



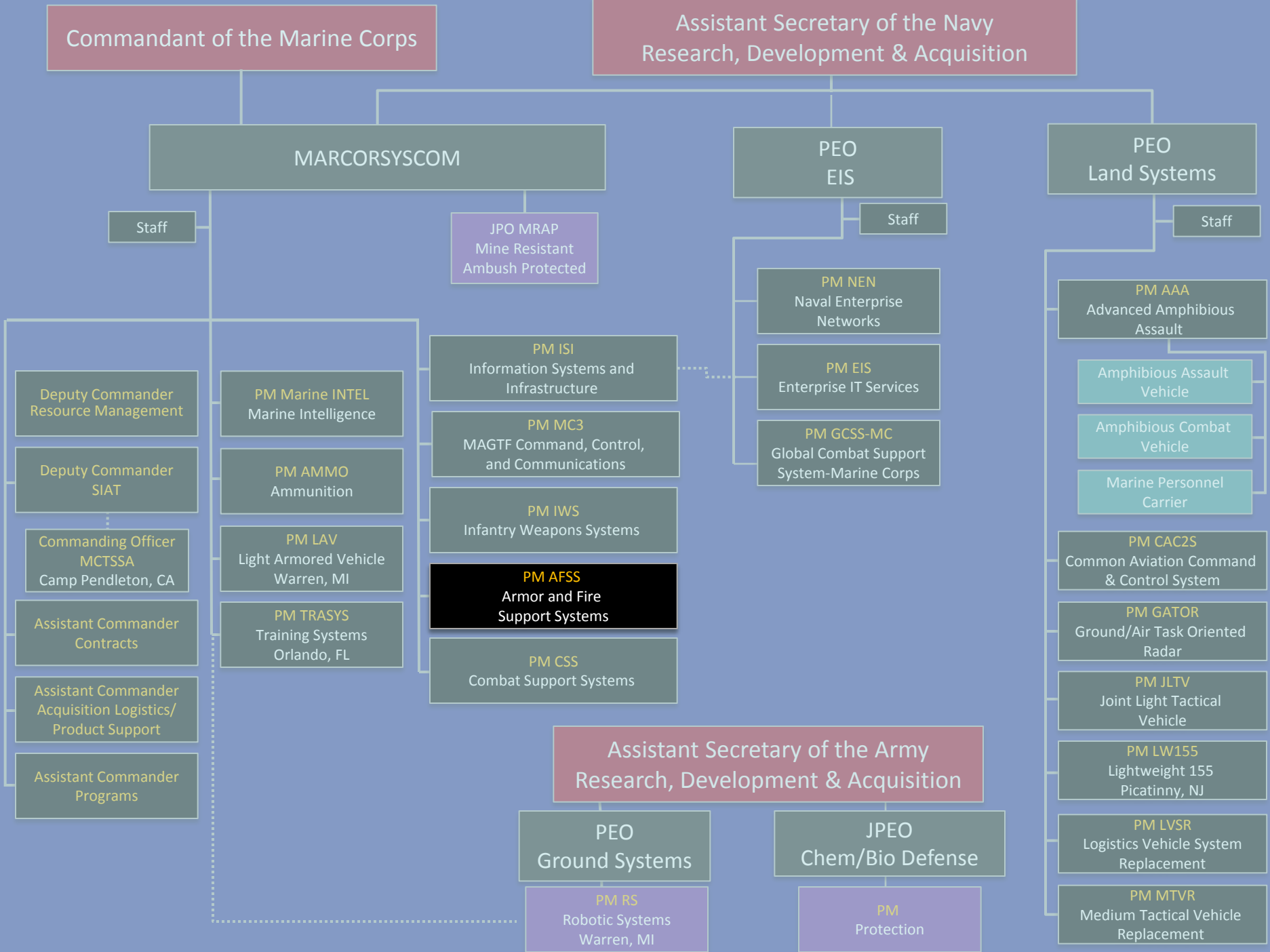
MARINE CORPS SYSTEMS COMMAND PROGRAM EXECUTIVE OFFICER LAND SYSTEMS



Program Manager Armor & Fire Support Systems



Advanced Planning Briefing to Industry
30-April – 2 May 2012





MARINE CORPS SYSTEMS COMMAND

PROGRAM EXECUTIVE OFFICER LAND SYSTEMS



Program Manager

Colonel Joe Shrader

Deputy Program Manager

Mr. Dominic Foster

Tier-1 IPTs

Product Manager, Fire Support Systems

Mr. Keith Davis

Product Manager, Tank Systems

Lieutenant Colonel John Smith

Assistant Program Managers

Contracts Manager:

Ms. Dorinne Rivoal

Lead Engineer:

Mr. Craig Melton

Lead Financial Manager:

Mr. Jeffrey Speer

Lead Logistician:

Mr. Jeffrey Gibbs

Program Management:

Mr. Jeffrey Speer (Acting)



MARINE CORPS SYSTEMS COMMAND PROGRAM EXECUTIVE OFFICER LAND SYSTEMS



FYDP Focus of Effort: *Reset, Sustain, and Enhance Armor and Fire Support Systems*

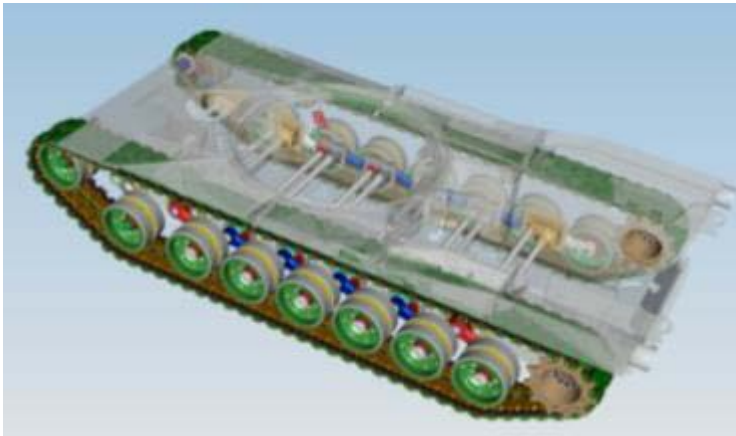
- M1A1 Tank
 - Abrams suspension upgrade
 - Stabilized Commander's Weapon System
 - Improved Loader's Weapon Station
 - Ammunition compartment safety
 - Integrated display and targeting
- AVLB hydraulic electrical system
- SLEP
- HIMARS
 - Fire control system upgrade
 - Maintain rocket inventory
- EFSS
 - Complete fielding and establish logistics /maintenance infrastructure
 - Develop precision and extended range suite of ammunition
- Assume management of USMC M777A2 (LW155)
- Target Acquisition
 - GCFS Net-ready
 - Improve Laser targeting capability
 - Improve Survey/Met capability



MARINE CORPS SYSTEMS COMMAND PROGRAM EXECUTIVE OFFICER LAND SYSTEMS



Abrams Suspension Upgrade (ASU)



Description:

- Provides improved gross vehicle suspension weight capacity to 77 tons.
- Provides decreased shock to internal LRU tank components and extends their service life.
- Improves mobility performance of the vehicle.
- Improves maintainability and reliability of the suspension system.

Status

- Proof of Principle field installations complete
- ASU being installed on Rebuild Line
- Preparing for Super Mod Line Start

Schedule:

- ASU cut into Rebuild Line Jul 10
- ANAD Super Mod Line Start Aug 12

Fielding Plan:

- ASU fielding will be conducted thru the normal tank rotation process.
- Tanks are currently receiving ASU on the rebuild line.
- Tanks rotating off of MPF will receive ASU at ANAD (super mod line) prior to moving to the fleet.



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Stabilized Commander's Weapon Station (SCWS)



Description:

- SCWS is an upgrade to the current CWS that provides weapon stabilization in azimuth and elevation, while also providing a permanent mounting location for the BFT.

Fielding Plan:

- SCWS installs will be cut into the production line and super mod line summer FY 2012. Field installs will be conducted across all CONUS units using a GDLS fielding team, commencing in July 2012.

Cost to Complete

- \$1.8M for installs

Status:

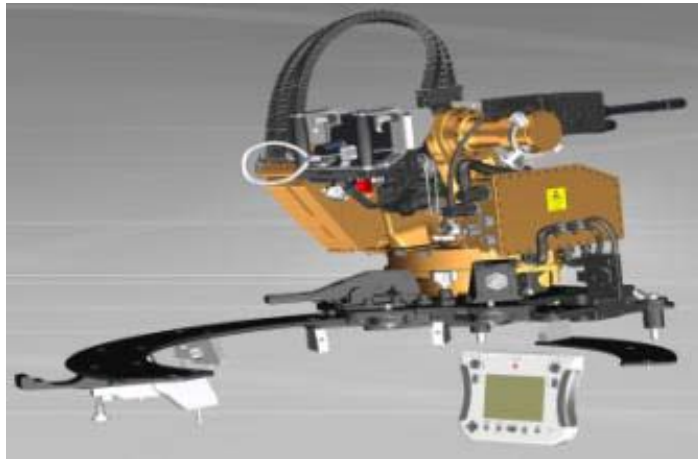
- Currently in Full Rate Production
- Receiving Deliveries
- Preparing for Fielding to Operating Forces



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Improved Loader's Weapon Station (ILWS)



Description:

Upgrade to current Loader's Weapon Station that allows the loader to remotely engage targets under armor.

Key elements include:

- Thermal Sight (640 x 480)
- Integrated Display Control Module
- Color Day TV Sight

Status

	FY12	FY13	FY14	FY15	To Complete
Total	75	123	164	95	0
Cum	75	198	362	457	362

Key tested features:

- 600 ammo rd max ammo capacity
- 1x, 2x, 4x zooms
- Sectors of fire: 7 – 12 o'clock
- Accuracy vs. 2m x 3m tgt: 250m (100%)
500m (100%)
800m (77%)
- Image pumped to TC's .50 cal DCM

Event	Est. Dates
First Article Test	Apr 12
I MEF Fielding Conference	Nov12
1 st Tank Bn deliveries begin	Jan13
II MEF Fielding Conference	Dec 12
2 ^d Tank Bn deliveries begin	Feb 13
MPF deliveries	Oct 13
4 th Tank Bn deliveries begin	Aug 14



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Improved Turret Ammo Rack



Description:

- 36 Rounds in Turret/24 Tubes for HE Rounds
- Extended protection for longer HE Rounds
- Racks alone increase tank weight by 182 lbs
- Titanium Blowoff Panels result in no tank weight change
- Gen III Racks can be upgraded (77 of 400 tanks)
 - All other tanks will require new racks

Status:

- U. S. Army modification work order
- Acquisition Strategy in development
- Determining procurement options for titanium blowoff panels

Safety Improvements:

- Tube coating/ Grounding straps dissipate static electricity
- New Round Stopper adhesive prevents stuck rounds

Fielding Plan:

- 10 year program if applied solely during rebuild
- Begin during FY14 Rebuild Production



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Abrams Integrated Display and Targeting System (AIDATS)



Description:

- The AIDATS program is designed to reduce the number of displays in the TC's position, decrease the TC's workload, and improve the capability of the SCWS.
- This system is made up of three principle components: a multi-function display, a high resolution color day camera, and an improved Thermal Sight Module (TSM).
- AIDATS will combine the functionality of the BFT display and DCM into a single screen
- Current day camera and TSM will be replaced with improved versions that will double current performance.

Status

- Statement of Need signed 2 Apr 12
- Executing NVL Prototyping Effort
- Building performance specification
- Preparing Program Initiation/Designation

Schedule:

- | | |
|------------------------------|------------------------|
| • Program Initiation | 3 rd Qtr 12 |
| • Start Development Phase | 1 st Qtr 13 |
| • End Development Phase | 1 st Qtr 15 |
| • Procurement Contract Award | 2 nd Qtr 15 |
| • Fielding Begins | 1 st Qtr 16 |



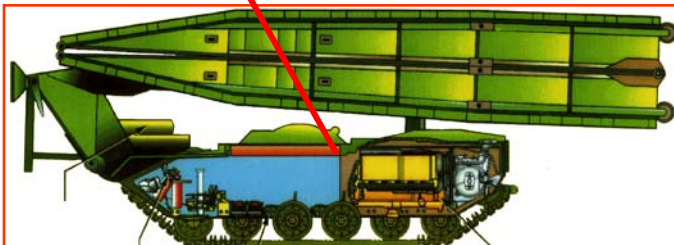
MARINE CORPS SYSTEMS COMMAND PROGRAM EXECUTIVE OFFICER LAND SYSTEMS



Armored Vehicle Launched Bridge (AVLB)



IMPROVED
HYDRAULICS



Description:

- Designated Abbreviated Acquisition Program
- Provides the MAGTF's only assault gap crossing capability.
- Bridge upgraded to an MLC 70 in the 1990s
- Was expected to be replaced by the Joint Assault Bridge
- Modification is an obsolescence mitigation issue
- Modern electrical harnesses
- Modern, supportable hydraulic system
- Depot level modification which has to be done in conjunction with overhaul or IROAN

Milestones and Key Events

- Program designation Apr 2012
- IROAN proof of principle (MCLB Albany) Sept 2012
- First complete rebuilds Aug 2012
- MS C and Fielding Decision Dec 2012
- Initial Operational Capability (IOC) Jan 2013
- Full Operational Capability Jul 2015

Cost to Complete

- \$21M

Delivery Schedule

	FY12	FY13	FY14
Quantity	10	13	6

To be accomplished through a combination of scheduled IROANs supplemented by out-of-cycle Depot Rebuilds

Total AAO: 30

Bridges themselves planned to be hosted on the JAB



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HIMARS

Description



The HIMARS is a C-130 transportable, wheeled, indirect fire, rocket / missile system capable of firing all rockets / missiles in the current and future Multiple Launch Rocket System Family of Munitions (MFOM) . HIMARS provides the Fleet Marine Force with 24 hour, all weather, ground-based, responsive General Support / General Support Reinforcing (GS/GSR) fires.

As a result of the 2010 Force Structure Review Group the Approved Acquisition Objective (AAO) for Marine Corps HIMARS was increased from 46 HIMARS to 52 HIMARS, therefore the Marine Corps has a requirement for 6 additional HIMARS launchers, associated Re-Supply Systems, and ancillary equipment.

Schedule

- GMLRS contract award – 3rd Qtr FY12
- Fielding of Quebec Battery – 4th Qtr FY13
- GMLRS AWP contract award – 3rd Qtr FY15

Budget

APPN	FY13	FY14	FY15	FY16	FY17	Total
R&D	2.4	2.4	2.5	2.5	2.6	12.4
PMC	156.9	50.1	90.6	50.7	50.2	398.5
O&M	3.2	3.4	3.4	3.6	3.7	17.3



MARINE CORPS SYSTEMS COMMAND PROGRAM EXECUTIVE OFFICER LAND SYSTEMS



Expeditionary Fire Support System (EFSS)



Description

The Expeditionary Fire Support System (EFSS) is a fire support system that is designated to accompany the MAGTF in any expeditionary mode of operations. It is the primary indirect fire support system for the vertical assault element of the ship-to-objective maneuver (STOM) force.

Schedule

- Fielding to 10th Marines – 3rd Qtr FY12
- Fielding to 12th Marines – 4th Qtr FY12
- Fielding to 31st MEU – 3rd Qtr FY12
- Fielding to Ft. Sill – 4th Qtr FY12
- Fielding to 11th Marines – 4th Qtr FY13
- Fielding to DMFA Quantities – 4th Qtr FY13

Budget

APPN	FY13	FY14	FY15	FY16	FY17	Total
R&D	7.0	18.3	8.7	4.9	2.4	41.3
PMC	2.5	.6	10.4	24.4	26.4	64.3
O&M	1.9	1.7	1.8	1.9	1.9	9.2

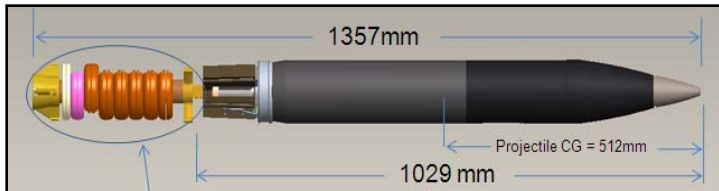
* Includes PERM funding



MARINE CORPS SYSTEMS COMMAND PROGRAM EXECUTIVE OFFICER LAND SYSTEMS



Precision Extended Range Munition (PERM)



Description

- PERM is a 120mm mortar round consisting of a tail charge assembly, rocket motor, warhead, and fuze; PERM will also include a guidance system
- Designed to be fired from the EFSS 120mm RTM
 - Range: 16 (T) km; 20 (O) km
 - Accuracy: CEP <20 (T) m; CEP <10 (O) m
 - Lethality: PERM NLT 80% of current HE round (T); same as current HE round (O)
- Full Rate Production Decision: 1st Qtr FY17

Schedule

- E&MD RFP Released – 1st Qtr FY12
- E&MD contract award – 4th Qtr FY12
- E&MD Demo begins – 4th Qtr FY14
- MS C – 4th Qtr FY15
- Production RFP Release – 4th Qtr FY15
- Production contract award – 2nd Qtr FY16
- FRP Decision – 2nd Qtr FY17

Budget

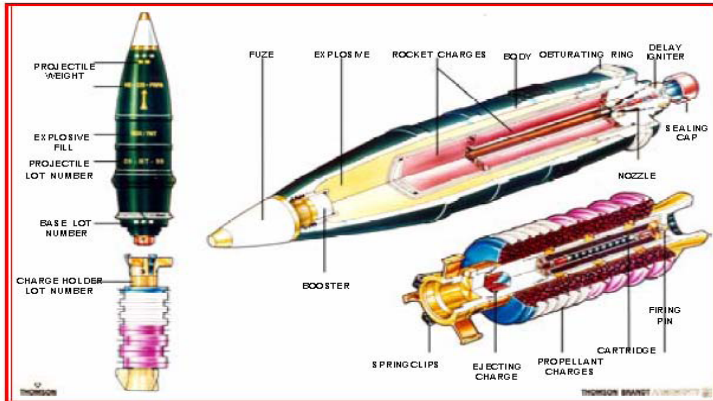
APPN	FY13	FY14	FY15	FY16	FY17	Total
R&D	7.0	18.3	8.7	0.0	0.0	43.2
PMC	0.0	0.0	10.4	24.4	26.4	61.2
O&M	0.0	0.0	0.0	0.0	0.0	0.0



MARINE CORPS SYSTEMS COMMAND PROGRAM EXECUTIVE OFFICER LAND SYSTEMS



High Explosive Rocket Assisted Projectile (HE RAP)



Description

- HE RAP is a 120mm mortar round consisting consist of a tail charge assembly, rocket motor, warhead, and fuze.
- Designed to be fired from the EFSS 120mm RTM
 - Range: 12 km
 - Accuracy: HE RAP same as current HE round
 - Lethality: HE RAP same as current HE round
- Full Rate Production Decision: 3rd Qtr FY14

Schedule

- MS C – 3rd Qtr FY13
- Receipt of 310 test articles – 2nd Qtr FY13
- FRP Decision – 1st Qtr FY15

Budget

APPN	FY13	FY14	FY15	FY16	FY17	Total
R&D	0.0	0.0	0.0	0.0	0.0	0.0
PMC	0.0	0.0	0.0	0.0	0.0	0.0
O&M	0.0	0.0	0.0	0.0	0.0	0.0



MARINE CORPS SYSTEMS COMMAND PROGRAM EXECUTIVE OFFICER LAND SYSTEMS



Ground Counter Fire Sensor (GCFS)



Description

The Ground Counter Fire Sensor (GCFS) is an acoustic weapons locating system that provides the Marine Corps all-weather, 24-hour passive indirect fire (IDF) weapons location capability. The GCFS can be used as a stand alone system to provide enemy weapons locations or in coordination with other IDF detection assets to collaborate detection information as a cueing agent. The GCFS also provides intelligence to supported units by providing the location of acoustic events such as Improvised Explosive Devices (IED).

Schedule

Acoustic Detection Accuracy Testing June-September 2012
Conduct Modernization to maintain ATO June 2012

Funding

APPN	FY12	FY13	FY14	FY15	FY16	FY17
R&D	0	250	300	300	0	0
PMC	0	750	500	0	0	0
O&M	0	150	250	500	500	500

*GCFS procurement was funded with OCO PMC in 2005

GCFS modernization effort consisting of OS migration and integration with Marine Corps Common Hardware Suite (MCHS) hardware only is funded from the FS Mods Line.



MARINE CORPS SYSTEMS COMMAND PROGRAM EXECUTIVE OFFICER LAND SYSTEMS



Common Laser Range Finder-Integrated Capability (CLRF-IC)

Current
CLRF components



Notional
CLRF IC Light image

Description

CLRF IC is a replacement to the existing CLRF Suite of Equipment. The CLRF IC will assist the operator with target/object detection, recognition, identification, and will determine accurate target/object location. Change 1 to the AEROS ORD directed replacement of the current CLRF system with 2 variants: *light* and *medium*. Both systems will significantly reduce the overall carrying weight of the current system while improving accuracy along with providing a night target recognition capability. The anticipated AAO is currently 1757 CLRF IC *Light* systems and 586 CLRF IC *Medium* systems. Currently funding only exists for the Light variant, the schedule and funding profile below reflect the effort to procure only this varinat

Schedule

Milestone A	September 13, 2011
Contract Award	August 29, 2012
PDR	February 16, 2013
Milestone B	April 18, 2013
CDR	November 25, 2013
Milestone C/LRIP	June 2, 2014
FUE	July 17, 2015
FRPD	August 28, 2015
IOC	March 28, 2016
FOC	September 28, 2016

Funding

APPN	FY12	FY13	FY14	FY15	FY16	FY17
R&D	11610	920	4384	0	0	0
PMC	35	3249	8582	11337	11531	11728
O&M	913	870	811	944	960	976



MARINE CORPS SYSTEMS COMMAND PROGRAM EXECUTIVE OFFICER LAND SYSTEMS



JTAC Laser Target Designator



Description

JTAC LTD is a lightweight, easily portable system that will provide Forward Air Controllers (FAC), JTACs, and reconnaissance teams the ability to hand off targets via laser designation when troops are in contact and during routine patrols. The JTAC LTD can be used for terminal guidance of Laser Guided Munitions, reducing likelihood of collateral damage. The JTAC LTD weighs approximately 4.5 lbs and is capable of being stored in a utility pouch worn on the standard Marine Tactical Vest.

Schedule

IOC
FOC

November 2011
May 30, 2012

Funding

APPN	FY12	FY13	FY14	FY15	FY16	FY17
R&D	11610	920	4384	0	0	0
PMC	35	3249	8582	11337	11531	11728
O&M	913	870	811	944	960	976

Procurement funding was \$13,200,000 FY09 OCO PMC
Sustainment funding is provided through the FS Mods line.



MARINE CORPS SYSTEMS COMMAND PROGRAM EXECUTIVE OFFICER LAND SYSTEMS



Laser Target Designator (LTD)



Description

The LTD consists of the Portable Lightweight Designator Rangefinder (PLDR) and the Thermal Laser Spot Imager (TLSI). PLDR is used to designate targets for Laser Spot Trackers (LSTs) and laser guided munitions. TLSI is a thermal sight, that when bore sighted to PLDR provides operators a 24 hour targeting capability, and allows operators to view the laser spot created by the PLDR.

Schedule

Sustainment only since

October 2009

Funding

APPN	FY12	FY13	FY14	FY15	FY16	FY17
R&D	0	0	0	0	0	0
PMC	0	0	0	0	0	0
O&M	0	0	0	0	0	0

Currently there are no fiscal obligations or expenditures occurring for the LTD

LTD sustainment is funded from the FS Mods Line.



MARINE CORPS SYSTEMS COMMAND PROGRAM EXECUTIVE OFFICER LAND SYSTEMS



Modeled Meteorological Information Manager (MMIM)



Description

MMIM will provide the capability to create, receive, manage, and transmit meteorological information supporting artillery and target acquisition systems. It will be the primary artillery meteorological capability at the artillery battalion and regiment providing near real time meteorological information. MMIM will replace the AN/TMQ-41 Meteorological Station Group eliminating the requirement for 63 HMMW's & 21 Generators resulting in significant savings in fuel and Operations & Maintenance costs

Schedule

PDR/CDR	September 22, 2010
Milestone B	October 22, 2010
FIT	November 4, 2011
Milestone C	June 6, 2012
IOC	October 19, 2012
FOC	October 25, 2013

Funding

APPN	FY12	FY13	FY14	FY15	FY16	FY17
R&D	486	249	249	249	248	249
PMC	1921	1500	250	250	500	500
O&M	83	178	173	177	177	176



MARINE CORPS SYSTEMS COMMAND PROGRAM EXECUTIVE OFFICER LAND SYSTEMS



Global Positioning System-Survey (GPS-S)



*Notional
GPS-S Replacement image*

Description

GPS-S provides sub-centimeter, geodetic level survey accuracy allowing the creation of a high order network of Survey Control Points in terrain inaccessible to IPADS.

The GPS-S Replacement will address obsolescence issues, comply with Selective Availability Anti-Spoofing Module requirements, and provide Marine Artillery Sensor Sections with an enhanced man-portable capability to provide survey support.

Schedule

Milestone B	January 3, 2012
Contract Award	June 29, 2012
FUE	April 2, 2013
Milestone C/LRIP	May 21, 2013
IOC	October 1, 2013
FOC	June 30, 2014

Funding

APPN	FY11	FY12	FY13	FY14	FY15	FY16
R&D	0	0	0	0	0	0
PMC	4800*	1065	0	0	0	0
O&M	0	0	0	0	0	0

*GPS-S Replacement procurement is funded with OCO PMC

Initial Spares for GPS-S Replacement are funded from the FS Mods Line PMC



MARINE CORPS SYSTEMS COMMAND PROGRAM EXECUTIVE OFFICER LAND SYSTEMS



FYDP Investments		FY12	FY13	FY14	FY15	FY16	FY17
Weapon Systems	RDT&E	\$11.0M	\$7.0M	\$18.3M	\$7.3M	\$1.7M	\$1.8M
	PMC	\$10.4M	\$77.5M	\$6.6M	\$24.3M	\$31.5M	\$69.1M
	HIMARS Fire Control Upgrade Dev						
	HIMARS GMLRS (Unitary and AWP) Proc						
		PERM Dev			Proc		
Target Acquisition Systems	RDT&E	\$12.0M	\$4.6M	\$1.3M	\$1.3M	\$10.8M	\$11.0M
	PMC	\$1.3M	\$4.7M	\$8.5M	\$11.4M		
	CLRF IC Dev			CLRF IC Proc			
	GPS-S Proc			GCFS Net-Ready Dev Proc & Fielding			
Tank Systems	RDT&E	\$1.9M	\$1.6M	\$1.6M	\$1.8M	\$1.8M	\$1.9M
	PMC	\$53.9M	\$48.0M	\$51.1M	\$33.7M	\$24.1M	\$24.6M
	Abrams Suspension Upgrade						
	Stabilized Commander's Weapon Station						
	AVLB Hydraulic Electric Upgrade						
	Abrams Integrated Display and Targeting System						
				Ammunition Compartment Safety Upgrade			



MARINE CORPS SYSTEMS COMMAND

PROGRAM EXECUTIVE OFFICER LAND SYSTEMS



Opportunities

- Precision Extended Range Munition (PERM)
- Common Laser Range Finder – IC (CLRf – IC)
- Abrams Integrated Display & Targeting System
- Enduring / Unsolicited
 - Decrease fuel and power consumption
 - Lightening the load
 - Increase maintenance and sustainment efficiency
 - Cost reduction initiatives