

Army Health Hazard Assessment Program



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UNCLASSIFIED

Manpower and Personnel Integration

(DOD HUMAN SYSTEMS INTEGRATION)

**Health Hazard
Assessment**

Training

**System Safety
Engineering**



**Human Factors
Engineering**

Personnel

Manpower

Soldier Survivability

Mission Services

- Health Hazard Assessment Reports
- System Safety IPT Participation
- MANPRINT / HSI IPT Participation
- Acquisition / Capabilities Document Review
- Weapons Review Board & Committee Membership
- Uniformed Services University / Army Logistics University Support

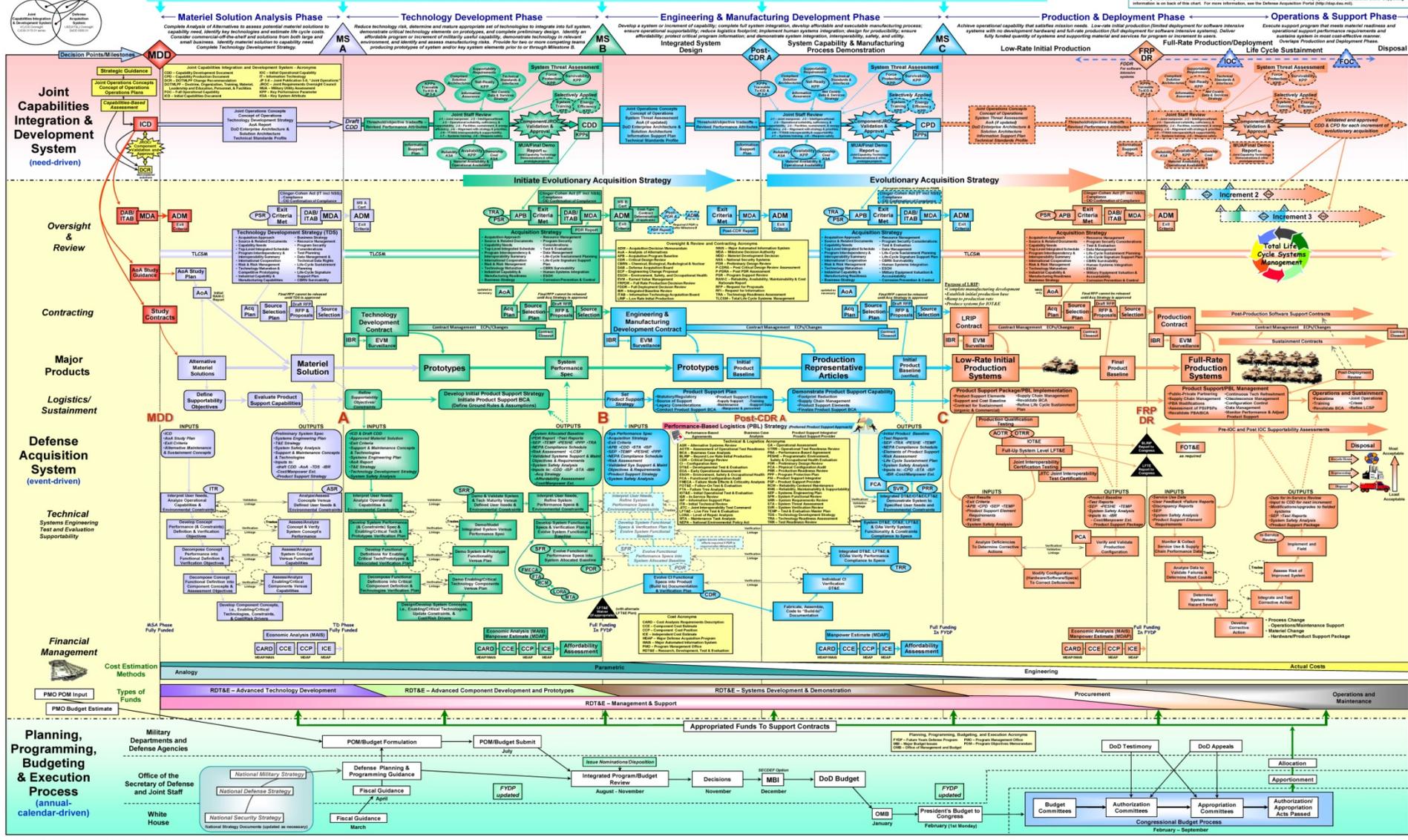


Version 5.4 15 June 2010

Integrated Defense Acquisition, Technology, and Logistics Life Cycle Management System

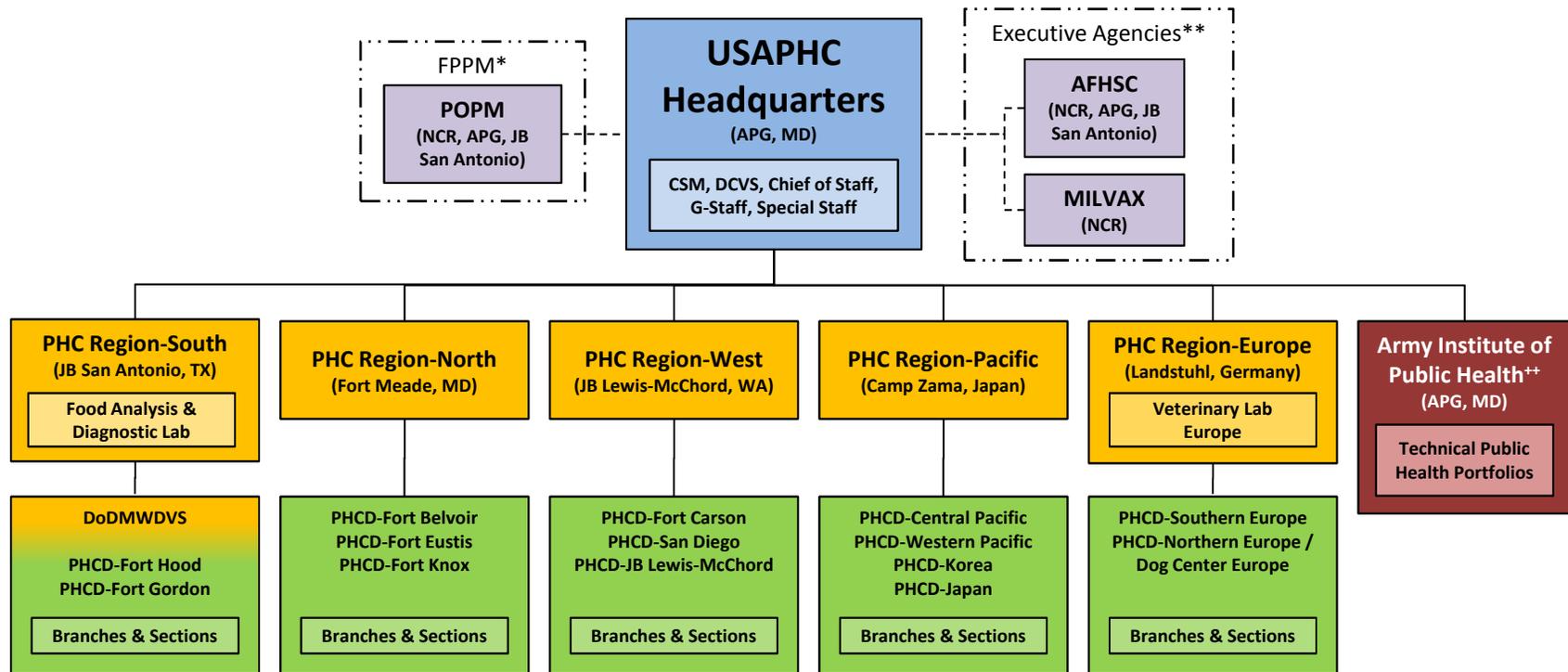
Following the Materiel Development Decision, the Milestone Decision Authority may authorize entry into the acquisition process at any point, consistent with phase-specific entrance criteria and statutory requirements

This chart is a reference aid for Defense Acquisition University students. It provides a national illustration of interaction among three major defense acquisition areas to develop, produce and field a major system for national defense. Defense acquisition is a complex process involving many stakeholders and is supported by a wide range of information systems. For more information, see the Defense Acquisition Portal (dap.dau.edu).





USAPHC Organizational Structure



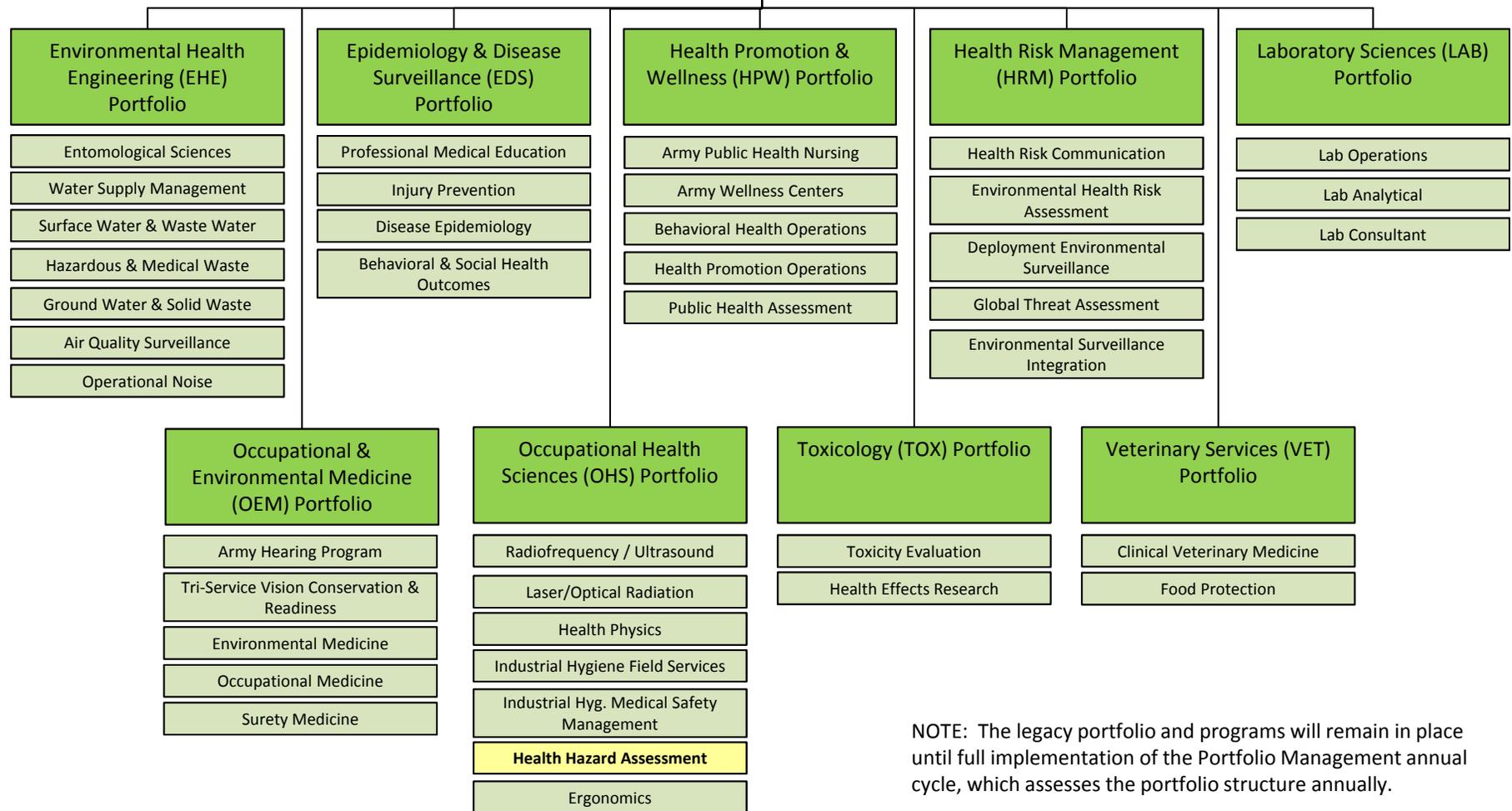
NOTE: Installations specified in parentheses represent the command group location, not units conducting short or long-term split operations, e.g. HQ, PHCR-North, and PHCR-Pacific.

- * USAPHC Commanding General dual-hat as the Functional Proponent for Preventive Medicine
- ** Executive agencies receive administrative support from USAPHC, but the Army Surgeon General oversees them
- ++ Director dual-hat as "Deputy to the Commander for Public Health"

Color Legend – Level of PH Services	
Blue	Major Subordinate Command (V)
Purple	Executive Agencies
Red	Strategic (V)
Gold	Regional Command (IV)
Green	VETSVC Area or Installation (I-III)

AIPH Organizational Structure

Army Institute of Public Health (APG, MD) also Deputy to the CDR for PH



NOTE: The legacy portfolio and programs will remain in place until full implementation of the Portfolio Management annual cycle, which assesses the portfolio structure annually.



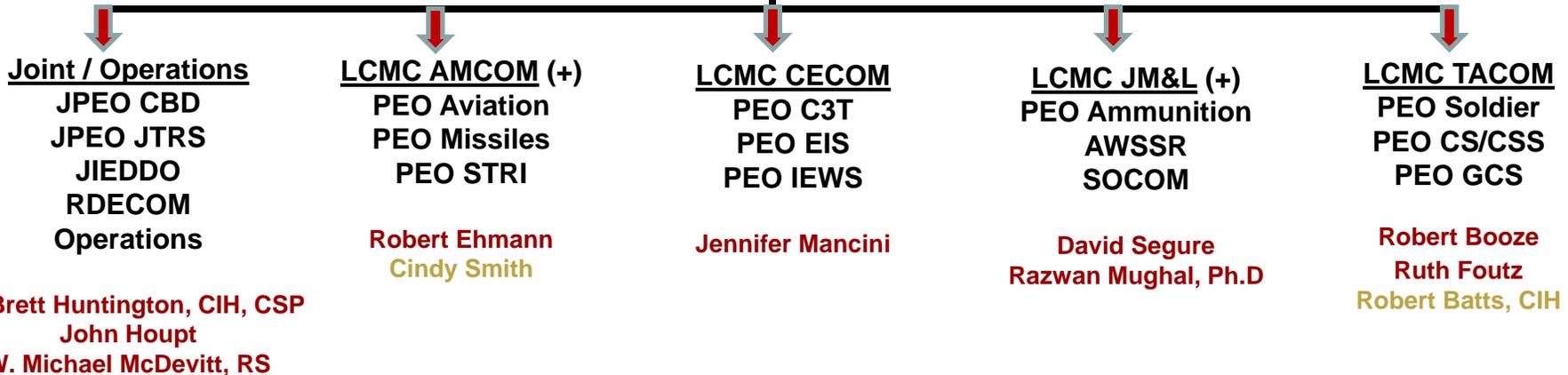
HHA Program TDA



10 May 2012

Program Manager
Timothy A. Kluchinsky, Jr., Dr.PH

Secretary
Melinda Battle-Hinson



	Total	Civilian	Military
REQUIREMENTS	15	11	4
AUTHORIZATIONS	13	11	2
ON BOARD	13	13	0
Source 0113 Approved TDA			

- LCMC = Life Cycle Management Command
- CECOM = Communications-electronics Command
- PEO = Program Executive Office
- JPEO = Joint Program Executive Office
- C3T = Command, Control, Communications (Tactical)
- EIS = Enterprise Information System
- IEWS = Intelligence, Electronic, Warfare & Sensors
- JTRS = Joint Tactical Radio Sets
- AMCOM = Aviation & Missile Command
- STRI = Simulation, Training, & Instrumentation
- TACOM = Tank-automotive and Armaments Command
- CS/CSS = Combat Support & Combat Service Support
- GCS = Ground Combat Systems
- JM&L = Joint Munitions & Lethality
- AWSSR = Army Weapon System Safety Review
- CBD = Joint Chemical & Biological Defense
- SOCOM = Special operations Command
- REF = Rapid Equipping Force
- RFI = Rapid Fielding Initiative
- JIEDDO = Joint IED Defeat Organization
- RDEC = Research Development Engineering Command



**Armor (1)
Preventive Medicine (3)
Veterinary Service (1)
Air Defense Artillery (1)
Infantry (2)
Clerk (1)**

**2 ea.
Toxicologists**

**2 ea.
Doctoral Degrees**

**2 ea.
Certified Industrial Hygienists**

**2 ea.
Human Factors Specialists/
Physiologists**

**2 ea.
Engineers
-Environmental/Civil
-Chemical**

**2 ea.
Certified Safety Professionals**

**2 ea.
Top Secret Clearances
(inactive)**

**President,
US Environmental
Health Association**

**3 ea.
Registered Sanitarians/
Registered Environmental
Health Specialists**

3 ea. Army Reservists

**1 ea.
Diplomat
American Academy
of Sanitarians**



DOD, DA, Civilian Work Groups, Associations, Committees, Councils, and Boards



DOD, DA, CIVILIAN WORKGROUPS, ASSOCIATIONS, COMMITTEES, COUNCILS (19 Jun 12)

Working GROUP	INDIVIDUALS	[PHC Unit/Section Assigned]	TITLE	TELEPHONE	EMAIL	GROUP CHARTERED BY?	HOW DID HHA INDIVIDUAL GET INVOLVED?	HHA INDIVIDUALS REPRESENT?	HOW, WHEN, WHAT DO INDIVIDUALS REPORT?
Army Weapon Systems Safety Review Board	Timothy Kluchinsky	Health Hazard Assessment	Program Manager	410.436.1061	timothy.kluchinsky@us.army.mil	Office Of the Director Of Army Safety	Proactive	OTSG	Report Back to OHS and Command from Each TDY, Meeting, or Teleconference, Information on Major Issues and Concerns.
Department of Army System Safety Council	Timothy Kluchinsky	Health Hazard Assessment	Program Manager	410.436.1061	timothy.kluchinsky@us.army.mil	Office Of the Director Of Army Safety	Proactive	OTSG	Report Back to OHS and Command from Each TDY, Meeting, or Teleconference, Information on Major Issues and Concerns.
DoD ESOH Acquisition IPT	Timothy Kluchinsky	Health Hazard Assessment	Program Manager	410.436.1061	timothy.kluchinsky@us.army.mil	Office of the Deputy Under Secretary of Defense Installations and Environment	Proactive	PHC	Report Back to OHS and Command from Each TDY, Meeting, or Teleconference, Information on Major Issues and Concerns.
HHA, Environmental Health Risk Assessment, Acquisition and Toxicology Working Group	Timothy Kluchinsky	Health Hazard Assessment	Program Manager	410.436.1061	timothy.kluchinsky@us.army.mil	Draft Charter	AR 40-10 Requirement	ALPH	Report Back to OHS and Command from Each TDY, Meeting, or Teleconference, Information on Major Issues and Concerns.
Joint Non-lethal Weapons Directorate Human Effect Review Board	Timothy Kluchinsky	Health Hazard Assessment	Program Manager	410.436.1061	timothy.kluchinsky@us.army.mil	Joint Non-lethal Weapons Directorate	DOD Requirement	OTSG	Report Back to OHS and Command from Each TDY, Meeting, or Teleconference, Information on Major Issues and Concerns.
Joint Weapons and Safety Working Group	Timothy Kluchinsky	Health Hazard Assessment	Program Manager	410.436.1061	timothy.kluchinsky@us.army.mil	Assistant Secretary of Defense for Research and Engineering	Proactive	OTSG	Report Back to OHS and Command from Each TDY, Meeting, or Teleconference, Information on Major Issues and Concerns.
System Safety Policy Action Committee	Timothy Kluchinsky	Health Hazard Assessment	Program Manager	410.436.1061	timothy.kluchinsky@us.army.mil	Army Materiel Command	Proactive	OTSG	Report Back to OHS and Command from Each TDY, Meeting, or Teleconference, Information on Major Issues and Concerns.
US Environmental Health Association	Timothy Kluchinsky	Health Hazard Assessment	Program Manager	410.436.1061	timothy.kluchinsky@us.army.mil	National Environmental Health Association Affiliate	President	Uniformed Services	Report Back to OHS and Command from Each TDY, Meeting, or Teleconference, Information on Major Issues and Concerns.
Joint Independent Logistics Assessment Working Group	Brett Huntington	Health Hazard Assessment	Industrial Hygienist	410.436.1036	s.brett.huntington@us.army.mil	Joint Program Executive Office, Chem Bio Defense	Proactive	OHS	Report Back to OHS and Command from Each TDY, Meeting, or Teleconference, Information on Major Issues and Concerns.
Science Technology Engineering and Math Working Group	Brett Huntington	Health Hazard Assessment	Industrial Hygienist	410.436.1036	s.brett.huntington@us.army.mil	PHC	Required	OHS	Report Back to OHS and Command from Each TDY, Meeting, or Teleconference, Information on Major Issues and Concerns.
Army Environmental Cost IPT	Mike McDevitt	Health Hazard Assessment	Industrial Hygienist	410.417.2827	mike.mcdevitt@us.army.mil	No Charter (ad hoc)	Proactive	HHA	Report Back to OHS and Command from Each TDY, Meeting, or Teleconference, Information on Major Issues and Concerns.
Nanotechnology IPT	Mike McDevitt	Health Hazard Assessment	Industrial Hygienist	410.417.2827	mike.mcdevitt@us.army.mil	No Charter	Proactive	HHA	Report Back to OHS and Command from Each TDY, Meeting, or Teleconference, Information on Major Issues and Concerns.
Safety Assessment Working Group	Robert Booze	Health Hazard Assessment	Industrial Hygienist	410.937.5300	robert.g.booze2@us.army.mil	Army Evaluation Center	Proactive	HHA	Report Back to OHS and Command from Each TDY, Meeting, or Teleconference, Information on Major Issues and Concerns.

Health Hazard Assessment

SPECIFIC OBJECTIVES:

1. Preserve and protect the health of the SOLDIER.
2. Improve SOLDIER performance and enhance SYSTEM effectiveness.
3. Enhance READINESS - Reduce health hazards causing training/operational restrictions.
4. Reduce SYSTEM design retrofits needed to control or eliminate health hazards.
5. Reduce PERSONNEL COMPENSATION - Eliminate or reduce injury/illness attributable to health hazards from the use of Army materiel.

Health Hazard Assessment Reports do not address...

- System Safety Engineering
- Human Factors Engineering
- Soldier Survivability
- Environmental Issues
- System Performance/effectiveness

Health Hazard Assessment Report

- Provides Materiel Developers (MATDEVs) and Capability Developers (CAPDEVs) an estimate of the Occupational Health (OH) risk associated with “normal use” of materiel.
- Not intended to provide an all-inclusive medical assessment or USAMEDD approval to use an item.
- Mishaps, accidents, or equipment failures resulting in injuries, although sometimes health-related, do not fall within the scope (Safety).



Health Hazard Assessment Report

Assessment Standards

- Apply OSHA 29 CFR 1910 and other non-DOD regulatory health standards to military-unique equipment, systems, and operations, insofar as practicable.
- OSHA Standards are generally designed for 8-hr exposures and may not be applicable for 24-hr exposures, multiple exposures, or short duration exposures typical of military-unique applications.

Health Hazard Assessment Report Assessment Standards

- When military design, specification, or deployment requirements render compliance with existing OH standards infeasible or inappropriate, or when no standard exists for military-unique applications, the Army will use the health risk management process or develop a military-unique OH standard.

Health Hazard Assessment

PRIMARY OBJECTIVE:

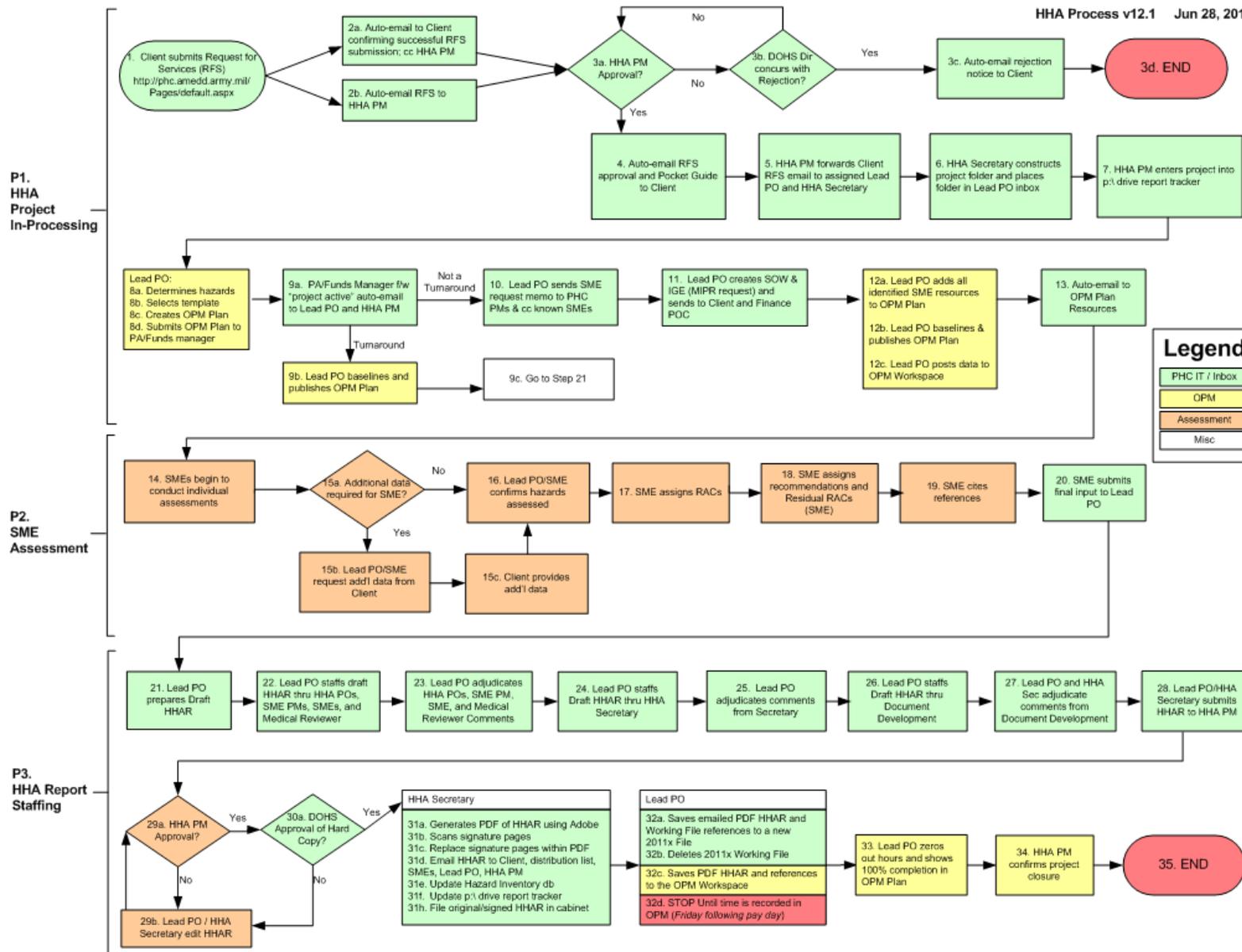
- To identify, assess, and provide recommendations to eliminate or control health hazards associated with:
 - *weapon platforms*
 - *munitions*
 - *equipment*
 - *clothing*
 - *training devices*
 - *other materiel systems*

Health Hazard Assessment Process

- Review historical Health Hazard (HH) data on similar items.
- Review health surveillance and safety data.
- Review designs, use scenarios, & test data.
- Assess the above information to determine Soldier risk.
- Make recommendations to control or eliminate HH.
- Assign a RAC & residual RAC when applicable.
- Establish priorities for control actions.
- Support acquisition Milestone Decision Reviews, safety releases, materiel releases, and other events.
- Will soon provide an estimate of Medical Cost Avoidance using the Medical Cost Avoidance Model (MCAM).

Requesting a Health Hazard Assessment Report

- <https://usaphcapps.amedd.army.mil/MSRV/ServiceRequest.aspx>
- Click on “Request Services”
- Complete the “Request for PHC Products and Services” form
- Upload/submit a signed memorandum on letterhead
- Upon acceptance, the HHA-PO:
 - contacts Client
 - develops project plan
 - sends SOW & funding request
 - opens an official HHA project
- Provide all data/test results and materiel system information relevant to HHA at least 90 days in advance of the anticipated publication date.



Proponent & Regulations

- Proponent: Army Surgeon General.
- Governing Regulations:
 - DODI 5000.02, Operation of the Defense Acquisition System.
 - AR 40-10, Health Hazard Assessment Program in Support of the Army Materiel Acquisition Decision Process.
 - AR 602-2, Manpower and Personnel Integration (MANPRINT) in the System Acquisition Process.
 - AR 70-1, Army Acquisition Policy.
 - AR 700-142, Type Classification, Materiel Release, Fielding, and Transfer.
- Lead Agent (1995): Army Institute of Public Health (AIPH).

Health Hazard Categories Addressed by the HHA Program

ACOUSTIC ENERGY

- Impulse Noise
- Blast Overpressure
- Steady-state Noise

BIOLOGICAL SUBSTANCES

- Field Sanitation & Hygiene
- Poisonous Plants & Animals

CHEMICAL SUBSTANCES

RADIATION ENERGY

- Radio Frequency/Ultrasound
- Laser/Optical Radiation
- Ionizing Radiation

SHOCK

- Rapid Acceleration/Deceleration

TRAUMA

- Sharp/Blunt Impact
- Musculoskeletal Trauma

VIBRATION

- Whole-body (multiple shock)
- Segmental

TEMPERATURE EXTREMES

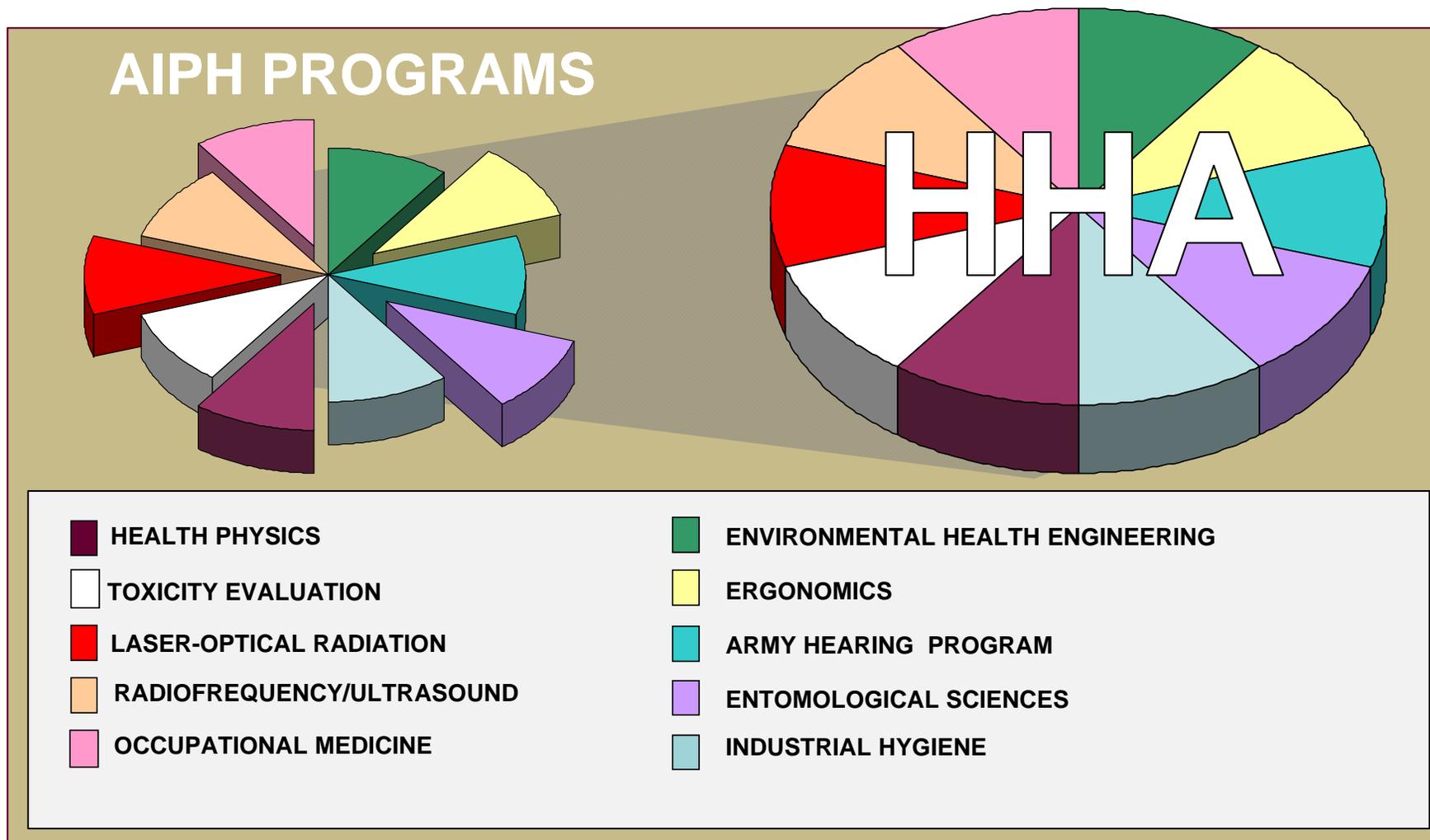
- Heat/Cold

OXYGEN DEFICIENCY

- High Altitude/Confined Spaces
- Ventilation



Health Hazard Assessment Process: Integrated AIPH Support





Risk Levels

Red = High
Orange = Serious
Amber = Medium
Green = Low

Risk Assessment Codes

High ←————→ Low

High
↑
↓
Low

Hazard Severity	Hazard Probability				
	A	B	C	D	E
I	1	1	1	2	3
II	1	1	2	3	4
III	2	3	3	4	5
IV	3	5	5	5	5



RISK Acceptance Levels per DODI 5000.02, 8 Dec 08 Risk Assessment Levels & Definitions per Tables A-I thru A-IV of MIL-STD 882D, 10 Feb 00				HAZARD SEVERITY				
				Catastrophic	Critical	Marginal	Negligible	
		Specific Individual Item	Fleet or Inventory	Could result in death, permanent total disability, loss exceeding \$1M, or irreversible severe environmental damage that violates law or regulation.	Could result in permanent partial disability, injuries or occupational illness that may result in hospitalization of at least three personnel, loss exceeding \$200K but less than \$1M, or reversible environmental damage causing a violation of law or regulation.	Could result in injury or occupational illness resulting in one or more lost work days(s), loss exceeding \$10K but less than \$200K, or mitigatable environmental damage without violation of law or regulation where restoration activities can be accomplished.	Could result in injury or illness not resulting in a lost work day, loss exceeding \$2K but less than \$10K, or minimal environmental damage not violating law or regulation.	
				1	2	3	4	
HAZARD PROBABILITY	Frequent	Likely to occur often in the life of an item, with a probability of occurrence greater than 10^{-1} in that life.	Continuously experienced	A	1-A HIGH AAE	2-A HIGH AAE	3-A SERIOUS PEO	4-A MEDIUM PM
	Probable	Will occur several times in the life of an item, with a probability of occurrence less than 10^{-1} but greater than 10^{-2} in that life	Will occur frequently	B	1-B HIGH AAE	2-B HIGH AAE	3-B SERIOUS PEO	4-B MEDIUM PM
	Occasional	Likely to occur some time in the life of an item, with a probability of occurrence less than 10^{-2} but greater than 10^{-3} in that life	Will occur several times	C	1-C HIGH AAE	2-C SERIOUS PEO	3-C MEDIUM PM	4-C LOW PM
	Remote	Unlikely but possible to occur in the life of an item, with a probability of occurrence less than 10^{-3} but greater than 10^{-6} in that life	Unlikely, but can reasonably be expected to occur	D	1-D SERIOUS PEO	2-D MEDIUM PM	3-D MEDIUM PM	4-D LOW PM
	Improbable	So unlikely, it can be assumed occurrence may not be experienced, with a probability of occurrence less than 10^{-6} in that life	Unlikely to occur, but possible	E	1-E MEDIUM PM	2-E MEDIUM PM	3-E MEDIUM PM	4-E LOW PM



Hazard Severity Categories

Numerical Designation	Classification	Possible Hazard Outcomes
I	Catastrophic	May cause death or total loss of a bodily system
II	Critical	May cause severe bodily injury, severe occupational illness, or major damage to a bodily system
III	Marginal	May cause minor bodily injury, minor occupational illness, or minor damage to a bodily system
IV	Negligible	Would cause less than minor bodily injury, minor occupational illness, or minor damage to a bodily system



Hazard Probability Categories

Descriptive Word	Level	Specific Individual Item	Fleet or Inventory
Frequent	A	Likely to occur frequently	Continuously experience
Probable	B	Will occur several times in the life of an item	Will occur frequently
Occasional	C	Likely to occur some time in the life of an item	Will occur several times
Remote	D	Unlikely but possible to occur in the life of an item	Unlikely but can reasonably be expected to occur
Improbable	E	So unlikely, it can be assumed occurrence may not be experienced	Unlikely to occur, but possible

FY12 Program Priorities

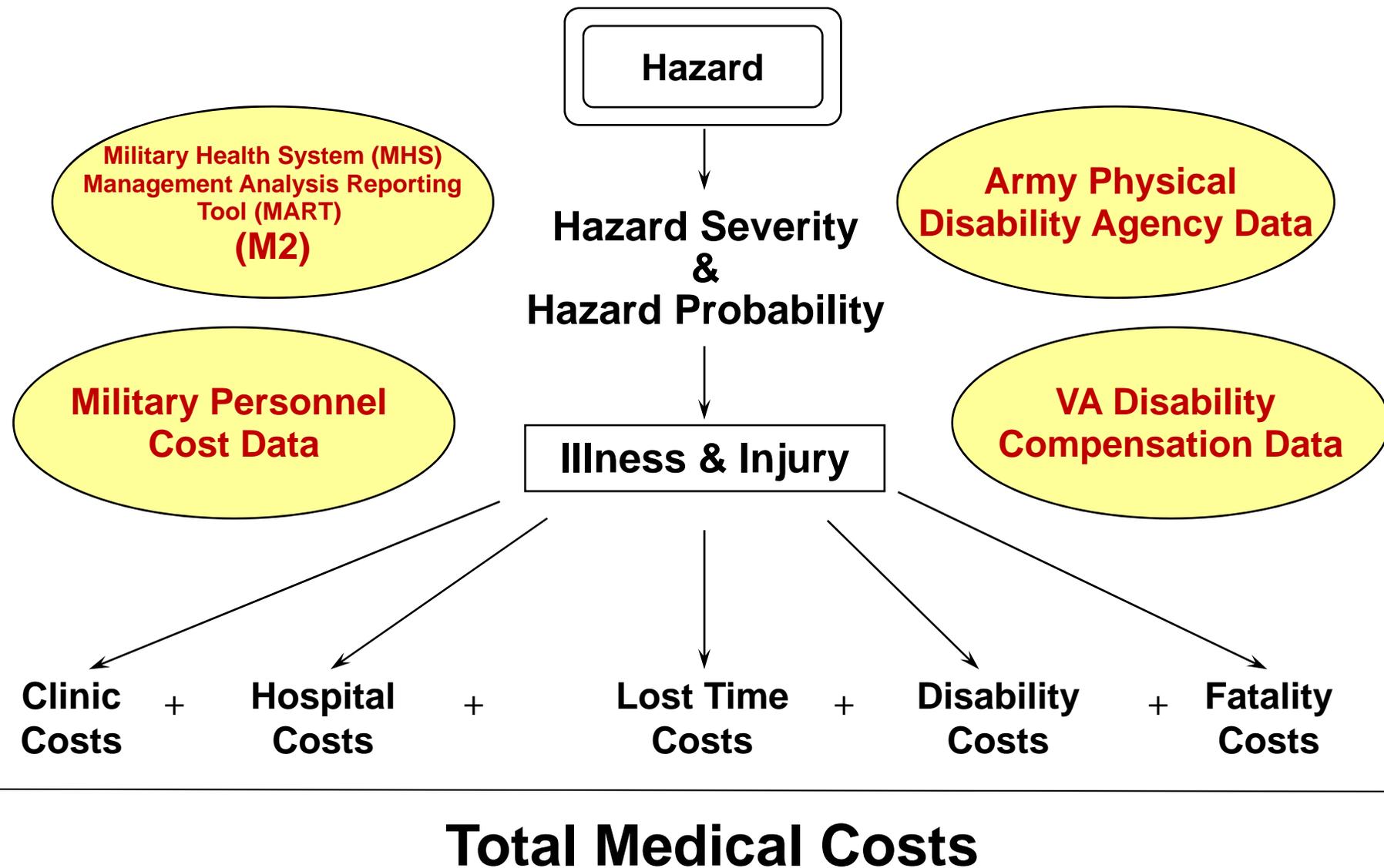
Priority Statement	Definition	Expected Outcome	Action Items, Collab & POC
Optimize the IH resource augmentation by hiring and training 6 IH. (83%, #1)	Hire, train, and assign an IH Project Manager to support each Program Executive Office.	Increase TDA to 13 ea. trained IH on hand.	Kluchinsky, G-1, G-6, ExpBAC
Populate the HHA Program website. (95%, #2)	Develop and post information for each of the 20 types of health hazards to include medical criteria, health effects, data requirements, and references.	Website constructed and populated.	Ehmann
Develop an Initial HHAR (IHHAR) and Turnaround (Reaffirmation/no new hazards) Template. (95%, #2)	Develop the IHHAR template and direct Client to HHA website for hazard specific information.	Improved IHHAR Process using a memorandum template and website information.	McDevitt
Standardize the HHA Process and depict it using a VISIO Diagram and Pocket Guide. (90%, #2)	The HHA process diagram and Pocket Guide are outdated and need to be redone.	Develop a VISIO Diagram and Pocket Guide depicting the process for requesting, conducting, and delivering an HHA Report.	Ehmann, Document Development
Standardize HHA involvement in all phases of each materiel's acquisition process. (95%, #2)	Devise and implement a strategy to ensure HHA support is maximized for all materiel.	Develop a by-acquisition phase protocol that identifies where HHA support is required/recommended.	Kluchinsky

FY12 Program Priorities

Priority Statement	Definition	Expected Outcome	Action Items, Collab & POC
Increase involvement in ESOH forums that make major ESOH-related recommendations and decisions in support of materiel acquisitions. (95%, #6)	Aggressively participate in Boards, IPTs, and WGs to promote the elimination/mitigation of OH hazards in acquisitions.	Maximize meeting attendance: -JNLWD-HERB -DOD ESOH in Acquisitions IPT -DA System Safety Council -DTC Safety Verification WG -Sys Safety Policy Action Comm. -Joint Weap and Laser Safety WG -JCIDS in ESOH WG. -HEAT WG	Kluchinsky, Huntington Kluchinsky Kluchinsky Segure, Booze, Houpt Kluc, Ehmann, Segure, Booze, Hunt, Houpt Kluc, Seg, Bze, McD, DeF Kluchinsky, McDevitt Klu, Houpt, McD, Booze
Improve the Joint Capabilities and Integration Development System (JCIDS) document review process. (95%, #2)	Devise a process of providing consistent and quality input to JCIDS documents and develop a method for tracking what has been reviewed and whether our comments were incorporated.	-Develop an SOP for JCIDS document review and conduct reviews for all ACAT programs. -Develop a presentation for the Army Logistic Management College-Capability Dev Course.	McDevitt, ALMC
Standardize RAC matrix logic for conducting HHAs. (10%, #4)	Conflicting guidance for assessing RAC is found in DODI 6055.1, MIL-STD 882D, DA PAM 40-503, AR 70-1, AR 40-10.	Use MIL-STD 882, which is what the acquisition programs use.	Huntington, McDevitt, OSD
Update AR 40-10, HHA Program in support of the Army Acquisition Process. (5%, #4)	AR 40-10 is dated 27 July 2007 and does not reflect recent changes to the acquisition process.	Publish a new AR 40-10 using the Rapid Action Review Process.	McDevitt, Document Development

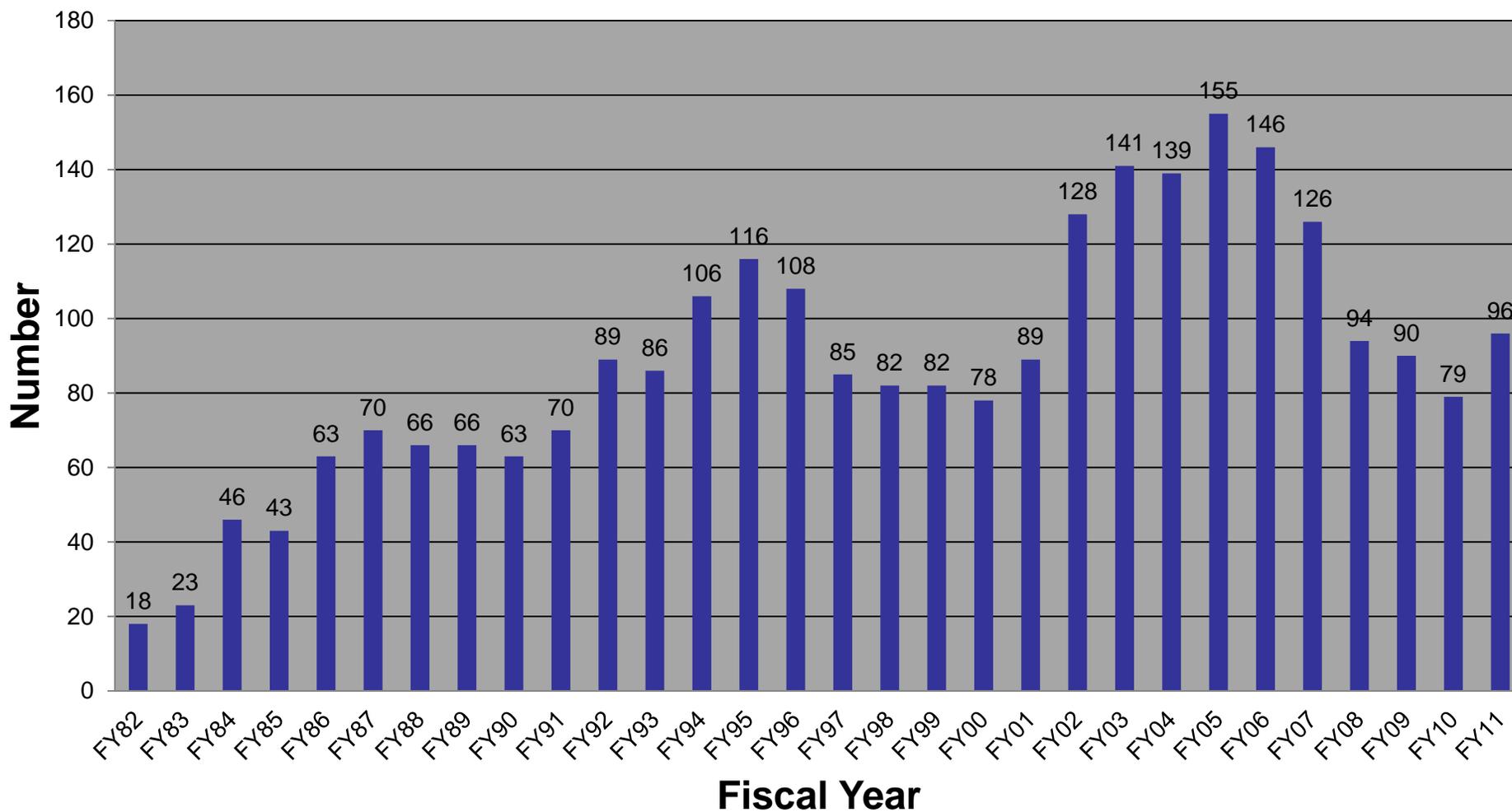
FY12 Program Priorities

Priority Statement	Definition	Expected Outcome	Action Items, Collab & POC
Update the HHA Assessor's Guide. (5%, #2)	Each chapter of the Assessor's Guide needs to be updated by the SME PMs.	Logic for assessing for each health hazard type clearly presented in an updated guide.	Huntington, McDevitt, SME PMs, Document Development
Improve our capabilities of assessing materiel. (95%, #4)	Identify and prioritize gaps associated with methods, models, tools, applications, injury criteria, procedures, and exposure standards required to properly assess materiel.	New developments by MRMC.	Kluchinsky, MRMC-MOMRP
Enhance the Medical and Lost Time Cost Avoidance Model (MCAM). (70%, #4)	Update algorithms, cost factors, metrics from data sources, and list of ICD-9 Codes used in the MCAM. Web-enable the model.	Update the MCAM. Create a web-based application.	Kluchinsky, LMI, DEDS, G-6, G-8
Support the USU-Division of Occupational and Environmental Health. (80%, #6)	Provide presentations and dissertation/thesis committee representation.	Enhance materiel-OH hazard awareness and publish manuscripts.	Kluchinsky
Populate the MANPRINT Enterprise Tracker Analyzer (META). (20%, #4)	META displays newly funded ACAT systems. HHA info for each materiel item needs to be entered.	HHA info entered and maintained.	Foutz, Project Managers

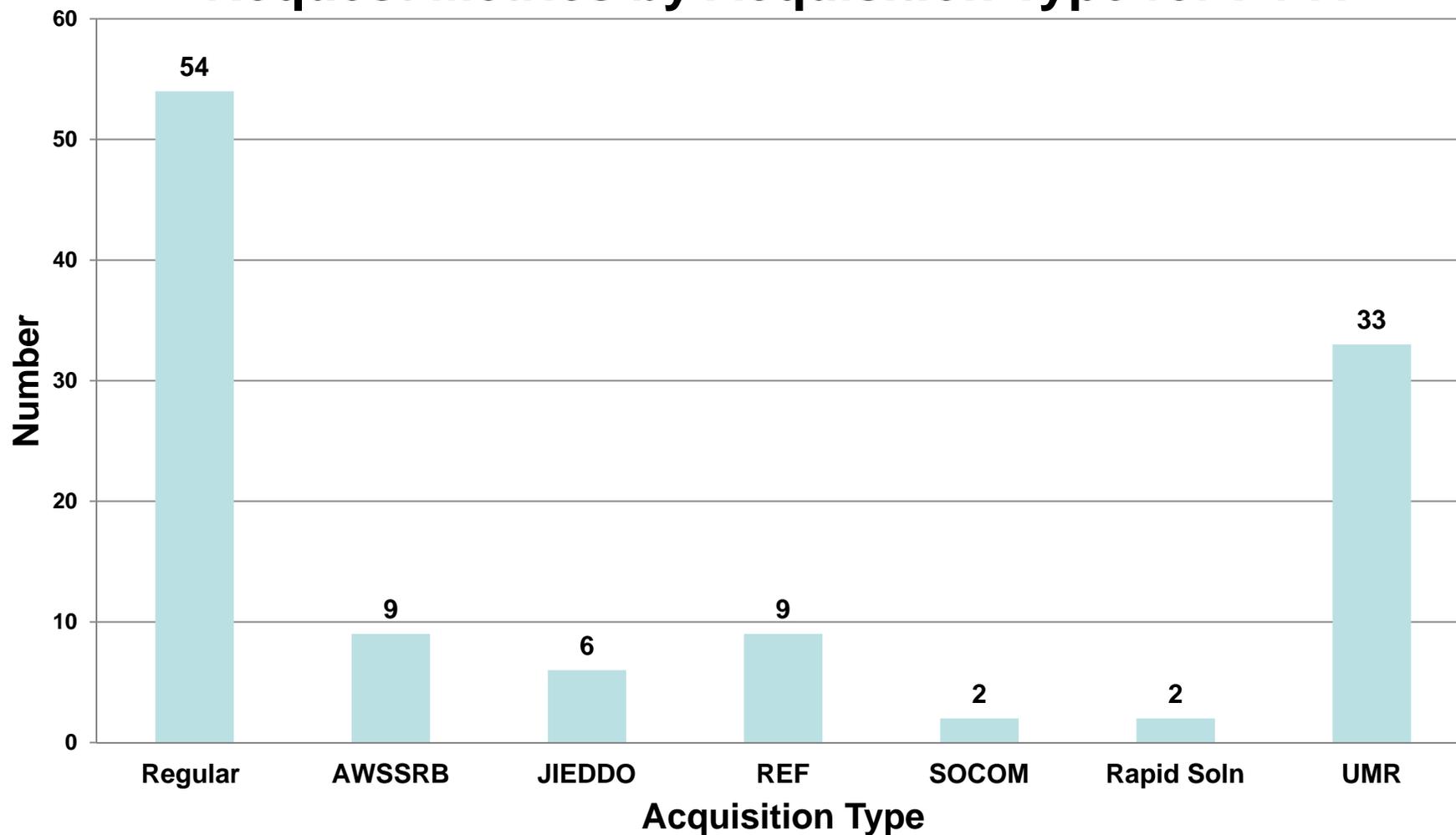


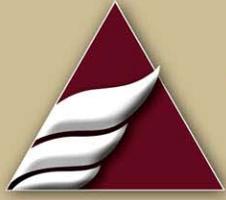


Health Hazard Assessment Reports



Health Hazard Assessment Reports: Request Metrics by Acquisition Type for FY11





U.S. Army Public Health Command

USAPHC

Questions?