

FEDTEX

Individual and Unit Tactical Gear, Uniforms and Personal Protective Equipment

May 19-20, 2026 Raleigh, North Carolina

Hosted By
US Senator Thom Tillis
US Senator Ted Budd
North Carolina Military Business Center



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US Navy & US Coast Guard Program & Opportunities

- Moderator: **Erin Ananian-Gentile**, Regional Program Manager (New Bern), NC Military Business Center
- Laura C. Winters, Director, Navy Clothing and Textile Research Facility
- Katrina Colucci-Chang, Ph.D., Biomedical Engineer/Clothing SME, Body Mounted & Survival Systems Branch, Aircrew Protection Survivability Division, Human Systems Engineering Department ([AA23200](#)), Naval Air Warfare Center Aircraft Division (NAWCAD), Naval Air Systems Command (NAVAIR)
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Navy Clothing and Textile Research Facility

Mission: To maximize the Quality of Life for Sailors through uniform and protective clothing.

Presented to:

FEDTEX

Presented by:

Laura Winters, Navy Clothing and Textile Research Facility, Director

21 May 2026

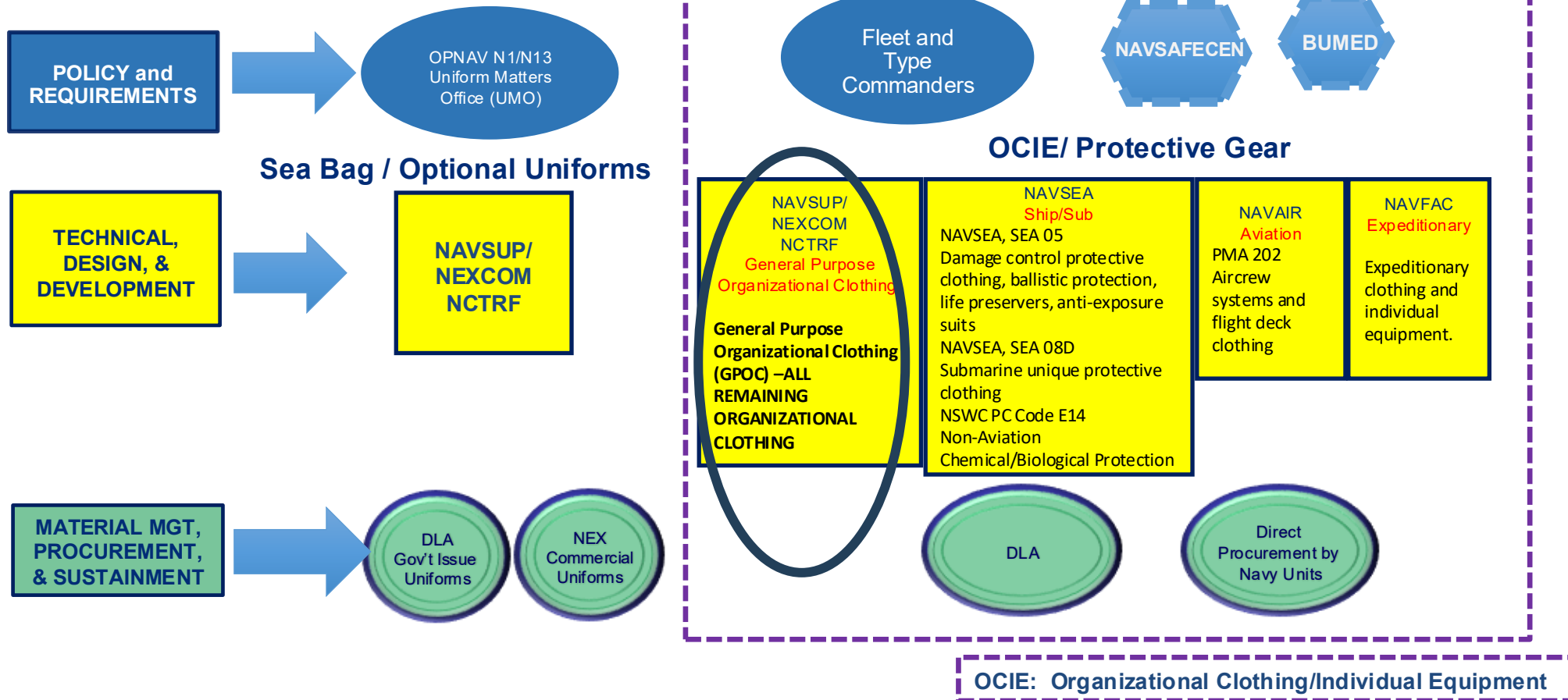
READY. RESOURCEFUL. RESPONSIVE.



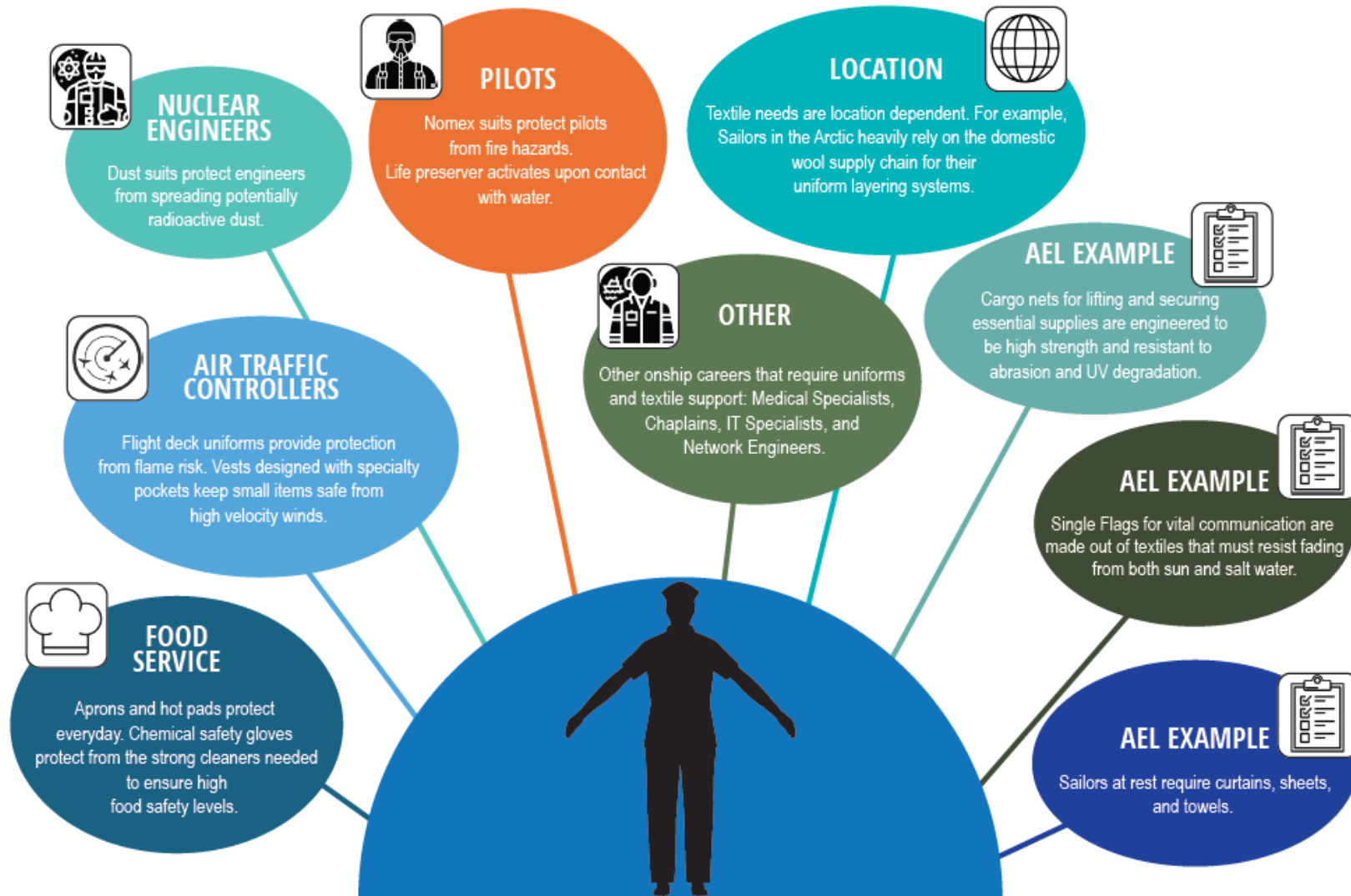
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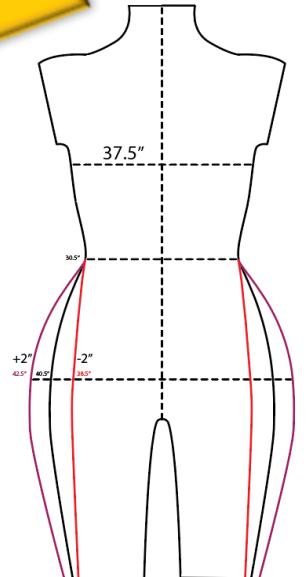
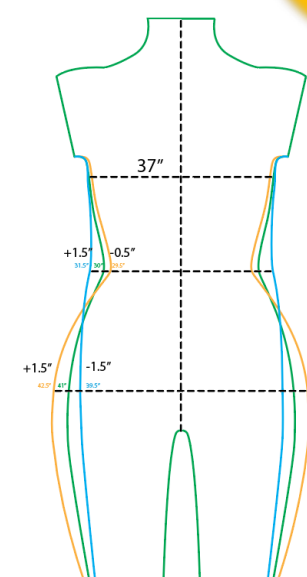


Domestic textile supply chains are heavily integrated aboard U.S. Naval ships.



No Correlation
between
Current &
USN Modern
Sizing

NATO
Fit Type
Nomenclature

Current Sizing				USN Modern Sizing																																																															
				<p>Pattern Development Non-standardized pattern development designer discretion using linear grading <i>Current patterns are based on size data from the late 80s with no systematic approach in the development of these patterns nor fit</i></p>		<p>Pattern Development Standardized pattern development utilizing blocks patterns* Using non-linear grading <i>*Block Pattern are basic patterns that map to Navy specific fit forms, that are the base for consistent style pattern development</i></p>																																																													
				<p>Differentiation of Fit Types Bust to Waist Delta = 7" does not change per fit type nor size Only Hip changes per fit type</p>		<p>Differentiation of Fit Types Bust to Waist Delta = varies 3.5" to 7" pending fit type and size Waist and Hip change per fit type</p>																																																													
				<p>Fit Types Junior [J] Misses [M] Women's [W] (XXS to XXL)</p>		<p>Fit Types Alpha [A], Bravo [B], Charlie [C] Delta [D] (XS to XXL)</p>																																																													
<p>BASE SIZE 12</p> <table border="1"> <tr> <td>Unit: inches</td> <td>J</td> <td>M</td> <td>W</td> </tr> <tr> <td>Bust</td> <td colspan="3">37.5</td> </tr> <tr> <td>Waist</td> <td colspan="3">30.5</td> </tr> <tr> <td>Hip</td> <td>38.5</td> <td>40.5</td> <td>42.5</td> </tr> </table>				Unit: inches	J	M	W	Bust	37.5			Waist	30.5			Hip	38.5	40.5	42.5	<p>Size Range 04 to 26 Base Size 12</p>		<p>Size Range 02 to 18 and 18 to 26 Base Sizes 10 and 22</p>			<p>BASE SIZE 10</p> <table border="1"> <tr> <td>Unit: inches</td> <td>A</td> <td>B</td> <td>C</td> <td>D</td> </tr> <tr> <td>Bust</td> <td colspan="4">37</td> </tr> <tr> <td>Waist</td> <td>31.5</td> <td>30</td> <td>29.5</td> <td>43.5</td> </tr> <tr> <td>Hip</td> <td>39.5</td> <td>41</td> <td>42.5</td> <td>51.5</td> </tr> </table>		Unit: inches	A	B	C	D	Bust	37				Waist	31.5	30	29.5	43.5	Hip	39.5	41	42.5	51.5	<p>22</p> <table border="1"> <tr> <td>Unit: inches</td> <td>A</td> <td>B</td> <td>C</td> <td>D</td> </tr> <tr> <td>Bust</td> <td colspan="4">49</td> </tr> <tr> <td>Waist</td> <td>31.5</td> <td>30</td> <td>29.5</td> <td>43.5</td> </tr> <tr> <td>Hip</td> <td>39.5</td> <td>41</td> <td>42.5</td> <td>51.5</td> </tr> </table>	Unit: inches	A	B	C	D	Bust	49				Waist	31.5	30	29.5	43.5	Hip	39.5	41	42.5	51.5
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NAVAL SUPPLY SYSTEMS COMMAND
NAVY EXCHANGE SERVICE COMMAND

Digital Engineering ...

NCTRF

NAVY CLOTHING AND TEXTILE RESEARCH FACILITY

NEXCOM
NAVY EXCHANGE SERVICE COMMAND

Many of the Navy's Size Modernization efforts align with the Joint Clothing and Textile Modernization Initiative (JCTMI) holistic focus areas to integrate digital technologies, standardize processes, and maximize commonality to the greatest extent.

Uniform Fit Sample Development:

Use block patterns to attain Vendor Style and graded patterns that are validated. Streamline development and utilize industry capabilities that meet Navy Requirements.

Vendor "Kit" Guidelines:

A standardized framework outlining the required inputs, documentation, and expectation for external vendors.

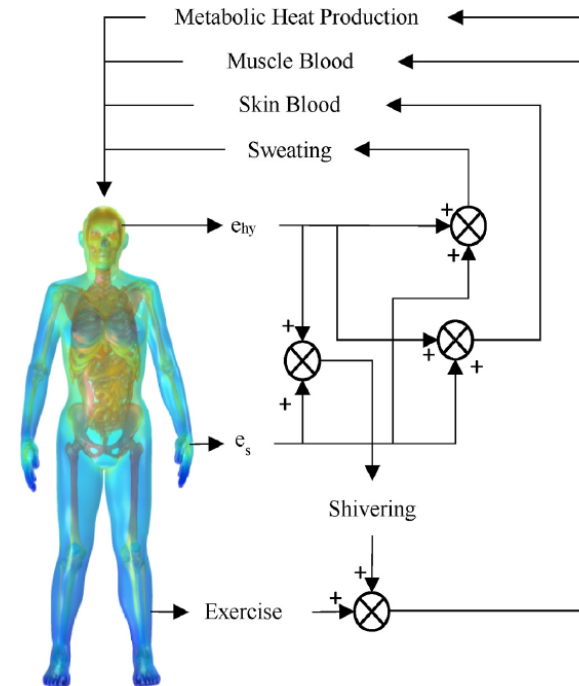
Industry Best Practice Process Map:

A comprehensive, end-to-end process map documenting industry-standard approaches to pattern development, sample iteration, and validation.

Digital Collaborative Framework:

A defined digital workflow for managing pattern development and facilitating communication across stakeholders, ensuring transparency, version control and efficient collaboration.

- Almost all US military protective and cold weather clothing uses unisex sizing and was designed for men.
- Navy and USAF aviation communities have some cold weather garments with women's specific designs.
- All previous US military thermal manikin studies have been done on manikin with man's body form.
- Comparative thermal manikin evaluations of women's specific and unisex designs of protective and cold weather clothing are needed.
- Thermal manikin evaluation of cold weather clothing and protective equipment on woman's body form to establish data to improve thermoregulation model and decision aids for women is needed.



Garment FIT MATTERS for Performance.

➤ NCTRF:

- is the Navy's premier uniform testing and evaluation organization
- is uniquely positioned within NAVSUP/NEXCOM to deliver its critical Quality of Life mission
- is a major contributor to warfighter readiness

Efficient, Agile, Innovative



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PMA-202 Naval Aircrew Systems

We deliver Aircrew and Maintainer Systems in order to optimize Naval Aviation's combat effectiveness



Presented to:

FEDTEX

Presented by:

Katrina Colucci-Chang, PhD
Clothing Systems Engineer, PMA-202

NAVAIR Public Release SPR-2026-0125. Distribution Statement A - "Approved for public release; distribution is unlimited".





NAVAL AIRCREW SYSTEMS



MISSION

We advocate for the human as a weapon system and equip our aircrew, passengers and aviation maintainers with life support and safety systems that optimize Naval Aviation's combat effectiveness



VISION

Provide sustainable, cost-effective life support equipment that enhances the human-as-a-weapon-system and prevents human performance as a limiting factor in achieving aviation combat superiority



BACKGROUND

The Naval Aircrew Systems program office (PMA-202) provides the systems that directly support aircrew, aviation maintainers and passengers in the performance of their missions, and consists of common components to enhance human performance, ensure survivability in combat environments, and facilitate recovery so downed aviators can live to fight another day



Clothing Systems Programs

- **Cold Weather Anti-Exposure System**

- With peer threats pushing aircrews further away from land/ship, increased mission time and potential Arctic operations, effective protection during extended flights and sea survival becomes more vital
 - Increase in-water thermal protection levels
 - Increase water intrusion resistance
 - Reduce in-flight thermal burden
 - Reduce movement restriction
 - Support extended missions and extended recovery durations



Maintainer Below the Neck Ensemble

- Provide support and improvements for fielded aircraft maintainer clothing to provide protection from fire, fuels and flight line contaminants
- Ensure clothing is effective in the hot & cold environmental conditions
 - Hot/cold/foul weather



Naval Aircrew Systems Concerns



- **Need for more robust industrial base**
 - Limited number of vendors on the Qualified Producer List (QPL) for anti-exposure suits and G-suits,
 - Requesting additional vendors apply to QPL
- **Long lead times**
 - Potential Government assistance for modernization of facilities
 - “Hard to get” material
 - Limited sources of supply
- **Materials Issues**
 - Limited availability of fluorinated Durable Water Repellency (DWR) finishes
 - Non-PFAS reduced performance
 - Reduced resistance to organic fluids n-tetradecane
 - Reduced soil resistance after hydraulic fluid exposure
 - Anti-exposure suit zipper concerns



PMA-202 Contact



Questions & Inquiries can be emailed to:

cynthia.m.stead.civ@us.navy.mil



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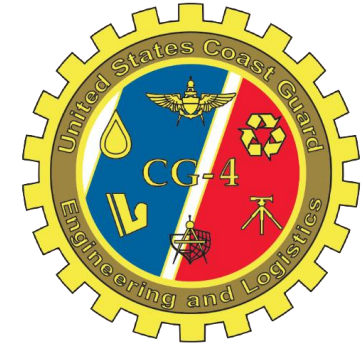
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USCG Uniform Update: FEDTEX

May 2026

Captain Lisa Garcez
USCG Division Chief- PSC PSD

Ms. Nancy Southwick
USCG Clothing Design & Tech Office



Force Design 2028

BLUF: Growth of the Coast Guard workforce (primarily enlisted members) to 60,000 by 2028

Contributing Factors:

- Aggressive goal - Service is still developing plans and processes to be able to recruit, access, and train new accessions
- Align Force Design 2028 objectives: Coast Guard is requesting to increase the Active Duty and Reserve end-strength as follows:

Active-Duty

FY 2026 – 50,000

FY 2027 – 55,000

FY 2028 – 60,000

Reserve

FY 2026 – 8,500

FY 2027 – 10,500

FY 2028 – 12,500



Planning Strategy

Ongoing Mitigation Efforts:

- Improve forecasting service needs (CG & DLA)
 - Align with critical dates i.e., graduation, transfer season etc.
 - Establish system to monitor the evolving uniform demand
 - Investigate tracking issued size vs best fit
 - MFG's ability to quickly adapt to changes in quantities & sizes
- Ensure MFG has proper tools & skill set to complete production of end item:
 - Required pre-production/first article sample
 - With potential first lot sample
 - Joint site visit (DLA Tech, Service, DLA Contracting)
- Ability to ramp up C&T vendors & resources to meet the anticipated demand of CG rapidly growing workforce
 - Fair price and reasonable lead time
- Improvement in 339s
 - Delayed 339 submission
 - Missing critical details
 - Incorrect information

USCG Uniform Items in Development

Future Supply Request Packages (SRPs) will be submitted to DLA:

- **Operational Dress Uniform (ODU):**
 - Evaluating duty uniform designs utilized by other services.
 - Commonality of design supports manufacturability.

- **Physical Fitness Uniform:**
 - “New” USAF PT T-shirt- Same design & color, with USCG emblem.
 - NEXCOM Optional short: Same design & blue color, with USCG emblem.

- **USAF Track Suit:**
 - 100% Poly, 4-way Mechanical stretch
 - Twill Fabric
 - Shade Critical, Color: Blue
 - Same shade & design as USAF with USCG emblem.
 - Estimated Annual Unit Quantity- 20K

USCG Uniform Shortages

Fleece Liner, 00600

Windbreaker, 02088

Coat, ODU, 03722

Trouser, ODU, 00030

Flat Front Slacks, 03522

Dress Trouser, 01763

Long Sleeve Blue Shirt, Women, 00148

Short Sleeve Blue Shirt, Men, 00146

White Pinpoint shirt, Women, 03895



White Pinpoint shirt, Men, 03924

Wash & Wear Slacks, 03996

Wash & Wear Trouser, 03856

Coats, Women, 03840

Coat Men, Athletic, 00522

Coat, Men, Standard, 03841



Fabric Sources Sought

➤ Poly/Wool Blend

- Service Dress Uniform
- Shade Critical, Color: Blue
- Serge or washable
- Berry Amendment or Kissell Amendment Compliant
- Estimated Annual Garment Quantity- 20K

➤ 5.0 oz/yd² Herringbone Cloth, Polyester/Cotton blend

- Winter Dress Blue Shirt
- Shade Critical, Color: Blue
- Open to comparable fabric design
- Berry Amendment or Kissell Amendment Compliant
- Estimated Annual Garment Quantity- 7K

Textile Materials & Findings: You Have It, We Want It!

- USCG is interested in evaluating additional sources and alternate fabric solutions to enhance supply chain stability and better support the operational needs of the user community. Including:
 - Poromeric material (footwear)
 - Pearlescent button
 - Printing (heat transfers, labels)

Tech Packs

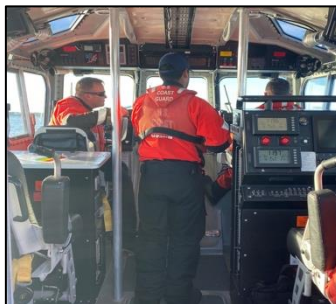
- The USCG is interested in collaborative discussions with industry focused on evolving the uniform technical data package process to improve efficiency, and long-term sustainment.



U.S. COAST GUARD CLOTHING DESIGN & TECHNICAL OFFICE (CDTO)

CDTO Overview:

- **NSSC tenant activity since 1990's**
- **Command: PSC Reorg to DCS 4 (Logistics)**
- **Team consists of 5 civilian members:**
 - 3 Clothing Designers
 - 1 Textile Technologist
 - 1 Program Assistant
- **Collaboration:** Joint service efforts and shared uniform items



Capabilities:

Product Design & Development

- Clothing & insignia item: design, development, product improvement
- Specifications/patterns/technical drawings
- Maintain USCG uniform items, insignia, hub, dies, medals and awards

Testing & Evaluation

- Arrange laboratory testing & analyze data
- Perform wear evaluations, surveys & focus groups
- Manage DLA requests/engineering support for all USCG uniform program items

Technical Data Package

- Provide documentation & patterns for USCG, the Exchange, DLA and Industry

Certification and Quality Assurance

- Uniform program fabric, uniform and insignia
- Establish/maintain shade tolerances & standards



Questions?



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Ms. Nancy Southwick
USCG Clothing Design & Technical
Office
Textile Technologist/Supervisor
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