



Project Manager  
Soldier Protection and Individual Equipment

# The Soldier

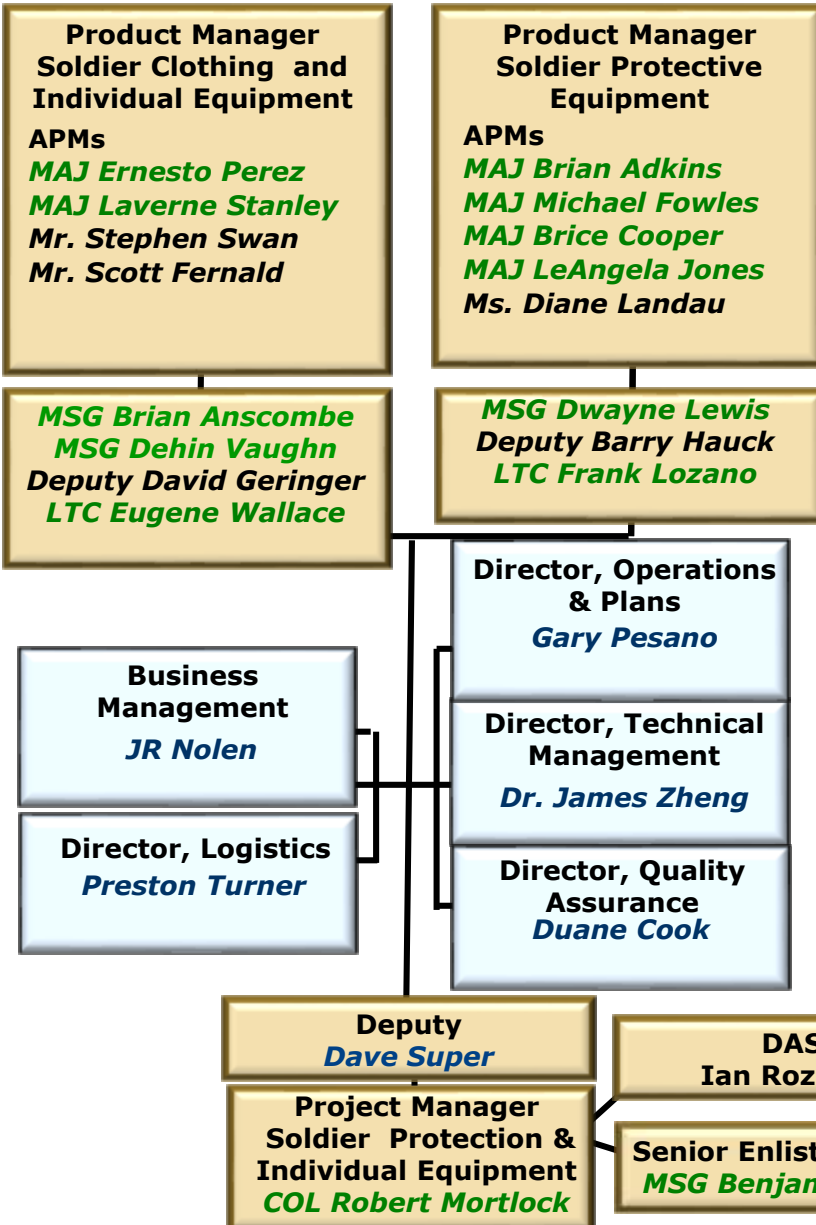
**Our Strength and Purpose**

**Project Manager (PM)  
Soldier Protection and Individual Equipment (SPIE)  
Program Overview  
To  
Joint Advanced Planning Brief for Industry**

**COL Robert (Bob) Mortlock, Ph.D  
Project Manager  
PM Soldier Protection & Individual Equipment  
7-8 May 2014**



# PM SPIE Leadership Organization Chart



## Fort Belvoir, VA

### PM SPIE Mission:

Develop and provide superior and sustainable integrated clothing and equipment in a rapidly changing global environment as well as provide Soldiers with the state-of-the-art protection to defeat and reduce threats associated with ballistics, blast overpressure, fragmentation, and heat.





# PM SPIE Focus

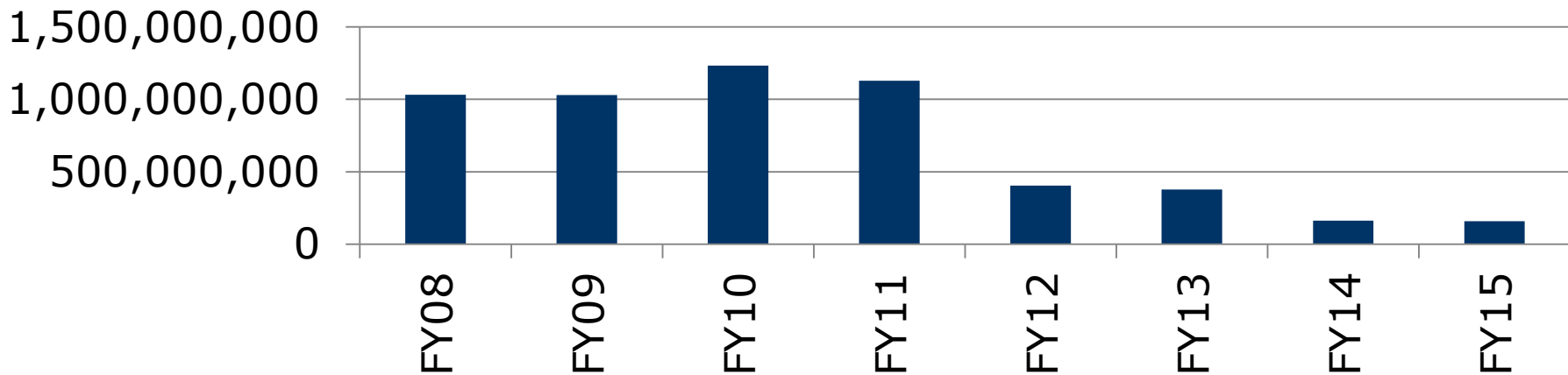


- Support to Operation Enduring Freedom (OEF)/ Rapid Fielding Initiative (RFI)
- Establishment of Enduring Programs of Record (PORs)
- Combat Uniform Camouflage Effort
- Deployer Equipment Bundle (DEB)
- Soldier Protection System (SPS)
- Clothing Bag Uniforms
- Tropical Uniforms and Equipment
- Arctic Warrior Uniforms and Equipment
- Female Specific Uniforms and Equipment

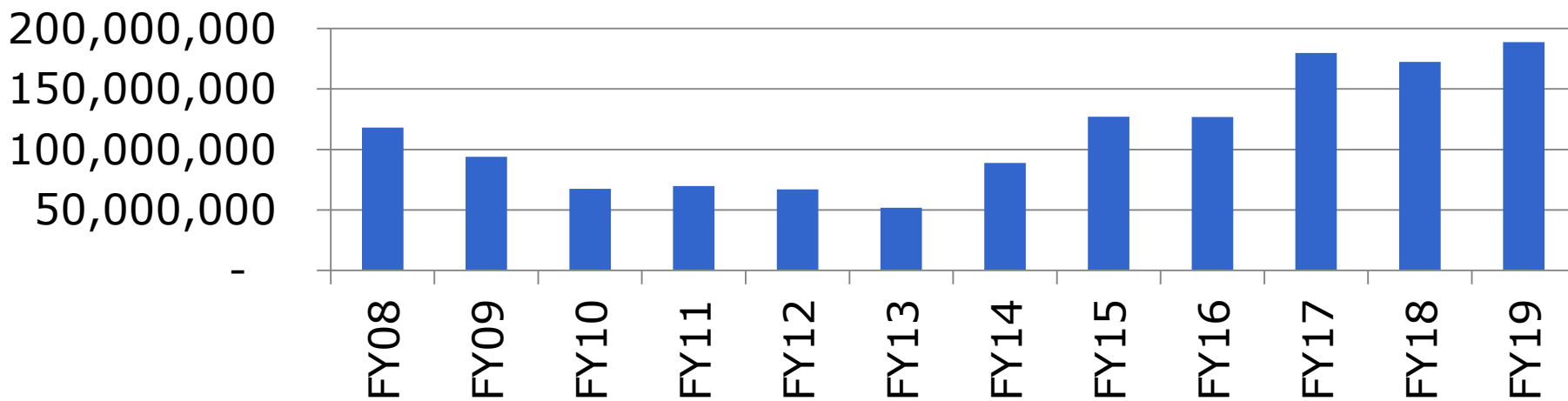


# OMA Funding

## Overseas Contingency Operations (OCO)



## Central Fielding & Funding (CFF)





# **Soldier Clothing and Individual Equipment**



# Product Manager Soldier Clothing and Individual Equipment

## Individual / Unit Equipment



Team Stove



Individual Water Treatment Device



Multi-purpose Personal Hydration System



Modular Sleeping Bag Systems



Army Mountaineering Kit



Individual First Aid Kit II (IFAK II)

## Tactical/Environmental Clothing



OCP Flame Resistant ACU



Fuel Handlers' Coverall



Army Aircrew Combat Uniform (A2CU)



Modular Ghillie Suit & Ghillie Suit Accessory Kit (GSAK)



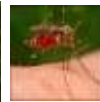
Lightweight Performance Hood (LPH)



Improved Combat Vehicle Crewman (iCVC) Ensemble



ACU - Permethrin



JSLIST



FR-ACU



Army Combat Shirt



Army Combat Pant (ACP)



JPACE



Fire Resistant Environmental Ensemble



Extended Cold Weather Clothing System

## Hand and Foot Wear



Mountain Combat Boot



Temperate Weather Mountain Combat Boot



Hot Weather Mountain Combat Boot



Combat Gloves

## Personal Clothing



Army Combat Uniform (ACU) & Ancillary items



Army Physical Fitness Uniform (APFU)



Army Service Uniform



ACU-Alternate (ACU-A)



# Cold Weather Clothing



## Where We Are:

- Flame Resistant Environmental Ensemble (FREE):
  - DLA competing sustainment contracts at the component level to support Aviators and Mounted Soldiers



- Extended Cold Weather Clothing System (ECWCS) GEN III
  - In sustainment via DLA at the component level



## Where We Are Going:

- Merge capabilities of FR and Environmental Protection into one system with reduced bulk for all Soldiers
  - SEP Effort approved by the SEP Council 2FY14
  - Results will help develop CPD performance requirements



# Clothing Bag Team



## Improved APFU

### Where We Are:

- Improved Army Physical Fitness Uniform
  - Increased durability, moisture Management and comfort
- Army Combat Uniform Alternate (ACU-A)
  - Alternate sized ACU for small statured Soldiers



## Garrison FSU



### Where We Are Going:

- Developing a CPD for an improved Food Service Uniform (FSU) that will provide increased protection while improving the professional appearance of Food Service Soldiers





# Flame Resistant (FR) Clothing



## Where We Are :

- As a result of Wartime requirements, we have developed and fielded via RFI, the following clothing items:
  - Flame Resistant Army Combat Uniform (FR ACU)
  - Army Combat Shirt (ACS)
  - Army Combat Pants (ACP)
  - Army Aircrew Combat Uniform (A2CU), including Female sizing
  - Improved Combat Vehicle Crewman Coverall (iCVC)
  - Joint Use FR Fuel Handler Coverall

FR ACU



A2CU



## Where We Are Going:

- Establishing enduring requirements for the FR ACU, ACP, eCVC and A2CU
- Defense Acquisition Challenge- Information feeding requirement for a two-piece material solution for eCVC
- Planned improvements to the A2CU (improved fabrics, female sizing)



# Boots



## Where We Are :

- Mountain Combat Boots (MCBs) developed to support Warfighting mission in mountainous terrain
- Hot Weather Flyers Boot updated to support OND/OEF operations

## Where We Are Going:

- Enduring requirement for a temperate and hot weather variant Mountain Combat Boot
- Enduring requirement for development of a tropical/jungle boot

**Hot Weather Mountain Combat Boot**



**Temperate Weather Mountain Combat Boot**





# Load Carriage & Hydration



## Where We Are:

- Modular Lightweight Load-carrying Equipment (MOLLE)
- Developed Medium Ruck for Deployers

## Where Are Going:

- Integrated Load Carriage (ILC) System
  - ILC CDD being developed with focus on:
    - Integration with a new Body Armor System
    - Reduction and Disbursement of weight
    - Reduced bulk
- Individual Water Treatment Device (IWTD) will provide Soldiers the ability to hydrate while on the move from indigenous water sources
  - Program initiation anticipated 4FY14
- Multi-Purpose Hydration System (MPHS) will provide Soldiers the ability to hydrate in a Chemical environment
  - Material Development and Production Decisions anticipated 4FY14

MPHS



(IWTD Example)





# Soldier Protective Equipment



# Product Manager Soldier Protective Equipment



GEN II Helmet Sensor



Combat Vehicle Crewman Helmet (CVCH)



Advanced Bomb Suit (ABS)



Enhanced Small Arms Protective Insert (ESAPI)



X-Threat Small Arms Protective Insert (XSAPI)



Pelvic Protection



Low Profile Concealable Body Armor



Family of Concealable Body Armor (FoCBA)



Military Combat Eye Protection (MCEP)



Non Destructive Test Equipment (NDTE)



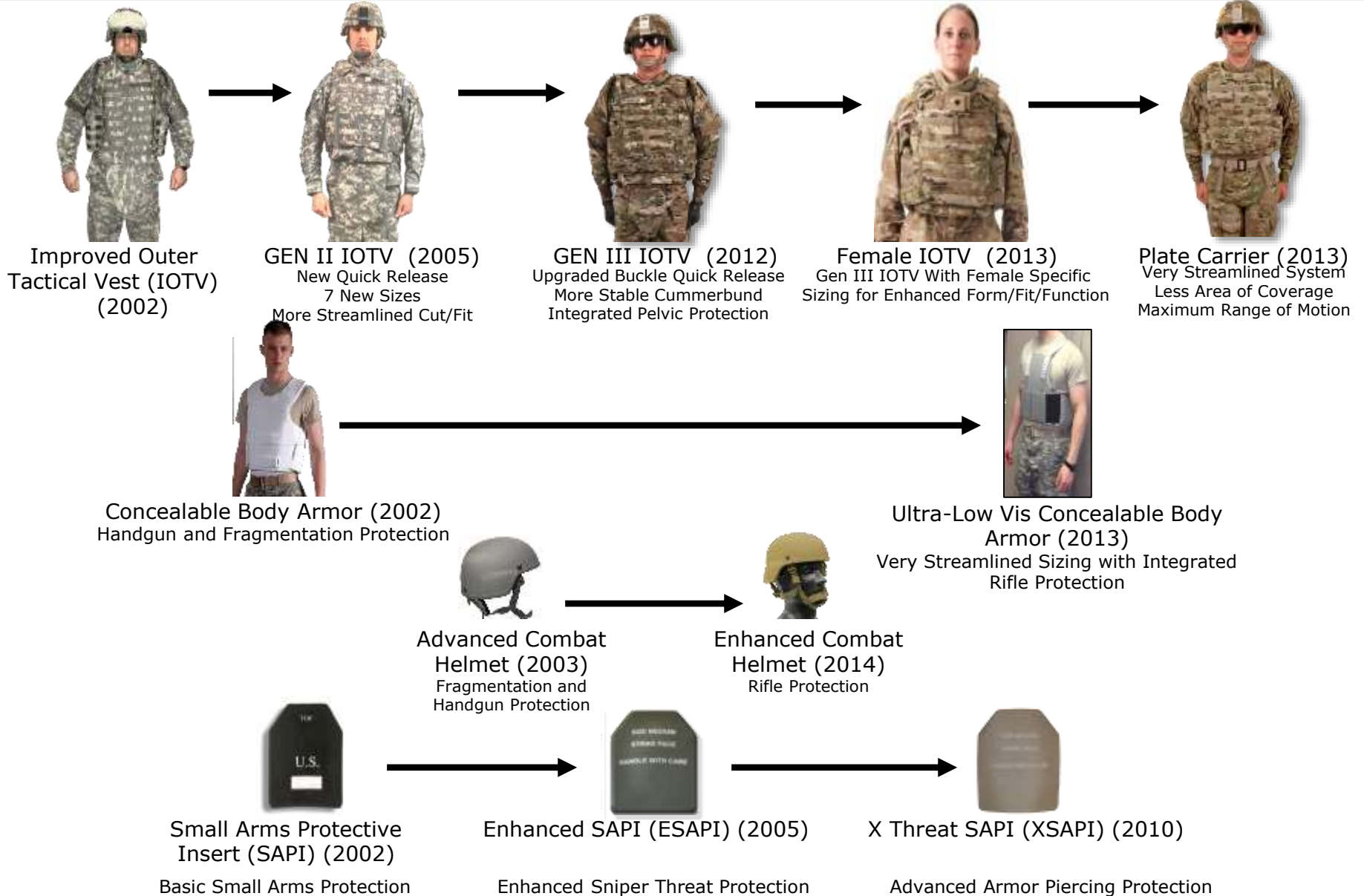
Enhanced Side Ballistic Insert (ESBI)



X-Threat Side Ballistic Insert (XSBI)



# Force Protection Evolution





# Soldier Protection System (SPS) (Integrated, Modular, Mission Tailorable)



## Vital Torso Protection (VTP)



Enhanced Small Arms Protective Inset (ESAPI)



Enhanced Side Ballistic Insert (ESBI)



X Threat Small Arms Protective Inset (XSAPI)

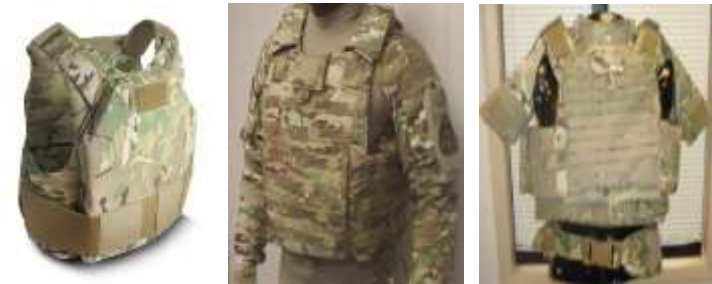


X Threat Side Ballistic Insert (XSBI)



SPS Integrated Head Protection System Designs

## Torso Protection (TP) Integrated Capabilities



## Integrated Soldier Sensor System (ISSS)

Blast Overpressure Gauge

SEN IN Helmet Sensor



USB Connection

Wireless Connection

Physiological Status Monitor



Transitional Combat Eye Protection (TCEP)



## Extremity Protection (EP)

Protective Under Garment Protective Outer Garment



**Soldier Protection System (SPS) replaces the capability of multiple current systems and provides Soldiers a 10% weight reduction – reducing Soldier Load!**



# Helmets



## Where We Are:

- Lightweight Army Combat Helmet (ACH):
  - Reducing weight while maintaining ballistic protection
- Enhanced Army Combat Helmet (ECH):
  - Procured to support OEF operations
  - Increased ballistic protection at ACH weight

ECH



## Where We Are Going:

- Enduring requirement to the Integrated Head Protection System (IHPS)- Increased protection and reduced weight:
  - Modular Helmet
  - Maxillofacial Protection
  - Transitional Combat Eye Protection (TCEP)
  - Modular Ballistic Appliqué

Maxillofacial Protection







# Soft Armor



## Where We Are:

- Improved Outer Tactical Vest (IOTV)- Improved over years and lessons learned to support wartime needs
  - GEN II-IV, FIOTV

## Where We Are Going:

- Enduring requirement for Torso and Extremity Protection:
  - Scalable, Mission-Tailorable Body Armor
  - Base Vest to full-up Ballistic Coverage Vests
  - Pelvic Protection-
    - Improved ballistic over and under garments





# Hard Armor



## Where We Are:

- Enhanced Small Arms Protective Insert (ESAPI)/ Enhanced Side Ballistic Insert (ESBI)
- X Threat Small Arms Protective Inserts (XSAPI)/ X Threat Side Ballistic Insert (XSBI)

## Where We Are Going:

- Enduring requirement for X threat variant and E threat variant at reduced weight and bulk





# Eye Protection

## Where We Are:

- Authorized Protective Eyewear List (APEL)- PM SPE tests commercial-off-the-shelf (COTS) eyewear to ensure compliance with military standards
- Combat eyewear sustained at Central Issuing Facilities(CIFs)

## Where We Are Going:

- Enduring requirement (part of IHPS)
- Transitional eyewear will be capable of adjusting to varying light conditions while providing increased ballistic fragmentation protection



TCEP





# Jungle Uniform and Equipment



## Where We Are :

- Jungle Boot: FY14 Soldier Enhancement Program (SEP) initiative
  - Durable in jungle environments (high humidity)
  - Quick drying and highly breathable
  - Drainage for evacuation of water
  - Pronounced heel to allow for improved grip
  - Outsoles that allow for braking on wet, muddy slopes
  - Tread/Lug pattern that easily sheds mud and debris
  - Keep mud and debris out of boot in water & deep mud

## Where We Are Going:

- Establishment of enduring requirement and program of record





# Arctic Warrior Uniforms & Equipment



## Where We Are :

- Soldier Enhancement Program (SEP) approved:
  - Arctic Canteen with Cup and Cover
  - 4 Glove System
  - Extreme Cold Weather Socks
  - Balaclavas
  - Light Loft Jacket
  - Ski Binding
  - Extreme Cold Weather Fuel Handler's Glove

## Where We Are Going:

- Gaiter/Over-Boot: An effort to develop a stand-alone, insulated gaiter/over-boot
- Establishment of enduring requirement and program of record





# Female Specific Sizing Uniforms and Equipment



## Army Combat Uniform-Alternate

The ACU-A offers 32 additional sizing choices that will accommodate Soldiers with smaller physical stature

**ACU**      **ACU-A**

- Bi-swing placement adjusted inward
- Shoulder width narrowed
- Repositioned rank
- Adjusted sleeve length and width
- Repositioned elbow patches
- Repositioned pencil and sleeve pockets
- Adjusted chest waist and sweep ratio
- Longer length front and back
- Adjusted hip to waist ratio
- Adjusted front and back rise
- Repositioned knee patches

Items not shown:

- Removed drawstring; added elastic waistband
- Shortened button fly
- Repositioned pockets (lower leg and cargo)



## Fire Resistant Environmental Ensemble (FREE)

- Provide female Aviators, or other female Soldiers that require No Melt/No Drip or Flame Resistant undergarments within the Fire Resistant Environmental Ensemble (FREE) system
- Increase overall comfort and support for female Soldiers while using the FREE system without sacrificing burn protection from flash flame threats



## Army Aircrew Combat Uniform (A2CU)

- The A2CU is a two-piece flight suit that offers the Soldier protection from flash fires
- The A2CU Alternate provides fit improvements for the female Soldier and the same level of flame resistant (FR) protection as the A2CU

**A2CU-A**

- Reshaped hips
- Changed waist design to partial elastic

**A2CU**      **A2CU-A**      **A2CU-A**      **A2CU**

- Back fullness reduced
- Shoulders narrowed
- Sleeve fullness reduced
- Waist/tunnel reshaped
- Reduced leg width
- Sleeve length shortened

The F-IOTV is a variant of the IOTV Gen III that was designed by NSRDEC. The sizing system for the Female IOTV accommodates the female population across 8 new sizes.

## Female Improved Outer Tactical Vest (F-IOTV)

- The vest incorporates a darted front panel which curves the vest around the chest for better coverage.
- The vest is shorter in length, which enables female soldiers to sit without the vest riding up.
- The vest has narrower shoulders and provides additional shoulder and waist adjustments.
- A redesigned collar, which better accommodates the hair bun worn by many female Soldiers.
- All sizes use current IOTV plates.



"I could wear this all day!"  
 "I could run a marathon in this."  
 "Are these the same plates?"  
 "They feel much lighter!"  
 "Can I have this one?"  
 "When are we going to get these?"  
 "It's about time!"

