• **Department Overview**
  - Mission / Products
  - Major Responsibilities
  - Organization / Department Overview
  - Division Descriptions
  - Major Customers / Projects / Roles
  - Department Resources
  - Unique Facilities / Capabilities
  - Acquisition Strategy Highlights
    - LDUUV
    - Rapid Prototyping

• **Contracting**
  - Current Major Contractors ~ Summary
  - Projected Contracts FY16 - FY17
  - Summary

---

~ Talent May Win Games, but Teamwork Wins Championships ~
Mission

“Provide integrated full spectrum undersea Weapon, Autonomous, and Defensive System solutions to the warfighter through technical expertise, cooperative innovation, engineering and life cycle stewardship.”

Vision

“Undersea Dominance through superior Autonomous and Defensive Systems”

Philosophy

“Operate with Excellence; Commit to Success”

DISTRIBUTION STATEMENT A: Approved for Public Release; distribution is Unlimited
Department Products

- **Science and Technology for:**
  - Torpedoes / Targets
  - Autonomous Undersea Vehicles (AUVs)
  - Countermeasures/Counterweapons

- **System Development, Integration & Test**
  - AUVs
  - Mobile ASW Targets and Torpedoes
  - Undersea Defensive Systems
  - T&E, assessments, and M&S

- **Acquisition, Fleet Support, & In-Service Engineering**
  - HW and LW Torpedoes
  - AUVs
  - Mobile ASW Targets
  - Undersea Defensive Systems

**Electric Torpedoes**

**S & T**

**Shock Analysis & Testing**
RAPID PROTOTYPING

“It is possible…to come up with kind of an HOV lane, if you will, that can fast track some really mature [examples of] the right types of technologies,”

“Therefore you see that happening — and this has to be done with full transparency, right? — then more and more people can sort of start to gradually move over to this streamlined way of acquiring.”

“Using prototypes of weapons and conducting more experimentation are key to acquisition reform”

“We are at prototyping and experimentation in a big way today.” … “What we’re doing, though, is fairly episodic. It is being driven by a compelling threat that gets top leadership’s attention. We make mountains move to address the threat. What we need to do is take that model and incorporate it into the way we do business every day.”

“Directing R&D money in order to build at least a few prototypes of systems the Pentagon knows it can’t afford to buy in big quantities … moves us forward technically. It keeps our industrial base healthy from a design perspective and it keeps our design teams together.”

“…There is a ‘very natural’ fit for unmanned systems within the Navy, particularly in the ability to rapidly prototype and try to fill needs and capability gaps that have been flagged by fleet commanders, outside of the typically long, ‘routinized’ acquisition process…”

"It's OK to fail as long as we fail fast,"

“I think what prototyping allows us to do is to better understand the art of the possible because you don’t always know it until you see it, and the other thing I think it allows us to do is get immediate feedback from the soldier…”

~ Brig. Gen. John Charlton,
Enable our Fleet to operate safely anywhere, unimpeded by undersea threats
**Major Code 85 Responsibilities**

- Submarine Track and Trail
- Biometrics
- Advanced Energy
- Non-Acoustic Technology
- Underwater Express
- AHSUM
- Supercavitation Technology
- Advanced Sensor Technology
- Next Generation CM/CCM
- G&C Technology
- Multi-band Sonar
- Propulsion, Silencing & Hydrodynamics
- New Fuzing
- BB
- Fiber Optics

**Transitioned Programs**

- DARPA
- PMS 404
- ONR
- ILIR/IAR

- PMS 404, 403/406, 415
- SUBFOR
- International Sales
- PMS 415

- PMS 404, 404, 403/406, 415
- International Sales
- PMS EOD
- PMW 120

- PMS 404, 406, 415
- International Sales
- Fleet
- PMS EOD

**Working Together to Deliver the Best Solutions Quickly**

- LDUUV / ATTDS / AN/SLQ-25
- Torpedo Modular Upgrade Prog.
- System Requirements
- Performance M&S
- System Integration / Safety / T&E
- OP SW Development
- Contract Technical Direction
- Next Generation CM
- UUV Technology
- Multi-band Sonar
- Advanced Navigation
- Autonomy
- MK18 Mod 2
- Bluewolf

- ATTDS / AN/SLQ-25
- MK30 Mod 1/2
- Signal Analysis System
- Risk Reduction
- HWT Sonar Tech Insertion
- Multi-band Sonar
- OP SW
- Knifefish
- ADC MK5
- MK 39 EMATT
- Production Eng’ing Support
- Fleet Introduction Planning
- Acceptance Testing Support
- Contractor Performance Ass’mt
- LBS (UUV-S)

- AN/SLQ-25A
- Countermeasures ADC 2/3/4
- Signal Analysis System
- MK30 Mod 1/2
- MK 39 EMATT
- Weapon performance assessment
- Fleet T&E support
- Fleet Failure Analysis / CA
- Reliability Management
- SCC training
- SW Downloads
- Fleet Procedures
- IMA Certifications
- ORDALT Development

---

**Our Main Thing:** Working with industry, academia and Navy labs to deliver solutions to the warfighter where and when they are needed.

**Transitioned Programs**

**Transitioning Programs**

**TOTAL:** 16%

**TOTAL:** 27%

**TOTAL:** 29%

**TOTAL:** 28%

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Code 85 T
Science & Technology Office

Code 85B
Deputy Department Head

Code 8501
Business Operations Office

Code 855
Fleet Support & Systems Assessment Division

Code 854
Undersea Defense & Intelligence Support Systems Division

Code 853
Unmanned Undersea Vehicles & Propulsion Systems Division

Code 852
Weapons Systems Division

Code 851
Advanced Technology Modeling & Simulation Division

Customer Advocates
NPT
KPT

Department Head
-----------------------------
Chief Engineers -
Dept. Assistant -

Technical Warrant Holder
- UUV/Targets
- Torpedoes
- USW Def. Sys.

DUSW – MCM ASW

Code 859
Program Management Office

Code 85T
Science & Technology Office

10 May 2016

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Code 851 ~ Advanced Technology Modeling & Simulation Division

“Provide full-spectrum Science and Technology (S&T) and M&S solutions for diverse Undersea Weapons, Vehicles, and Defensive Systems …..”
Code 852 ~ Weapon Systems Division

"Provide the Navy with well integrated undersea weapons systems solutions that address today's challenges and tomorrow's vision... Also provides systems support to undersea vehicles and defensive systems"
Provide technical expertise and core competencies for UUV’s, targets, undersea propulsion/energy, and technology payloads/operations as well as provide for associated technology development, evaluation & integration, acquisition, and life cycle management …..
“Develop and deliver innovative undersea warfare defense systems, including sensors, detection subsystems, soft and hard-kill devices, signal processing, and related deployment systems which provide effective torpedo self-defense for surface ships and submarines. Provide computer modeling, engineering evaluation, in water testing and submarine installations in support of intelligence programs.”
Code 855 ~ Fleet Support & Systems Assessment Division

“Assure maximum Fleet readiness through superior engineering and technical support across undersea weapons, vehicles, and defensive systems’ life cycles; including development, acquisition, in-service operation, operations assessment, performance analysis, tactics development, training, and communication....”
<table>
<thead>
<tr>
<th>Customer</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>DARPA, ONR, ONI</td>
<td>Concept Development, Maturation, and Insertion (RDT&amp;E)</td>
</tr>
</tbody>
</table>

**Propulsion**
- Certified Electro Chemical
  - Cheap, Long Endurance, High /Low Rechargeable

**Navigation**
- Retard Undersea Navigational Errors Growth
  - Over the Horizon Applications
  - Third Party Link...RF, etc.

**Autonomy / Software**
- Autonomous Object Recognition
  - Obstacle Avoidance
  - Precision Targeting
  - Energy Management

**Communications (COMMS)**
- Fiber Optics
- 3rd Party Targeting

**Sensors**
- Sonar / Sensing
  - Non-Traditional Sensing

**Payloads**
- Components / Module Level Technology
<table>
<thead>
<tr>
<th>Customer</th>
<th>Program</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMW 120</td>
<td>-</td>
<td>LBS (UUV-S): Littoral Battlespace Sensing (Unmanned Underwater Vehicle – Submarine)</td>
</tr>
<tr>
<td>PMS406</td>
<td>-</td>
<td>LDUUV: Lead Technical &amp; Systems Engineering Agent for acquisition of the LDUUV. We help establish and articulate requirements and define Technical specifications &amp; requirements; provide acquisition planning support &amp; systems engineering from source selection thru IOC; and coordinate technical efforts of other Technical activities to meet Program acquisition needs. NUWC Npt will be the Contracting Agency/PCO for LDUUV ACAT II Program.</td>
</tr>
<tr>
<td>PMS406</td>
<td>-</td>
<td>Knifefish: Provide Systems Engineering expertise as part of the Gov't Team in support of development, acquisition, and fielding of the Knifefish Surface Mine Countermeasure UUV Program. NUWC provides specific expertise as Gov't technical leads in the areas of Undersea Vehicle systems engineering, Acquisition Software, Systems Safety, and Cyber Security/Info Assurance. (ACAT III)</td>
</tr>
<tr>
<td>PMS418</td>
<td>-</td>
<td>Mk 18 Mod 2 UUV (Payload integrator/Advanced Technology support): Payload integration and demonstration for potential P3I product upgrades to the Mk18 Mod 2 UUV. We support the Program Office and Lead Technical Agents (SPAWAR SSC and NSWC-PCD) with risk mitigation systems engineering and payload integration for future Block Upgrades. We contract to several commercial partners for hardware and technical services. (ACAT-IV)</td>
</tr>
<tr>
<td>DARPA, ONR,</td>
<td>-</td>
<td>AUS: Advanced UUV systems technology based development, integration, test, and transition UUV Payload Develop / Prototypes:</td>
</tr>
<tr>
<td>PMS406, PMS408</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PMS404, USFF N7,</td>
<td>ASW Targets</td>
<td>Manage DIVNPT ASW Target efforts and Identify the technical requirements needed now and in the future to provide the USN with the best targets at the lowest overall cost.</td>
</tr>
<tr>
<td>CPF N7, OPNAV</td>
<td>Mk30</td>
<td>Mk30 Mod 1: Responsible for the integrity, technical design, and Fleet support for the HWT mobile ASW Training Target MK30 Mod 1 and support equipment.</td>
</tr>
<tr>
<td>N98, OPNAV N43,</td>
<td>EMATT</td>
<td>EMATT: Manage/implement all aspects of the Expendable Mobile ASW Training Target program. Execute procurement contract.</td>
</tr>
<tr>
<td>Various Navy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TYCOMs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer</td>
<td>Program</td>
<td>Role</td>
</tr>
<tr>
<td>----------</td>
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</tr>
<tr>
<td>PMS415 - AN/SLQ-25 (NIXIE)</td>
<td>AN/SLQ-25 (NIXIE): Manage systems engineering, acquisition, in-service engineering, Logistics Support, and Fleet Support tasking essential to deliver/maintain AN/SLQ-25 for the USN and FMS customers.</td>
<td></td>
</tr>
<tr>
<td>PMS415 - Countermeasure Anti-Torpedo (CAT)</td>
<td>Countermeasure Anti-Torpedo (CAT): System level technical performance certification authority as well as monitor design progress of the CAT program.</td>
<td></td>
</tr>
<tr>
<td>PMS415 - Torpedo Warning System</td>
<td>Torpedo Warning System (TWS): Perform system engineering functions to develop and verify compliance with the TWS performance specification; work directly with the program office to perform acquisition planning and establish program concepts as well as develop program documentation.</td>
<td></td>
</tr>
<tr>
<td>ONI - Intelligence support</td>
<td>Manage and maintain carry-on\carry-off systems. This includes developing SW builds to integrate SW system changes, provide technical support wherever the platform requires support and procure components and services to support the program. Contractors provide a majority (80%) of the program support.</td>
<td></td>
</tr>
<tr>
<td>ONR (FNC)</td>
<td>LIGHTWEIGHT TOW: Manage Surface Ship Torpedo Defense Advanced Development for the Lightweight Tow acquisition program.</td>
<td></td>
</tr>
<tr>
<td>PMS420 - LIGHTWEIGHT TOW</td>
<td>Submarine Countermeasures: Manages all aspects of NUWCDIVNPT acoustic countermeasure responsibilities. Oversees production of acoustic countermeasures to verify conformance; perform research toward device-level improvement; and participates in program office (NAVSEA) technical tasking.</td>
<td></td>
</tr>
<tr>
<td>PMS415 - Sub Countermeasures</td>
<td>NGCM: Provide technical direction regarding all countermeasure development programs, and perform contract monitoring, risk assessment, and systems engineering for the NGCM Program.</td>
<td></td>
</tr>
<tr>
<td>PMS415 - Next Generation CM (NGCM)</td>
<td>Various</td>
<td></td>
</tr>
<tr>
<td>PMS415 - Special Projects</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Defensive Systems**
<table>
<thead>
<tr>
<th>Customer</th>
<th>Program</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMS404 - HWT / LWT</td>
<td>Torpedoes</td>
<td>Development of: Mk48 Mod7 APB5 &amp; APB6/TI-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Production Support</strong>: Support overall HWT and LWT Torpedo production including reestablishing a production capability for all MK 48 Mod 7 CBASS torpedo parts (except warhead material). Manage in-service engineering, Logistics Support, and Fleet Support tasking essential to deliver/maintain reliable, available, and effective Fleet torpedoes. <strong>Mk48 Mods 6/7 AT</strong>: Provide for design, development, and evaluation of an upgrade package which will convert FMS Mk 48 Mod 4 torpedoes to a Mk 48 Mod 6/7 capability. <strong>Mk 54 Mods 0 and 1</strong> <strong>FMS</strong>: Manage extensive USN / FMS partnerships and collaborative efforts. <strong>Mk710</strong>: Field/maintain an automated All Up Round MK 48 Torpedo System Test Set for use by the Intermediate Maintenance Activities in the preparation and test of MK 48 torpedoes for the USN and RAN.</td>
</tr>
<tr>
<td>PMS397, PMS415, PMS450</td>
<td>Signal Analysis Systems (SAS)</td>
<td>Support all aspects of the SAS program including development, production and lifecycle support.</td>
</tr>
</tbody>
</table>
USW Weapons, Vehicles, and Defensive Systems Department

FY 16 LRE Projections are $190M
Civilian Total: 582 As of May 2016

- 86% Engineers/Scientists
- 7% Professional Admin.
- 6% Clerical
- 1% Tech Support

~44% of our Engineers and Scientists have Advanced Degrees & ~8% have PhDs
Code 85 Outsourced WYs By Skill – FY16 Total WYs - 150

- Business/Finance: 30%
- Clerical: 8%
- Admin/Mgt. Support: 6%
- Logistician: 15%
- Technicians: 4%
- Scientists & Engineers: 37%

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Significant NUWC Investment in Unique Facilities/Capabilities

Undersea Warfare Development Complex
- Weapon Analysis Facility
- Torpedo Analysis Facility
- Simulation Based Design Laboratory
- Super Computers
- H-W-I-L
- Weapon Analysis Facility-User Area

Undersea Tactical Vehicles Complex
- Life Cycle Support Facility
- Shapes Laboratory
- Acoustic Test Facilities
- Torpedo Electronics Lab

Torpedo Industrial Complex
- Battery Laboratory
- Anechoic Chamber
- Acoustic Wind Tunnel
- Materials Laboratory
- Chemistry Laboratory
- Motor Laboratory
- Small Tow Tank
- Research Water Tunnel

In-Water Test Facilities
- Portable Ranges
- Littoral Undersea Test Facilities
- AUTEC Range Complex
- Nanoose, Canada USW Range & Control Facility
- Dabob Bay USW Range

Land Based Propulsion Test Facility Complex
- Electric Propulsion Test Facility
- Deep Depth Test Facility
- Propulsion Noise Test Facility
- Torpedo Component Test Facility
- High Energy Chamber

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Prototyping for Large Displacement Unmanned Undersea Vehicle (LDUUV)

- **Current Navy LDUUV Program**
  - Use Government Lead System Integrator Approach *(NUWC Newport leads the NR&DE, UARC, and Industry Team)*

- **Define Capability We Buy**
  - Use Set-Based Design principles
  - Increased early Prototyping & Experimentation

- **Establish a Reliable Modular “Truck”**
  - Use Incremental approach for delivering Operational Capability

LDUUV Concept Design ~17,000 lbs Displacement

DISTRIBUTION STATEMENT A: Approved for Public Release; distribution is Unlimited
**Government Controlled Open Architecture (OA) Interfaces**

- **Sensors / Payload Controller**
- **Autonomous Controller**
- **Vehicle Control**
- **Navigation**
- **Comms**

**Innovate via Payloads**

- Sensors, Power and Cable Interface

**Power & Energy**

**C3 Vehicle Control**

**Autonomous Controller & Mission Planner**
Next Engagements for Industry

• **Request for Information (RFI) Issued by NUWCDIVNPT**
  – 3QFY16 (N66604-16-S-9999, [www.fbo.gov](http://www.fbo.gov))
  – Seeking technical and manufacturing capabilities, knowledge, experience level, and qualifications to meet LDUUV requirements

• **UUV Industry Day – 4QFY16/1QFY17**
  – Stay tuned for more information at [www.fbo.gov](http://www.fbo.gov)

• **Watch for Future NUWCDIVNPT UUV Prototyping Contract Opportunities**
• **Department Overview**
  - Mission / Products
  - Major Responsibilities
  - Organization / Department Overview
  - Division Descriptions
  - Major Customers / Projects / Roles
  - Department Resources
  - Unique Facilities / Capabilities
  - Acquisition Strategy Highlights
    - LDUUV
    - Rapid Prototyping

**Contracting**
  - Current Major Contractors ~ Summary
  - Projected Contracts FY16 - FY17
  - Summary

*~ Talent May Win Games, but Teamwork Wins Championships ~*
Current Code 85
Major Contractors

- **Adaptive Methods**
  - Sensor Processing and Computing Architecture for Fish Net Avoidance

- **Alion Science and Technology**
  - SSTD

- **Applied Physical Science**
  - Sensor and Sonar Support

- **Barber Nichols**
  - Alternator/Regulator Production

- **Boeing**
  - Data Co-Processor

- **DDL Omni**
  - Intelligence Programs

- **Draper Labs**
  - Engineering Support

- **General Dynamics Information Technology (GDIT)**
  - Eng. and Tech. Support to Surface Ship Torpedo Defense (SSTD)

- **ICI**
  - WAF Simops Support

- **Lockheed Martin**
  - MK 39 Expendable Mobile ASW Training Target (EMATT)
  - Torpedo Engineering Support

- **McLaughlin Research Corp. (MRC)**
  - Torpedo Engineering, Logistics, and Analysis Support; UUV Engineering

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Current Code 85
Major Contractors

- **Ocean Acoustical Services and Instrumentation Systems (OASIS)**
  - ✔ Computational & Experimental Mechanics Lab (CEML) Facility

- **Progeny**
  - ✔ Torpedo Engineering Support

- **Purvis**
  - ✔ SAS / CM Support

- **Raytheon**
  - ✔ Engineering Support (torpedoes)

- **Science Applications International Corporation (SAIC)**

- **SeaCorp**
  - ✔ WAF Engineering Support

- **Systron Donner**
  - ✔ IMU Design Support

- **Veterans Assembled electronics (VAe)**
  - ✔ Torpedo Wire-ink and Tuning Box Production Restart

- **Woods Hole Oceanographic Institute (WHOI)**
  - ✔ Engineering UUV Support

- **Yardney Technical (Products) Material**
  - ✔ Silver zinc batteries

- **Ultra 3 Phoenix, Inc.**
  - ✔ MK 710 Torpedo System Test Set (TSTS)
<table>
<thead>
<tr>
<th>Contract Number</th>
<th>Title</th>
<th>Current Contract Value (w options)</th>
<th>Incumbent</th>
<th>Seaport</th>
<th>Follow-On</th>
<th>Current Contract Type</th>
<th>Expected RFP Release</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>4032 N405</td>
<td>Intelligence Program Support</td>
<td>$5.5M</td>
<td>DDL Omni</td>
<td>Y</td>
<td>Y</td>
<td>CPFF</td>
<td>Nov 2016</td>
<td>SBSA</td>
</tr>
<tr>
<td>4066 N403</td>
<td>Surface Ship Torpedo Defense</td>
<td>$44M</td>
<td>Alion</td>
<td>Y</td>
<td>Y</td>
<td>CPFF</td>
<td>April 2017</td>
<td>TBD Sources Sought</td>
</tr>
<tr>
<td>4119 N432</td>
<td>USW Weapons Engineering Services</td>
<td>$10M</td>
<td>SAIC</td>
<td>Y</td>
<td>Y</td>
<td>CPFF</td>
<td>Feb 2017</td>
<td>TBD Sources Sought</td>
</tr>
<tr>
<td>4083 N455, N457 &amp;N458</td>
<td>Fleet Engineering analysis and Logistics Support</td>
<td>$26.5M, $27.8M, $4.5M</td>
<td>MRC, MRC, MRC</td>
<td>Y</td>
<td>Y (combines 3)</td>
<td>CPFF, CPFF, CPFF</td>
<td>Dec 2016</td>
<td>TBD Sources Sought</td>
</tr>
<tr>
<td>4065 N404</td>
<td>WAF Operations Support</td>
<td>$3.7M</td>
<td>ICI</td>
<td>Y</td>
<td>Y</td>
<td>CPFF</td>
<td>July 2016</td>
<td>SDVOSB</td>
</tr>
<tr>
<td>4095 N402</td>
<td>Computational and Experimental Mechanics Lab (CEML) Test Facilities</td>
<td>$7.2M</td>
<td>OASIS</td>
<td>Y</td>
<td>Y</td>
<td>CPFF</td>
<td>Mar 2017</td>
<td>SBSA</td>
</tr>
<tr>
<td>4119 N425</td>
<td>Surface Ship Torpedo Defense</td>
<td>$7.9M</td>
<td>SAIC</td>
<td>Y</td>
<td>Y</td>
<td>CPFF</td>
<td>Dec 2016</td>
<td>TBD Sources Sought</td>
</tr>
</tbody>
</table>
## Projected Contracts (Con’t)

<table>
<thead>
<tr>
<th>Contract Number</th>
<th>Title</th>
<th>Current Contract Value (w options)</th>
<th>Incumbent</th>
<th>Seaport</th>
<th>Follow-On</th>
<th>Current Contract Type</th>
<th>Expected RFP Release</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>4119 N429 &amp; N433</td>
<td>Technical Services for AUVEF</td>
<td>$9M $35M</td>
<td>SAIC</td>
<td>Y</td>
<td>Y</td>
<td>CPFF CPFF</td>
<td>Mar 2017</td>
<td>TBD Sources Sought</td>
</tr>
<tr>
<td>4119 N426</td>
<td>Programmatic and Financial Support</td>
<td>$7.4M</td>
<td>SAIC</td>
<td>Y</td>
<td>Y</td>
<td>CPFF</td>
<td>June 2017</td>
<td>TBD Sources Sought</td>
</tr>
<tr>
<td>4083 N453</td>
<td>Fleet Production Support</td>
<td>$49M</td>
<td>MRC</td>
<td>Y</td>
<td>Y</td>
<td>CPFF</td>
<td>Jan 2017</td>
<td>TBD Sources Sought</td>
</tr>
<tr>
<td>4012 N440</td>
<td>Surface Ship Torpedo Defense</td>
<td>$47M</td>
<td>GDIT</td>
<td>Y</td>
<td>Y</td>
<td>CPFF</td>
<td>Aug 2017</td>
<td>TBD</td>
</tr>
<tr>
<td>N66604-12-C-0393</td>
<td>Batteries</td>
<td>$5M</td>
<td>Yardney</td>
<td>N</td>
<td>Y</td>
<td>CPFF</td>
<td>Mar 2017</td>
<td>TBD</td>
</tr>
<tr>
<td>NEW</td>
<td>UUV Procurement</td>
<td>N/A</td>
<td>N/A</td>
<td>N</td>
<td>N</td>
<td>CPFF</td>
<td>June 2017</td>
<td>TBD</td>
</tr>
<tr>
<td>NEW</td>
<td>Torpedo Electronics ASSY Production (EEA/TSOB)</td>
<td>N/A</td>
<td>N/A</td>
<td>N</td>
<td>N</td>
<td>CPFF</td>
<td>Dec 2016</td>
<td>TBD</td>
</tr>
<tr>
<td>NEW</td>
<td>Lightweight TOW LRIP</td>
<td>N/A</td>
<td>N/A</td>
<td>N</td>
<td>N</td>
<td>CPFF</td>
<td>April 2017</td>
<td>TBD</td>
</tr>
</tbody>
</table>
The USW Weapons, Vehicles, and Defensive Systems Department is multifaceted with needs ranging from clerical support to advanced degree experts as well as significant material support.

- **Code 85 FY 16 LRE ~ $190M.**
- **Onsite Contractor Support in FY16 is 150 WY’s.**
  - Represents significant part of in-house WY’s ( > 25%)
  - Anticipate similar percentages in future