM DEVELOPMENT 2 | C/CPAF | Ultra : Braintree, MA | 5.484 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 5.484 | - |
| AASP SBIR Phase 2.5 | SS/CPFF | HAI : Cohasset, MA | 0.000 | 0.435 | Jan 2015 | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 0.435 | - |
| Subtotal | | | 32.038 | 3.956 | | 3.600 | | 8.849 | | - | | 8.849 | - | - | - |
| Management Services (\$ in Millions) | | | | FY 2015 | | FY 2016 | | FY 2017 Base | | FY 2017 OCO | | FY 2017 Total | | | |
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| TRAVEL | WR | NAVSEA : Washington, DC | 0.546 | 0.026 | Oct 2014 | 0.040 | Oct 2015 | 0.080 | Oct 2016 | - | | 0.080 | Continuing | Continuing | Continuing |
| PROGRAM MANAGEMENT SUPPORT | C/CPAF | TECH MARINE : Washington, DC | 0.900 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 0.900 | - |
| PROGRAM MANAGEMENT SUPPORT | C/CPAF | BOOZ ALLEN : Washington, DC | 0.221 | 0.384 | Dec 2014 | 0.260 | Dec 2015 | 0.400 | Oct 2016 | - | | 0.400 | Continuing | Continuing | Continuing |

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy **Date:** February 2016

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| Appropriation/Budget Activity 1319 / 7 | R-1 Program Element (Number/Name) PE 0101226N / <i>Submarine Acoustic War Dev</i> | Project (Number/Name) 1265 / <i>Sub Defensive Warfare</i> |
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| Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy | | Date: February 2016 |
| Appropriation/Budget Activity 1319 / 7 | R-1 Program Element (Number/Name) PE 0101226N / <i>Submarine Acoustic War Dev</i> | Project (Number/Name) 1265 / <i>Sub Defensive Warfare</i> |

Schedule Details

| Events by Sub Project | Start | | End | |
|---|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| Proj 1265 | | | | |
| Torpedo Defense Working Group(TDWG): FY16 TDWG | 3 | 2016 | 3 | 2016 |
| Torpedo Defense Working Group(TDWG): FY18 TDWG | 3 | 2018 | 3 | 2018 |
| Torpedo Defense Working Group(TDWG): FY20 TDWG | 3 | 2020 | 3 | 2020 |
| Torpedo Defense Working Group(TDWG): TDWG Modeling & Simulation (M&S) | 1 | 2015 | 4 | 2021 |
| Weapons Analysis Facility: COUNTERMEASURE (CM) EFFECTIVENESS/WEAPON ANALYSIS FACILITY (WAF) VULNERABILITY | 1 | 2015 | 4 | 2021 |
| Next Generation Countermeasure(NGCM): NGCM (M&S) Develop / Accredit | 1 | 2015 | 4 | 2021 |
| Next Generation Countermeasure(NGCM): NGCM T-Table Development | 1 | 2015 | 4 | 2020 |
| Next Generation Countermeasure(NGCM): EMD RFP | 1 | 2015 | 3 | 2017 |
| Next Generation Countermeasure(NGCM): NGCM TEMP Development | 1 | 2015 | 2 | 2017 |
| Next Generation Countermeasure(NGCM): Tactical Decision Aid (TacDA) | 1 | 2015 | 4 | 2021 |
| Next Generation Countermeasure(NGCM): Technical Direction Agent (TDA) Support | 1 | 2015 | 4 | 2021 |
| Next Generation Countermeasure(NGCM): Sabot Development | 1 | 2015 | 4 | 2020 |
| Next Generation Countermeasure(NGCM): Engineering & Manufacturing Development (EMD) | 3 | 2017 | 3 | 2021 |
| Next Generation Countermeasure(NGCM): NGCM CPD Development | 1 | 2018 | 4 | 2019 |
| Next Generation Countermeasure(NGCM): NGCM Critical Design Review (CDR) | 3 | 2018 | 3 | 2018 |
| Next Generation Countermeasure(NGCM): EDM-1 | 2 | 2018 | 4 | 2019 |
| Next Generation Countermeasure(NGCM): DT (EDM-1) | 1 | 2019 | 2 | 2020 |
| Next Generation Countermeasure(NGCM): EDM-2 | 2 | 2020 | 2 | 2021 |
| Next Generation Countermeasure(NGCM): DT (EDM-2) | 2 | 2020 | 2 | 2021 |
| Next Generation Countermeasure(NGCM): MS-C | 3 | 2021 | 3 | 2021 |

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| Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy | | Date: February 2016 |
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| Events by Sub Project | Start | | End | |
|--|----------------|-------------|----------------|-------------|
| | Quarter | Year | Quarter | Year |
| Next Generation Countermeasure(NGCM): LRIP | 3 | 2021 | 4 | 2021 |

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

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| Appropriation/Budget Activity 1319 / 7 | R-1 Program Element (Number/Name) PE 0101226N / <i>Submarine Acoustic War Dev</i> | Project (Number/Name) 9999 / <i>Congressional Adds</i> |
|--|---|--|

| 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 |
|---------------------------------|-------------|---------|---------|--------------|-------------|---------------|---------|---------|---------|---------|------------------|------------|
| 9999: <i>Congressional Adds</i> | 0.000 | 0.000 | 0.800 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.800 |
| Quantity of RDT&E Articles | | - | - | - | - | - | - | - | - | - | | |

A. Mission Description and Budget Item Justification

Project 9999/Congressional Add for "Compact Rapid Attack Weapon Program" will identify the program requirements to determine and justify a new start program by employing the 6" diameter Countermeasure Anti-Torpedo (CAT) in the submarine force.

B. Accomplishments/Planned Programs (\$ in Millions)

| | FY 2015 | FY 2016 |
|---|---------|---------|
| Congressional Add: Combat Rapid Attach Weapon Program | 0.000 | 0.800 |
| FY 2015 Accomplishments: N/A | | |
| FY 2016 Plans: This add will support an Analysis of Alternatives conducted to evaluate the technological readiness and engineering challenges associated with incorporating the CAT onto submarines as a defensive Anti-Torpedo Torpedo (ATT) to counter Non-Traditional Threat Torpedoes (NTTT). This study effort will involve subject matter experts from the Navy (primarily NUWC, Newport, to include torpedo, fire control, launcher, and systems integration expertise) and 6" CAT developers (at Applied Research Laboratory/Penn State University (ARL/PSU), as well as other warfare expertise such as from the Naval War College. | | |
| Congressional Adds Subtotals | 0.000 | 0.800 |

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

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

To be determined.

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy **Date:** February 2016

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| Appropriation/Budget Activity 1319 / 7 | R-1 Program Element (Number/Name) PE 0101226N / <i>Submarine Acoustic War Dev</i> | Project (Number/Name) 9999 / <i>Congressional Adds</i> |
|--|---|--|

| Proj 9999 | FY 2015 | | | | FY 2016 | | | | FY 2017 | | | | FY 2018 | | | | FY 2019 | | | | FY 2020 | | | | FY 2021 | | | | | | |
|------------------|---------|----|----|----|---------|----|-------------------------|----|-----------------------|----|-------------------|----|---------|----|----|----|---------|----|----|----|---------|----|----|----|---------|----|----|----|--|--|--|
| | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | | | |
| CRAW Development | | | | | | | CRAW Requirements Study | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Interim Report 1 ◆ | | Interim Report 2 ◆ | | Final Report ◆ | | | | | | | | | | | | | | | | | | | | |

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Schedule Details

| Events by Sub Project | Start | | End | |
|--------------------------------------|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| Proj 9999 | | | | |
| CRAW Development: Requirements Study | 3 | 2016 | 4 | 2017 |
| CRAW Development: Interim Report 1 | 4 | 2016 | 4 | 2016 |
| CRAW Development: Interim Report 2 | 2 | 2017 | 2 | 2017 |
| CRAW Development: Final Report | 4 | 2017 | 4 | 2017 |