



Project Manager Soldier Weapons

**EVERY SOLDIER,
EVERYWHERE, EVERY DAY**



Project Manager Soldier Weapons Ammunition Programs

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Product Manager
Individual Weapons

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Crew Served Weapons

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Program Executive Officer Soldier

20 May 2009

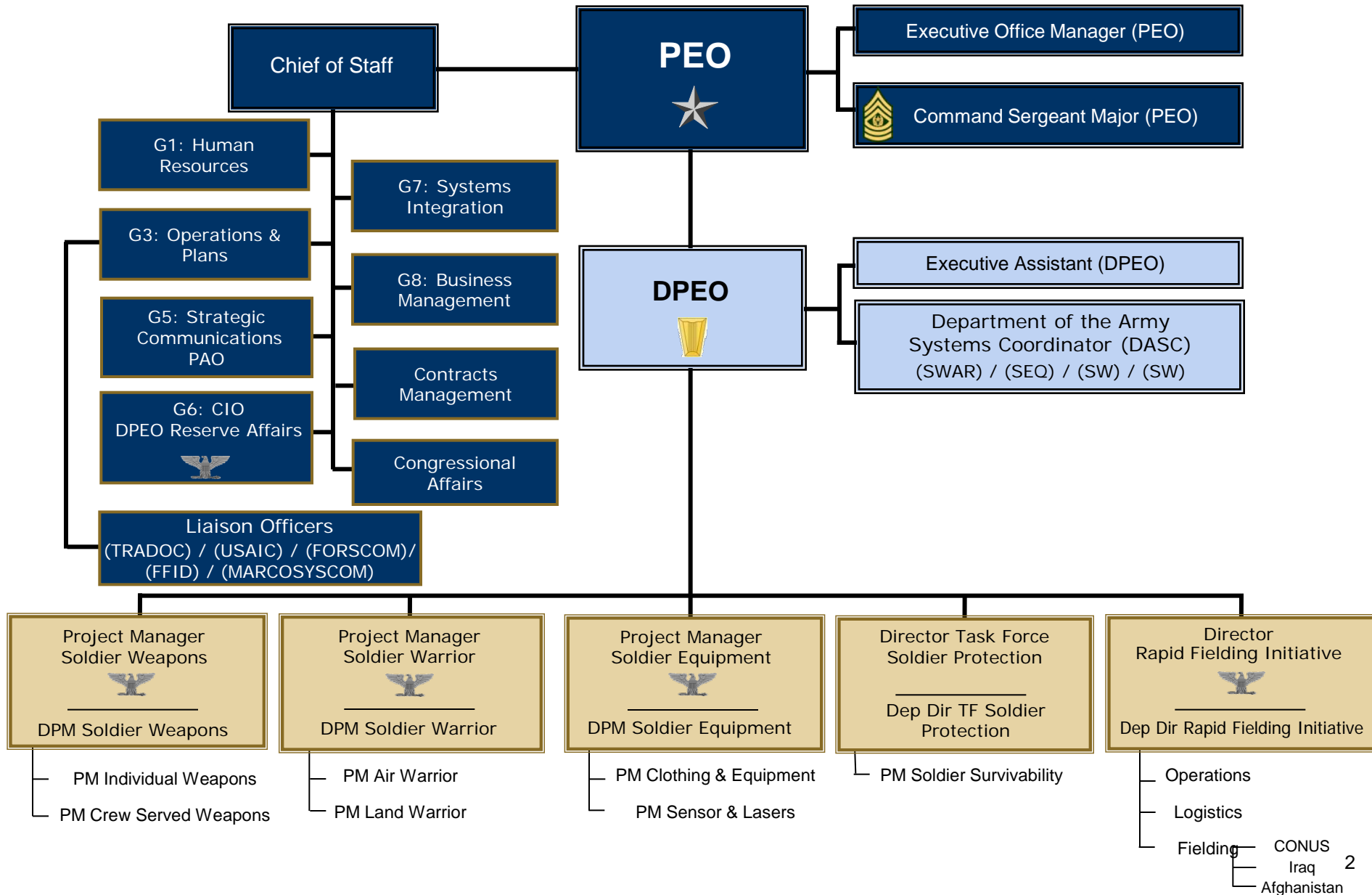
COL Douglas A. Tamilio
Project Manager Soldier Weapons



Program Executive Office Soldier

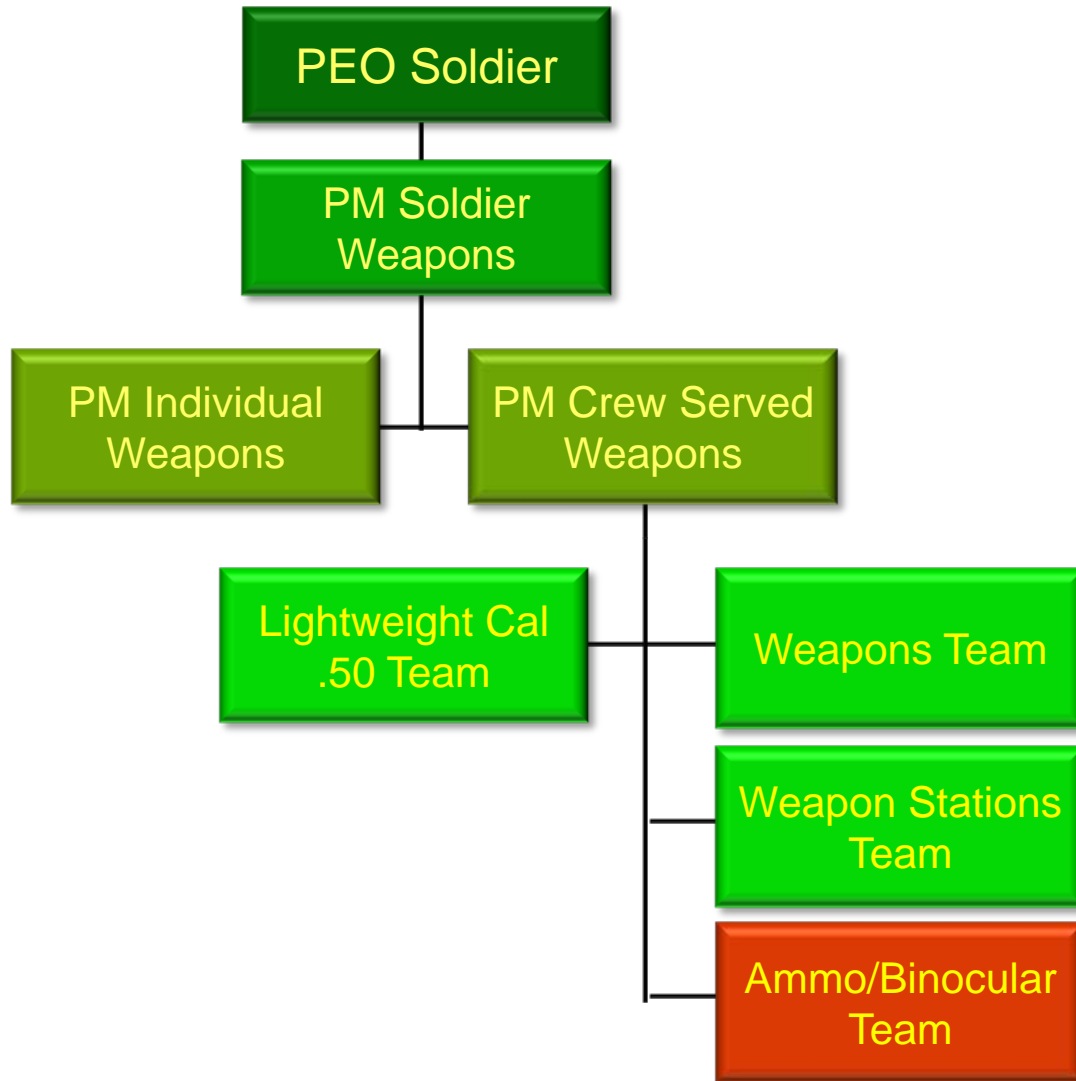


As of 20 April 2009





Organizational Tree





Small Arm Systems Improvements



- View Small Arms as **Systems**

- Weapon
- Fire Control
- Ammunition

Programs Coordinated with PEO Ammo

- Concur on Acquisition Strategy
- Concur on Executive Summary

- RDT&E of Ammunition for Existing Weapon Systems

- Includes Small Cal and 40mm Development Projects
 - Tactical/Lethal
 - Lightweight
 - Training
 - Non Lethal



PM CSW Ammo Team



Rob Zienowicz Ammunition Team Chief - PM Crew Served Weapons Office

Percy Mistry

XM1112 40mm Airburst Non Lethal Cartridge
Micro Electro-Mechanical S&A

Brian O'Neill

M862 5.56mm Short Range Training Cartridge
M1030 12 Gauge Breaching Cartridge

Ben Wong

M100 GREM / M101 GREM-TP
M903/M962 Cal .50 SLAP/SLAP-T
M973/M974 7.62mm Short Range Training Ctg

Gene Hudson

XM1037 5.56mm Short Range Training Cartridge
M1041/M1042/M1071 CCMCK Ammo

Fred Fitzsimmons

XM1110 40mm Day/Night TP Cartridge
M24 Minature Binocular
M25 Stabilized Binocular

Audrey Shabazz

Lightweight Small Caliber Ammo
XM1116 12 Ga Extended Range Non Lethal Ctg
XM1140 40mm Extended Range Non Lethal Ctg

George Dieterle

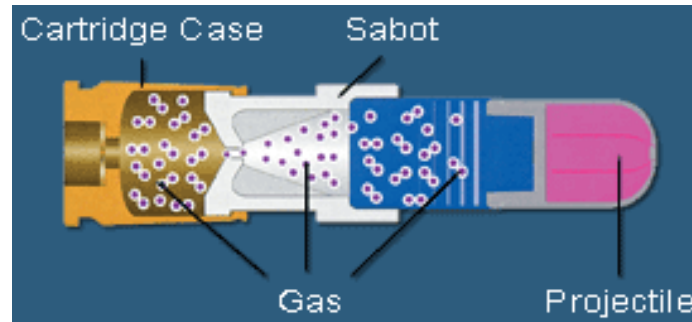
Improved 9mm Cartridge
40mm Close-In Antipersonnel Cartridge
M992 40mm Infrared Illumination Cartridge

PM-SW Managed

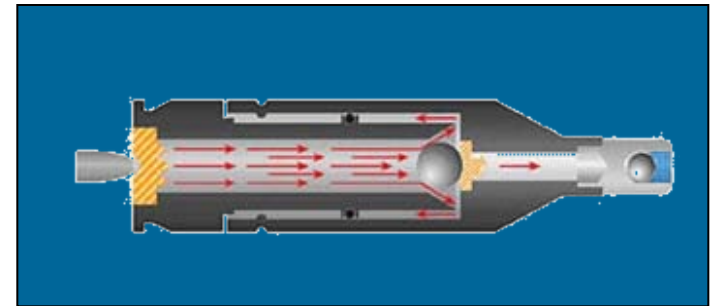
Support to PM-MAS FY09 Production



Close Combat Mission Capability Kit (CCMCK)



- Operator Installation
- Must Not Fire Service Ammo
- Not Fracture SWD Goggles at 12 in
- Fire From Standard M4/M16/M249/M9/M11
- Not Penetrate Skin Thru Hot BDU at 5M (T) 0M (O)



Milestone C Approved July 2008



Close Combat Mission Capability Kit



Rifle
XM1042



SAW
XM1071



Pistol
XM1041





Close Combat Mission Capability Kit



Rifle



SAW



Pistol



XM1037 5.56mm Short Range Training Ctg



- Ballistic match with standard ammo out to 100m
- Maximum Range 600m
- M4, M16, M249 Series Weapons
- No Weapon Modification

Program Objective:

Development

- Developmental Program
- Initial Production Start up – FY10

Next Major Milestone – Conduct Developmental Test

- Conduct Limited User Evaluation
- ATC Final Report
- ATEC Independent Evaluation (OER)



Lightweight Small Caliber Ammunition



Objectives

To develop a functional alternative 7.62mm M80 Ball and M62 Tracer cartridges assembled with an alternative case material

- 20% weight savings
- Meets current ballistic performance
- Manufactured using standard industrial techniques
- Assembled on LCAAP loading machinery

Move on to:

- 7.62mm Blank
- 5.56mm Ball
- 5.56mm Blank
- Cal .50



Lightweight Small Caliber Ammunition



- **Feasibility – Computer Modeling & Studies**
- **Phase 1 – Demonstration**
 - Test full up cartridges in a Mann barrel
 - Machinegun tests
- **Phase 2 – Development & Production Prove - Out**
 - Ballistic testing
 - Product refinement
 - Ensure compatibility with production equipment
- **Phase 3 – Production Qualification Testing (PQT)**



Lightweight Small Caliber Ammunition



Weight Of **5** Assembled
LSCA M80 Cartridges =
4 Conventional Brass
Cased M80

- Accomplishments
 - Weight reduction objective met
 - Demonstrated F&C with M240 Machinegun in Ball & Tracer configurations
 - Complies with MIL-C-46931 Specification
 - Compatible with conventional loading equipment



Improved 9mm Ammunition



- Develop an Environmentally Friendly 9mm Cartridge that will Exhibit Better Performance Than Current Leaded M882
 - Operational In M9 & M11 Weapons
 - Improve Lethality
 - Meet NATO Requirements
 - Utilizes Latest Science And Technology To Improve Upon All Aspects Of The Round (Environmental Compliance, Accuracy)
 - Ballistically Matched To M882
 - Cost Equivalent to M882

- Two Phased Approach
 - Study Determines Feasibility of Alternative Designs
 - Perform Qualification of Selected Design





XM1116 12 Ga Ext Range NL



- Based on Urgent Requirement for XM1092
- Blunt Trauma Non Lethal Munition
- Capable of Marking Targets
- No Weapon Modifications Required
- Range 5-75 Meters





XM1140 40mm Ext Range NL



- Based on Urgent Requirement for XM1091
- Blunt Trauma Non Lethal Munition
- Capable of Marking Targets
- Fired From M203/M320
- Range 10-80+ meters



Notional Pending Source Selection

40mm Airburst Non-Lethal Munition, XM1112



Develop A Cartridge That Provides Non Lethal Effects Through Blast Characteristics (E.G. Flash & Sound) Without The Range Limitations Encountered With Traditional Blunt Trauma Munitions



Capabilities:

Increased Range (300m (T), 400m (O)) for Crowd Dispersal Capability with 40mm systems.

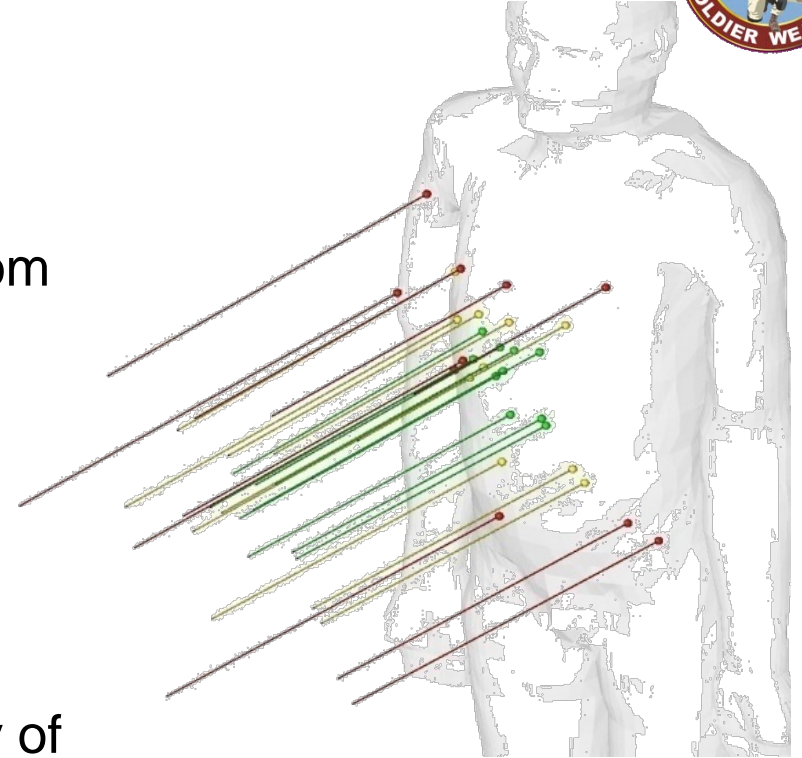


40mm Close-In Antipersonnel (CIAP)



Description:

- Low velocity 40mm cartridge fired from M203 and M320 grenade launchers
- Expels multiple projectiles providing anti-personnel capability at short ranges
- Evaluate buckshot versus flechette cartridges for lethality and probability of a hit

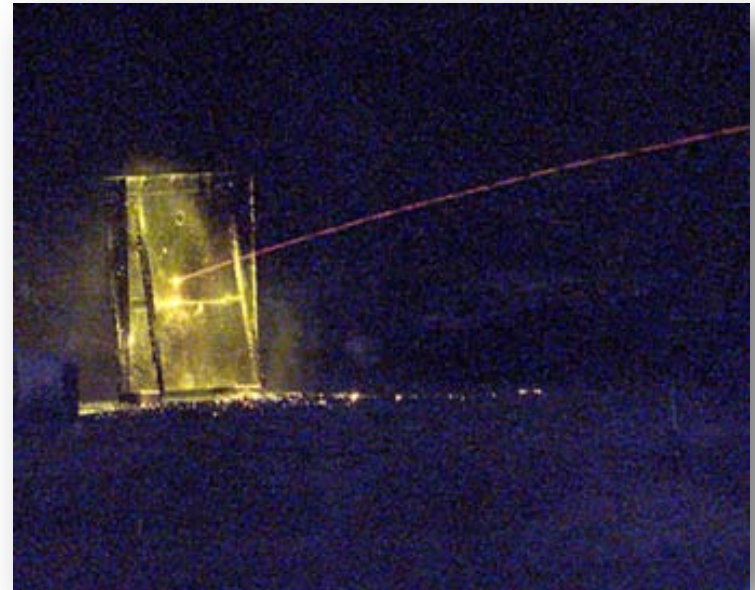




XM1110 Improved 40mm Training Cartridge



- Contains Both A Day And Night Signature And W/Improved Performance On Soft Targets
- Annular Groove In Ogive
- Payload = M781's Orange Powder Plus Glow Stick Mix In Glass Ampoules
- Non Dud Producing /No Pyrotechnics/ No Brush Fires
- Compatible W/ All 40mm LV Grenade Launchers
- Developed To Support SOCOM'S EGLM W/ Day-night Sights
- Marks With Visible Light For Night Time TP Capability



XM1110



M781



Micro Electro-Mechanical S&A (MEMS)



Goal: Develop Mechanical safety and arming (S&A) device and explosive ink writing technology for the M433 & M430A1 40mm HEDP cartridges

- New fuze with electronic initiation, improved target sensing, self-destruct capability, command-arm-enable function, more accurate arming distance, lower volume & cost
- Improved reliability on soft targets and in graze impacts using paired MEMS omnidirectional impact sensors (g-switch)

Objective:

- Reduced fuze volume
- Equal to or better Lethality and penetration
- Improved reliability on soft targets (snow, grass)/graze angles
- Reduced tolerance on arming/non-arming distance





Future Plans



- Develop Materiel Solutions to Meet Gaps
 - Extended Ranges
 - Marking
 - Training
 - Door Breaching

- Continue Weight Reduction Efforts

- Incorporate Technological Improvements
 - Lethality
 - Insensitive Munitions Technology

- Mature Relationship With PEO Ammo

PROJECT MANAGER SOLDIER WEAPONS



THE BEST
FOR THE BEST