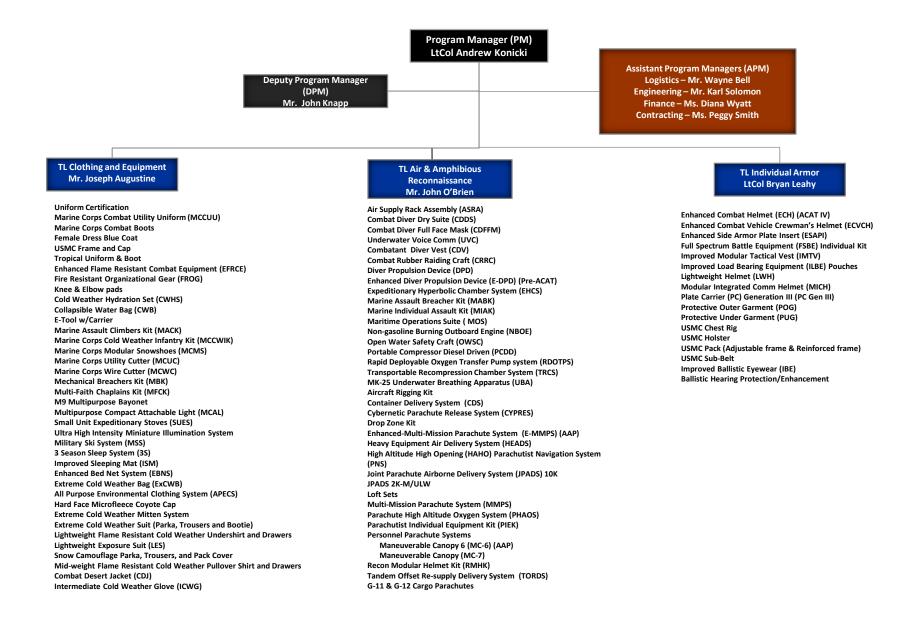


# Program Manager Infantry Combat Equipment JAPBI

6 Nov 19

## MARINE CORPS SYSTEMS COMMAND





# **Areas Where Industry Can Help**

- Lighter & flexible body armor/plates
- Integrated helmet solution
  - Improved suspension system for helmets
  - Hearing protection/enhancement
- Extreme cold weather improvements
- Flame resistant fabrics
- SWIR mitigation
- Maternity uniform improvements
- Sensors biometrics
  - Networked & wireless sensors
  - Controlled sensor emissions through cueing
  - Sensor data fusion



<image/>	<ul> <li>Program Concerns/ Important Topics</li> <li>D-UNS states fielding to Infantry/Infantry-like (27,499)</li> <li>Fielding focus: Infantry, Recon, Combat Engineers, LAR, ANGLICO</li> <li>Artillery may be added in the future.</li> <li>Additional \$17.8M in FY20-21 OMMC being requested through CCLTF and POM-21 to procure AAO</li> </ul>
<ul> <li>Program Fielding Status/ Updates</li> <li>Infantry Helmet D-UNS, 1 Feb 2018</li> <li>RFI Released 4 June 2019</li> <li>Send Invitation Letters Nov 2019</li> <li>Award OTAs Jan 2020</li> <li>Final Prototypes Due January 2021</li> <li>Initial Fielding FY22</li> </ul>	<ul> <li><u>Configuration/ Integration Information</u></li> <li>IHS will have an increase in ballistic protection</li> <li>Provides improved integration with hearing protection/enhancement and Binocular Night Vision Goggles</li> <li>Increased comfort and stability</li> </ul>



# **MARINE CORPS SYSTEMS COMMAND** Equipping our MARINES

Hearing Enhancement	Program Concerns/ Important Topics
	<ul> <li>Synchronize NET with PC Gen 3 NET</li> <li>Releasing AMHS Distribution message</li> </ul>
Program Fielding Status/ Updates	Configuration/ Integration Information
<ul> <li>DLA TLSP purchase July 2019</li> <li>Estimated Delivery Date: Begin November 2019 and Complete March 2020</li> <li>Distribution to Artillery and Recon units</li> <li>Artillery: 2,244 Non-Comm Headsets and 627 Comm-Enabled Headsets with Push-To-Talk</li> <li>Recon Units: 1,336 Comm-Enabled Headsets with Push-To-Talk</li> </ul>	<ul> <li>Shipped with a single comm cable to connect to Squad Radio and dual comm cable for connection to AN/PRC-117/117G/119/148/152</li> <li>Compatible with Combat Arms Earplugs IV for double-hearing protection requirements</li> </ul>



# MARINE CORPS SYSTEMS COMMAND

**Equipping our MARINES** 

# Mountain Cold Weather Clothing & Equipment Program (MCWCP)



#### Program Status

- □ AAO: Required/Fielded
  - □ Cold Weather Undergarments, Silk Weight: 972,000
  - □ Cold Weather Undergarments, Grid Fleece: 486,000
  - □ Extreme Cold Weather Set: 140,000/140,000
  - □ Hardface Fleece Caps: 168,833/168,833
- Special Issues: System review underway completed comparison evaluation against Norwegian cold weather clothing
  - □ Examine wool for base layers and level 3 insulation layer
  - □ Wool/waterproofing for Caps and balaclavas
- □ Follow-On Strategy: Update and refine products based on user evaluations and after action reports

#### **Program Description**

- □ The MCWCP is a family of cold weather clothing items. The cold weather clothing is designed to support Marines operating in wet/cold and dry/cold or mountainous environments with a threshold temperature range from 4.4 to -31.6 °C (40 to -25 °F) when used as a system. The objective temperature range extends down to -37.2°C
- Submitted SRP modification for secondary closure for APECS parka. Contract modified and new version available in Aug 2019
- □ Common efforts with Army: Snow Overwhites, Happy Suit, and LWES
- Planning underway for User Evaluations on improvements to Layer 1, Layer 3, ICW boots, handwear and headwear at MWTC and Norway Jan-Mar 2020

#### Key Milestones

Event	Date
FOC Attainment	FY12
Next ILA	FY20
Next In-Service Review	FY19
Winter evaluations	Jan-Mar 2020
Item Exit Date	Various



# **FY20 Winter Evaluations**

# **CWC Layers:**

- Product improvements to Level 1 and 3 to improve wicking/moisture transport and drying time
  - Explore mesh underwear for level 1.
  - Improved level 3 that improves moisture transport (wicking), dry time, and insulation – wool or synthetic
- Soft shell uniform solution for insulation and quick drying
  - o from sweat and precipitation
  - o in a wet-cold environment.
  - o More breathable than APECS
  - Reduces sweat build up and condensation inside the garment.

### Headwear

Balaclava - open face balaclava design to improve drying time, warmth, and wind protection



ECW Cap - capability gap of an insulated, wind resistant, and highly water resistant headwear item







## Gloves

#### **Contact/Combat Glove**

- Touch Screen
- 🛛 FR
- □ Water repellent
- Evaluated candidates at MWTC and Norway during FY2019 winter User Evaluations – durability suffered



#### Intermediate Cold Weather Gloves

- Procurement complete
- Reworked entire stock to repair faulty thumb crotch
- Final delivery order executed June 18 for 10,982 additional ICWGs



#### **ECW Mittens**

- Looking at Army requirement.
- Joint requirement will result in better sustainment and economy of scale.
- □ Addition of trigger finger
- Generate joint mitten specification for DLA.

#### Inserts

Looking to develop Type II Wool Insert in addition to FR Light Duty Glove Insert (use with black leather shell or mitten)



FR

- Maintain current MCCUU attributes, including 50

- Cost increase: < 5% (objective) / < 10% (threshold)

- FR durability: 100 (objective) / 50 (threshold)

- Minimal impact on non-FR performance

Low-Cost and Durable FR Treatment to the Marine Corps

Combat Utility Uniform (MCCUU)

USMC & Army – Natick R&D

laundering cycles

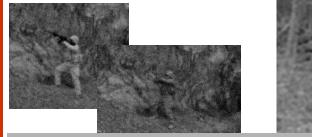
wash cycles

□ SBIR – FR MCCUU

# NexGen MCCUU

### SWIR

- USMC and Army effort with CCDC Soldier Center & NSWC Dahlgren
  - Objective: Reduce/eliminate SWIR detection from uniforms and equipment
  - Solution: Passive Modifications to Existing PPE (paint/pigment)
- SWIR signature mitigation of deployed warfighter (USMC and US Army) combat kit (uniforms and 500D nylon load carriage)
- □ Apparent Reflectivity signature measurement reduction





Baseline MARPAT vs. Proof Of Concept SWIR Developmental Materials.

# Intent is to merge SWIR Mitigation and FR into the NexGen MCCUU

#### Where We Are Going:

- □ FY 20 Publish Changes to Fabric Specifications & Item Purchase Descriptions
- □ FY 21 User Evaluations on changes refine Fabric Specifications & Item Purchase Descriptions
- □ FY 21 Transition to production with final changes to Fabric Specifications & Item Purchase Descriptions
  - Phased approach encompassing ICE items (uniforms, load carriage)
  - Prioritization on combat uniforms and load carriage items pending contract renewal





### Modify exiting Service Green Tunic and maternity shirt

- Add color (Black)
- Add adjustable side tabs
- Add elastic bunching
- Certify Nursing T-Shirt for optional purchase in MCX Certify Maternity T-Shirt for optional purchase in MCX
- Follow on pattern change for DLA support

Using existing Maternity Service Green trousers and skirt as baseline.

- Add colors: Black (Skirt) and Sky Blue (Slacks) (Dress Uniform)
- Modify all deigns to include 360° belly panels on Service and Dress skirt/slacks



# **Questions?**



### **Clothing & Equipment**

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