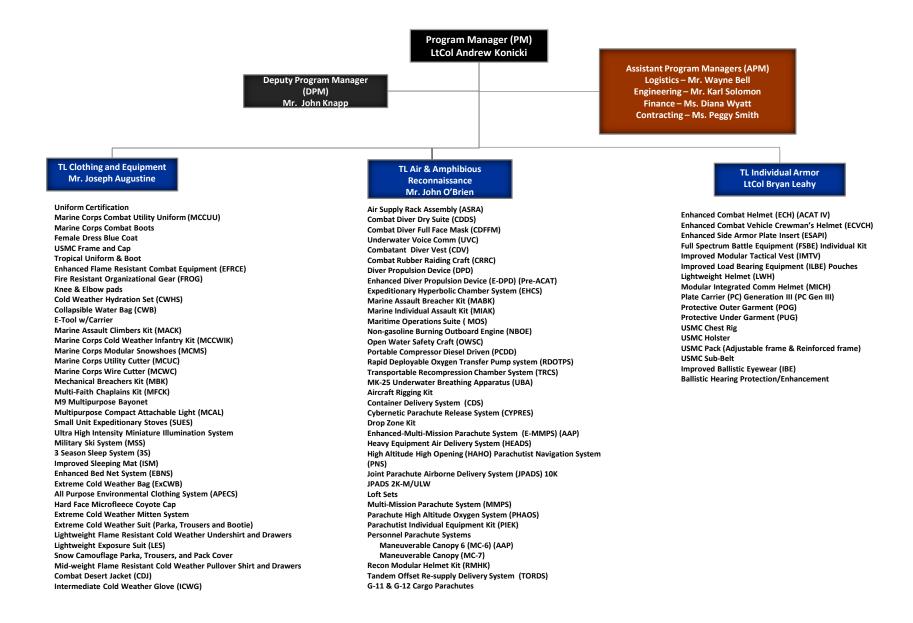


Program Manager Infantry Combat Equipment JAPBI

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



MARINE CORPS SYSTEMS COMMAND Equipping our MARINES

Hearing Enhancement	Program Concerns/ Important Topics
	 Synchronize NET with PC Gen 3 NET Releasing AMHS Distribution message
Program Fielding Status/ Updates	Configuration/ Integration Information
 DLA TLSP purchase July 2019 Estimated Delivery Date: Begin November 2019 and Complete March 2020 Distribution to Artillery and Recon units Artillery: 2,244 Non-Comm Headsets and 627 Comm-Enabled Headsets with Push-To-Talk Recon Units: 1,336 Comm-Enabled Headsets with Push-To-Talk 	 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 Compatible with Combat Arms Earplugs IV for double-hearing protection requirements



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

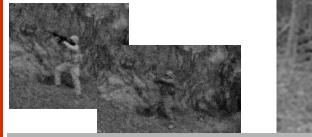
wash cycles

□ 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?



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