



CENTER OF OUR STRENGTH

Program Executive Office Soldier



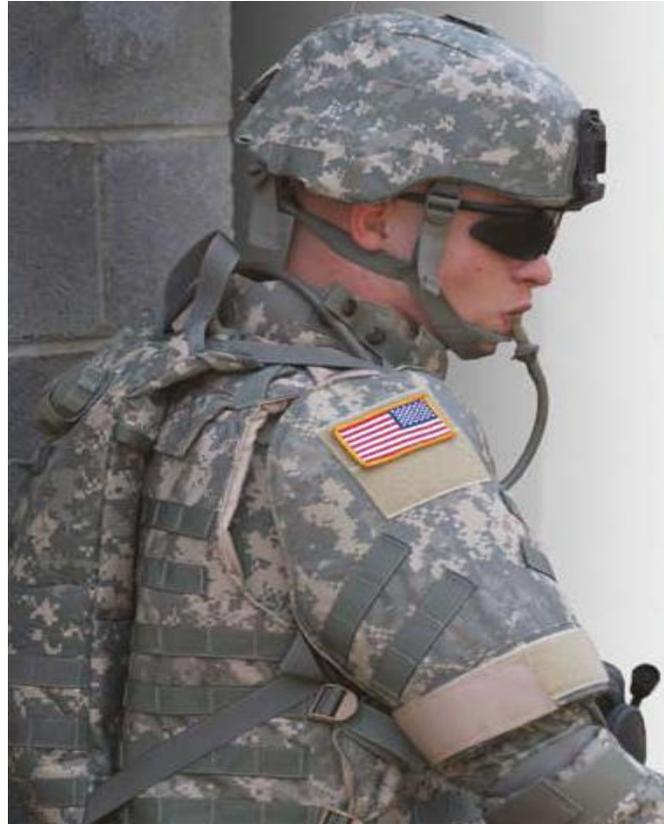
On the Move Hydration

Advance Planning Brief for Industry

12 May 2011



Program Purpose



The On-the-Move Hydration (OTMH) System will provide a hands-free, on-the-move hydration capability to warfighters conducting missions of all types in all environments

OTMH Description: Overview



- On the Move Hydration is a Product Manager Soldier Clothing & Individual Equipment (PM-SCIE) designation that covers two distinct programs, each with staged delivery of capabilities:
 - Program 1: Multi-purpose Personal Hydration System (MPHS)
 - Proponent: U.S. Army Chemical School
 - Purpose: Provide a personal hydration system for use in a Chemical, Biological, Radiological, Nuclear (CBRN) environment
 - Program 2: Individual Water Treatment Device (IWTD)
 - Proponent: U.S. Army Infantry Center
 - Purpose: Provide Water Filtration/Purification capability at the individual level
- The systems will be based on commercially available CBRN resistant materials, reservoirs, and water purification/filtration devices



OTMH Description: Program Increments



■ MPHS

- Block I: Chemical, Biological, Radiological, Nuclear (CBRN) Hydration System
 - Provides a CBRN resistant, on-the-move, hands free hydration system that will have the capability of interfacing with current and developmental CBRN protective gear
- Block II: Refill in CBRN Environment (FY 13 – FY 15)
 - Provide enhanced system capabilities to enable the NEPHS to be refilled in a CBRN contaminated environment with non-potable fresh water and existing available drinking water systems
 - Provide enhanced CBRN resistance while reducing overall cost.
- Block III: Integrate with IWTD -Purify CWA/TIC/TIM (FY 16 – FY 18)
 - Remove hazardous chemicals from indigenous water sources, as compatible with the IWTD

■ IWTD

- Block I: Filtration/Purification (FY 11- FY13)
 - Provide enhanced system capabilities to filter and purify non-potable fresh water
- Block II: Desalinization (FY 14- FY 16)
 - Provide enhanced system capabilities to include the ability to desalinate water. The NEPHS Block IV will include the development of a total dissolved solids measuring device to validate water purity for the purification
- Block III: Integrate with MPHS – Purify CWA/TIC/TIM (FY 16 – FY 18)

Current Methods of Water Carriage



**Modular
Lightweight Load
Carrying
(MOLLE)
Hydration
System**



1 Qt Canteen



Cold Weather Canteen



2 Qt Canteen



Multi-Purpose Personal Hydration System (MPHS)



OBJECTIVE: To replace the canteen as the primary method of water carriage by the individual Soldier in all battlefield environments, including CBRN/Toxic Industrial Material (TIM) environments.

BOI: 1 per authorized user, plus spare bite valve and gas mask attachment

SYSTEM DESCRIPTION:

- Will provide a steady flow of water on demand during the performance of mission essential duties
- The system will function both independently and while integrated with the protective mask
- Consists of a Chemical/Biological agent and radioactive particle resistant reservoir with carrier
- This system will be compatible with current CBRN protective masks, suits and individual load bearing equipment (LBE)



MPHS Status



- Evaluation has been completed with MPHS candidates satisfying the Key Performance Parameters (KPPs) for use in a CBRN environment, mask compatibility, and other requirements
- ATEC has provided a letter supporting the Full Rate Production (FRP) and Full Material Release (FMR) of these items
- MPHS Type-Classification (MS-C/FRP), Procurement, and Fielding has been delayed by requirements document staffing

MPHS Desired/Future Capabilities



- Block II
 - Temperature Regulation
 - Refill in CBRN environment
 - Refill without removing bladder from carrier
 - Improved CBRN capabilities and durability at lower cost

- Block III
 - Antimicrobial in all components
 - Water Volume Indicator
 - Improved CBRN capabilities and durability at lower cost



Current Methods of Water Purification

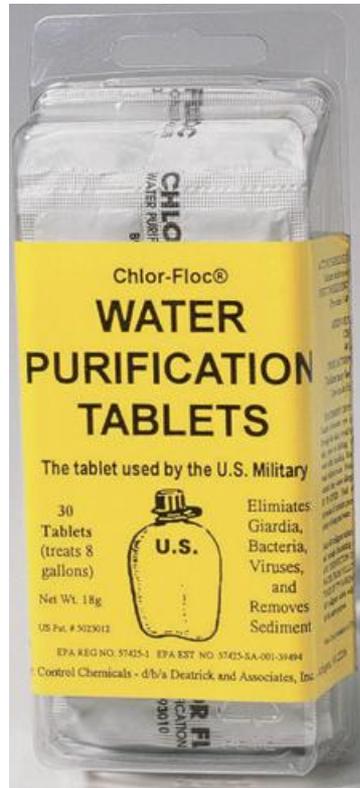


Type Classified

Unit Purchased / Not Type Classified



Iodine Tablets



Chlor-Floc Tablets



Commercial Water Filters/ Purifiers



Commercial Oxidants



Individual Water Treatment Device (IWTD)



OBJECTIVE:

Develop an Individual Water Purification System that will enable Soldiers to drink from indigenous water sources, removing contaminants to National Sanitation Foundation Protocol 248 (NSF P248) standards by the US Army Public Health Command (USAPHC)

BOI: 1 per Soldier

SYSTEM DESCRIPTION:

- Enables the Soldier to filter/purify water from indigenous water sources
- Removes microbes and viruses
- Accelerate Treatment Time
- Reduce turbidity
- Improve water taste
- Light Weight and Hands Free
- Compatible with MOLLE Hydration System
- Ultimate objective: the removal of CBRN, Toxic Industrial Chemicals (TICs) and TIMs
- Supplement/replace iodine and chlor-floc tablets





IWTD Status



- CPD in staffing at Department of Army 3-Star Level
- Milestone Decision Document (MDD) FY12
- Request for Proposal FY12
- Test & Evaluation starting in FY13
- Initial Operational Capability (IOC) FY14
- Small Business Innovative Research (SBIR) efforts for “Novel In-Line Water Purification” (Block 1) and “Man-Portable Desalination” (Block 2)
- Development of short-term use Individual Water Purifier for US Army Africa (USARAF)

IWTD Desired/Future Capabilities



- Block 1
 - Single Purification/ filtration solution (1 item)
 - Alternate Technologies
 - Prevention from freezing or low temperature operation
 - Filter Life indicator
- Block 2
 - Desalinization
 - Improved filter life, flow rate, lower pressure drop
- Block 3/PIP
 - Full TIC/TIM removal

Modular In-Line Water Purifier SBIR A09-161



OVERALL DESCRIPTION: A novel in-line filter system that incorporates multiple water purification technologies into a single MOLLE compatible filter housing

Individual Water Treatment Device (IWTD)
Capabilities Production Document (CPD)

- Draft June 2010 ver. 1.4

OBJECTIVE: A MOLLE compatible in-line water purification system that is compact and lightweight which minimizes the Soldier's exposure when collecting drinking water on the battlefield by enabling them to purify the water while on the move

BOI: 1 per deploying Soldier

NSNs: TBD

ACTIONS:

- Phase II contract awarded
- Task 1: Accelerated 12 month effort to meet or exceed P248 Protocol
- Task II: increased flow with greater TIC/TIM* removal

*TIC/TIM: Toxic Industrial Chemicals/Materials



Points of Contact



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Load-Carrying Equipment

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Modular Lightweight Load Carrying Equipment (MOLLE) Set Configurations



Rifleman Set

INCLUDES:

* FIGHTING LOAD CARRIER (BEING REPLACED BY TACTICAL ASSAULT PANEL)

CANTEEN / GENERAL PURPOSE POUCH (2)

TRIPLE MAGAZINE POCKET, 30 ROUND (2)

BANDOLEER AMMO POUCH, 6 MAGAZINE

M4 TWO MAGAZINE POUCH (3)

FLASH BANG GRENADE POUCH

HAND GRENADE POUCH (2)

ENTRENCHING TOOL CARRIER

HYDRATION SYSTEM

ASSAULT PACK

WAIST PACK



Tactical Assault Panel (TAP)



Grenadier Set

INCLUDES:

40MM HIGH EXPLOSIVE POUCH (SINGLE) (12)

40MM HIGH EXPLOSIVE POUCH (DOUBLE) (4)

40MM PYROTECHNIC POUCH (DOUBLE) (2)



Large Rucksack Set

INCLUDES:

LARGE RUCK FLAP

SUSTAINMENT POUCH (2)

MOLLE PACK FRAME

MOLDED WAIST BELT

LOAD LIFTER ATTACHMENT STRAP

BUCKLE, SHOULDER SUSPENSION

ENHANCED FRAME SHOULDER STRAPS



Squad Automatic Weapon (SAW) Gunner Set

INCLUDES:

100 ROUND UTILITY POUCH (2)

200 ROUND SAW GUNNER POUCH (2)



Medium Rucksack



Pistolman Set

INCLUDES:

HOLSTER/LEG EXTENDER

9MM MAGAZINE POUCH (4)



Medic Set

INCLUDES:

BAG, MEDICAL

INSIDE REMOVEABLE POCKET (2)

MEDIC IV BANDOLEER

MEDIC MODULAR POCKET (8)



Tactical Assault Panel (TAP)



OBJECTIVE: Provide deploying Soldiers a Tactical Assault Panel that can be worn, and quickly released with the Improved Outer Tactical Vest (IOTV) and Soldier Plate Carrier System (SPCS) in emergency situations

BOI: 1 per Soldier through RFI. Included w/ OEF Camouflage Pattern (OCP) MOLLE Rifleman Set or issued separately in Universal Camouflage Pattern (UCP)

SYSTEM DESCRIPTION:

- TAP design solves issue of Fighting Load Carrier (FLC) incompatibility when worn with the IOTV and SPCS
- Carries all the MOLLE basic fighting load pouches, yet allows IOTV/SPCS to release in emergency situations
- Without Body Armor, external webbing harness allows TAP to be worn like a Ranger Assault Carrying Kit (RACK)



MOLLE RFI Procurement Status



- Two awards made by Natick Contracting in August 2006 for MOLLE sets
 - 5-year Indefinite Delivery, Indefinite Quantity (IDIQ)
 - 899,492 Rifleman sets, and Large Ruck sets plus other Contract Line Item Numbers (CLINs) delivered to date
 - Large business 70%, SDS/BAE Systems
 - Small business 30%, Michael Bianco/Eagle Ind/ATK
 - Contracts fulfill Rapid Fielding Initiative (RFI) requirements for MOLLE through August 2011



MOLLE Procurement Status



- ATK and BAE are currently producing MOLLE items in UCP and OCP camo patterns
- There have been multiple OCP delivery orders since July 2010
- PM-SCIE intends to continue placing delivery orders until August 2011 when these contracts end
- Currently no plan for additional Army managed MOLLE contracts
- Continued MOLLE sustainment through DLA Troop Support



MOLLE Sustainment



- DLA Troop Support Sustainment contract awarded to BAE Systems June 2008
- 3-year contract that ends in May 2011
 - Base year, plus 2 option years for 62 MOLLE items
 - Base Year Quantities (min/max)
 - Rifleman Sets – 10,500/50,000
 - FLC – 30,000/50,000
 - Assault Pack – 12,000/70,000
 - Large Ruck Sets – 21,000/60,000



Planned FY11 MOLLE Solicitations



- DLA Troop Support contract with BAE expires 26 May 2011
- DLA Troop Support currently has a MOLLE Pre-solicitation Notice in FedBizOpps. SPM1C1-10-R-0175
 - Indefinite Delivery Type Contract (IDTC)
 - Minimum and maximum quantities for each item
 - Base year and 2 option years
 - Will have an Unrestricted portion and a Small Business Set-Aside portion
 - 72 line items on the Unrestricted portion
 - 21 line items on the Small Business Set-Aside portion
 - Both OCP and UCP camouflage patterns will be ordered



New MOLLE Specifications and Opportunities



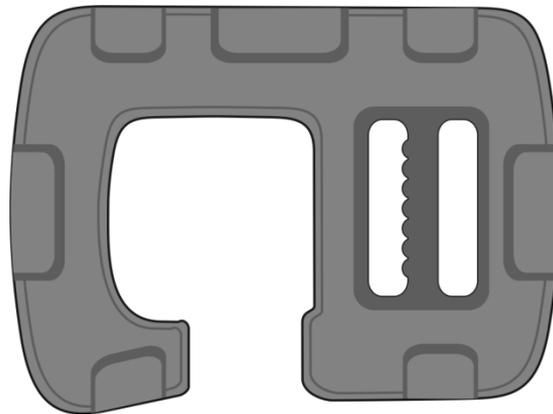
- A new 4 color printed webbing has been developed for the MOLLE Tactical Assault Panel (TAP). It is a Government owned design and available to all Berry compliant manufacturers who supply webbing for Government contracts.
- MOLLE Hardware Development Opportunities for injection molding manufacturers.



MOLLE Hardware Development Opportunities



- The MOLLE Tactical Assault Panel (TAP) currently attaches to the body armor with a two piece side release fastener. The Army has a need for a one piece, hook-like, ambidextrous fastener, that quickly attaches/detaches to MOLLE horizontal webbing. See concept drawing below. Any interested hardware manufacturers should contact PM-SCIE at john.kirk@us.army.mil





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QUESTIONS?



BACKUP



A-A-55301 4-color 1" wide OCP Webbing



For the MOLLE TAP, a 4-color camouflage webbing has recently been developed for 1" textured nylon webbing. Pattern number, PNP3156, TKG International, Macon, GA

- NIR Spectral Reflectance Requirements for 4 color webbing

▪ Olive 527

Wlght (nm)	Tan 499		Brown 529		Dark Green 528	
	Min	Max	Min	Max	Min	Max
▪ 600	8	20	10	30	3	12
▪ 620	8	20	11	30	3	12
▪ 640	8	22	11	32	4	12
▪ 660	8	24	12	32	4	13
▪ 680	12	24	14	35	4	18
▪ 700	12	34	19	40	6	25
▪ 720	16	42	22	43	6	27
▪ 740	22	46	25	46	10	29
▪ 760	30	50	27	48	14	33
▪ 780	34	54	28	50	18	36
▪ 800	36	56	29	50	20	37
▪ 820	38	58	30	51	20	38
▪ 840	38	58	32	51	21	39
▪ 860	40	60	33	52	21	40

Interested vendors may submit printed webbing samples to the Natick Shade Lab for courtesy evaluation.