



Small Caliber Ammunition “Present and Future”

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Small Caliber Ammunition

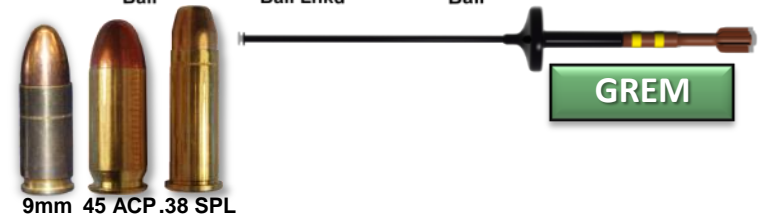
5.56mm, 7.62mm, .50 CAL., Pistol, Shotshell, .22 Long Rifle, DDI, CCMCK, GREM



67 Active Products



.300 Winmag





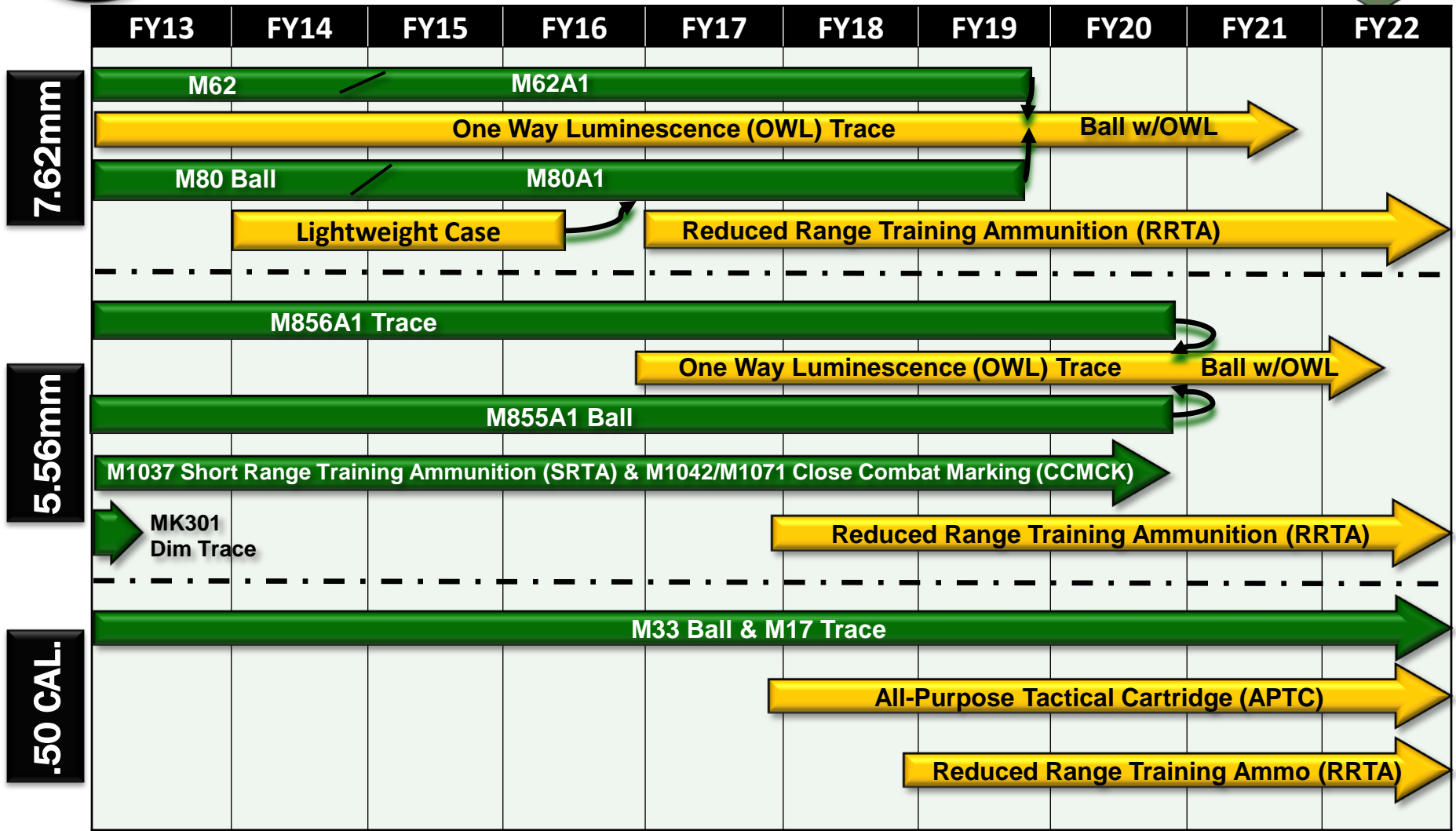
Accomplishments



- **FY13 Production Deliveries: 1.4B rounds (all services)**
- **7.62mm M80A1/M62A1 EPR Critical Design Review**
- **5.56mm MK301 Dim Trace Full Materiel Release**
- **.300 WinMag MK248 Mod 0 Full Materiel Release**
- **Completed .30 Cal. M2 AP Test Parts Kit production & deliveries**
- **.38/.45 Pistol Caliber Production Contract Award**
- **5.56mm M1037 Short Range Training Ammunition Production Contract Award**



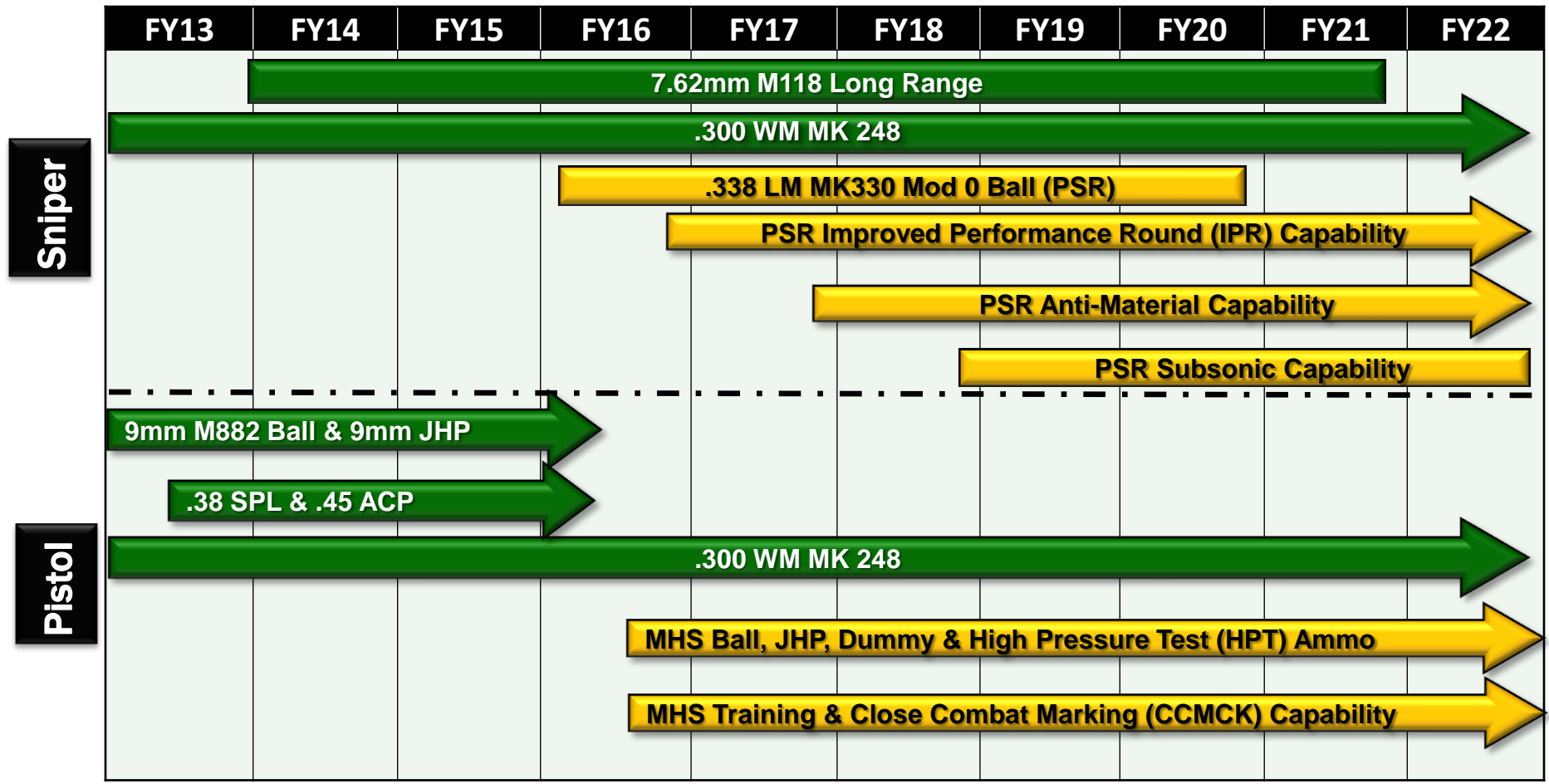
Small Caliber Ammunition Roadmap



Production	R&D/Potential Future Req.
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Small Caliber Ammunition Roadmap



Production
R&D/Potential Future Req.

PSR = Precision Sniper Rifle
 JHP = Jacketed Hollow Point

DISTRIBUTION STATEMENT A:
 Approved for Public Release; Distribution is unlimited



Ammo Procurement Plans



- **5.56mm/7.62mm/.50 Cal Second Source Contract (FY16)**
- **Sniper Ammunition**
 - .300 WinMag (FY14)
 - Precision Sniper Rifle (PSR) Ammo (FY15) – Reqmt. Dependent
- **Handgun Ammunition (FY16) – Acquisition strategy in development**
 - 9mm M882 & JHP, .38 SPL and .45 ACP, 9mm DDI
 - Modular Handgun System (MHS): Ball, JHP and Dummy
- **Training**
 - 5.56mm and 9mm CCMCK (FY16)
 - 5.56mm and 7.62mm Short Range Training Ammo (FY17)
- **Containers**
 - M2A2 Container (FY14)



Projected Small Caliber Ammo Future Capabilities (Unconstrained)



5.56MM

FoA CDD - FY15

- One Way Luminescence (OWL)
- Lightweight Small Caliber Ammunition (LSCA)
- Reduced Range Training Ammunition (RRTA)



7.62MM

FoA CDD - FY14

- OWL
- LSCA
- RRTA



.50 Cal.

FoA CDD - FY15

- OWL
- LSCA
- All Purpose Tactical Ctg.**
- RRTA



Sniper (PSR)

FoA CDD - FY15

- .338 LM: Improved Performance Round (IPR), Anti-Materiel & Subsonic
- 7.62mm: IPR & Subsonic
- .300 WM: IPR & Subsonic



Handgun (MHS)

FoA CDD - FY16

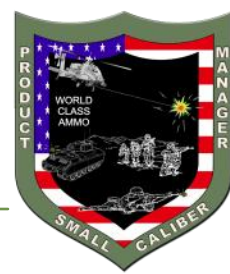
- CCMCK
- Specialized Training Ammunition



**= Will include OWL and LSCA



One Way Luminescence (OWL)



Program Description

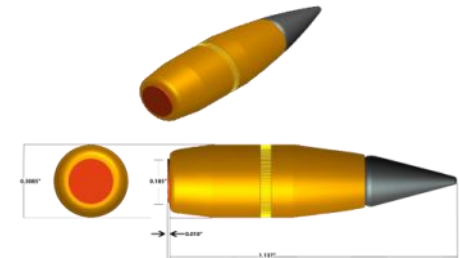
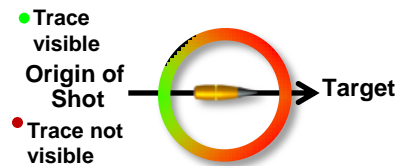
- Objective:
 - Develop And Demonstrate Non-pyrotechnic Full Day/Night Tracer Technology that Eliminates Shortcomings of Current Tracers
- Strategy: Competitive Prototyping
 - Industry Tracer Concept Defense Ordnance Technology Consortium (DOTC) Effort
 - USG Concept Development

Recent Milestones & Events

- USG Material Contract Award (AUG 13)
- Industry DOTC Request For Technology Initiative (ROTI) Released (SEP 13)

Future Milestones & Events

- Bench-top Manufacturing At Picatinny (NOV 13)
- DOTC Contract Award (DEC 13)



PROGRAM SC-60	FY13				FY14				FY15				FY16				FY17			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Tech. Dev.					CDD															
	Market Survey				DOTC Contract Award				Industry Concept Development				USG Concept Development				Concept Downselect			
Eng. & Mfg. Dev.	TRL 2								TRL 4								TRL 6			
																	TRA → MSB			



Lightweight Small Caliber Ammunition (LSCA)



Program Description:

Objectives:

- Demonstrate & qualify lightweight cartridge case technology
- Charter Joint IPT to synchronize case efforts
- Monitor other service efforts for possible adoption
- Lead DOTC effort to demonstrate 7.62mm polymer
- Draft Requirement: (T) 10% (Obj) 50%

Recent Milestones & Events:

- DOTC proposal evaluation (JUL 13)

Future Milestones & Events:

- SOCOM Improved Sniper SBIR (FY14)
- Contract award ASA(ALT) funded DOTC for polymer case (FY14)
- USMC .50 Cal Polymer case qualification (FY15)
- Government testing of DOTC polymer M80/M62 (FY15)

	FY13				FY14				FY15				FY16			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Program Management							▲ 7.62mm FoA CDD Approval		▲ 5.56mm FoA CDD Approval					▲ .50Cal FoA CDD Approval		
Engineering and Testing								7.62mm Polymer M80/M62				7.62mm Polymer M80A1/M62A1				
						Polymer .300										
			.50CAL Polymer M33													

- ARMY ACTIVITY
- SOCOM ACTIVITY
- USMC ACTIVITY



Reduced Range Training Ammunition (RRTA)



Program Description:

Objective

- Develop and qualify training ammunition that has a trajectory match to combat ammunition for qualification ranges with significantly shorter surface danger zones (SDZ)
- Provide an effective solution for 360° collective training

SDZ	Threshold	Objective
5.56mm	1800m	460m
7.62mm	2400m	900m
.50 Cal	3600m	900m

Recent Milestones & Events:

- N/A

Future Milestones & Events:

- Initiation (2QFY14)
- Develop Initial concept designs (3QFY14)
- Perform initial performance verification simulations (3QFY14)

Challenges:

- Performance goals (max range/effective range) may be difficult to attain simultaneously with geometric modifications (fins etc.) to projectiles
- May require non-conventional technologies to achieve goals

Notional Schedule

	FY14			FY15				FY16				FY17				FY18				FY19				FY20					
	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q		
Engineering and Testing	Feasibility Study											7.62mm RRTA Development																	
																5.56mm RRTA Development													
																					.50 Cal RRTA Development								



Future Focus



- **Managing reductions in production across Industrial Base**
- **Qualification and fielding of 7.62mm M80A1/M62A1 EPR**
- **Joint service involvement in acquisition strategies to ensure needs of all Warfighters are addressed**
- **Future Capabilities:**
 - **One-Way Luminescence**
 - **Lightweight Small Caliber Ammunition**
 - **Reduced Range Training Ammunition**
 - **Precision Sniper Rifle & Modular Handgun System Ammo**

Future of Small Caliber Ammunition taking shape NOW!