US Army Corps of Engineers®

2012 Leaders Emeritus

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US Army Corps of Engineers

2012 Leaders Emeritus

13 September 2012

AGENDA

Time	Activity	Presenter	Page Number
0800 – 0855	**Registration & Continental Breakfast**		
0855 – 0910	**Group Photo (outside CMD Suite)**		
0910 – 0915	**CofS Admin Remarks**	COL Dan Anninos	
0915 – 1015	**Chief of Engineers Opening Remarks/Priorities**	LTG Tom Bostick	
1015 – 1045	**Military Programs** *- COCOM support* *- Energy Security and Sustainability* *- Partnering with IMCOM*	Mr. Bob Slockbower	1
1045 – 1100	**Break**		
1100 – 1130	**Engineer Regiment** *- Shaping for 2020*	BG Duke Deluca	33
1130 – 1230	**Lunch (Catered)**		
1230 – 1300	**Civil Works** *- Civil works transformation*	MG Michael Walsh and Mr. Steve Stockton	64
1300 – 1330	**Contingency Operations** *- After Iraq/Afghanistan* *- Disaster response* *- COCOM support*	Mr. Ray Alexander and COL Tom Smith	91
1330 – 1345	**Break**		
1345 – 1415	**Research and Development** *- COCOM and Joint Engineer support* *- Advancing technology*	Mr. Steven Cary	101
1415 – 1445	**Key Enablers Overview** *- Building strong people and teams* *- Improving USACE business processes*	Mr. Stuart Hazlett, Mr. Bob Kazimer, Ms. Pat McNabb	115
1445 – 1515	**USACE 2020 and Wrap-Up**	MG Todd Semonite	128

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Military Missions 2020

Mr. Robert E. Slockbower, PE
Director, Military Programs

TEAM USACE

US Army Corps of Engineers
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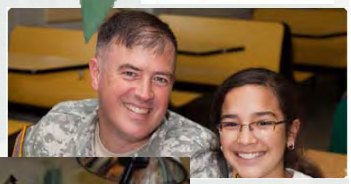
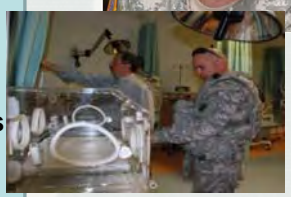
Paradigm Shift

Surge Era
- **Military Programs**
- **Commodity**
- **Energy/sustainability as a consideration**
- **Transformation**
- **Service Supplier**

f[ ] = Solutions





Post Surge Era
- **Military Missions**
- **Value**
- **Energy/sustainability as a driver**
- **Innovation**
- **Systems Integrator**

Developing a Value Proposition

"Great brands share four fundamental qualities:

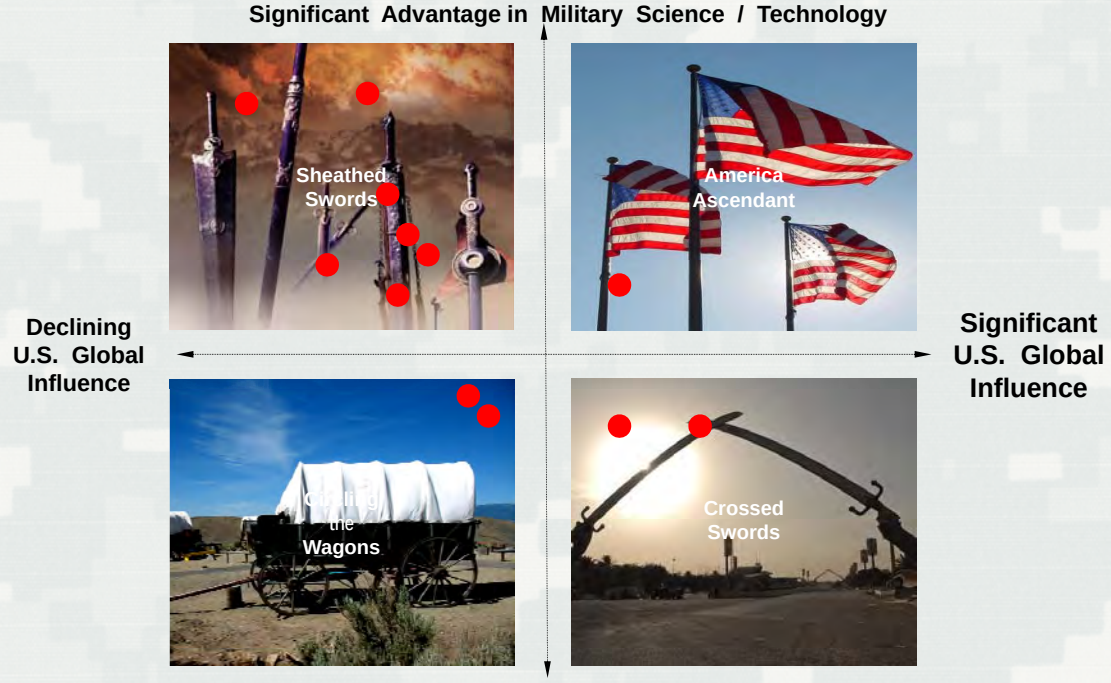
- ✓ They offer and communicate a clear, relevant customer promise.
- ✓ They build trust by delivering on that promise.
- ✓ They drive the market by continually improving the promise.
- ✓ They seek further advantage by innovating beyond the familiar."*

*Barwise and Meehan, "The One Thing You Must Get Right When Building a Brand," *Harvard Business Review,* December 2010.

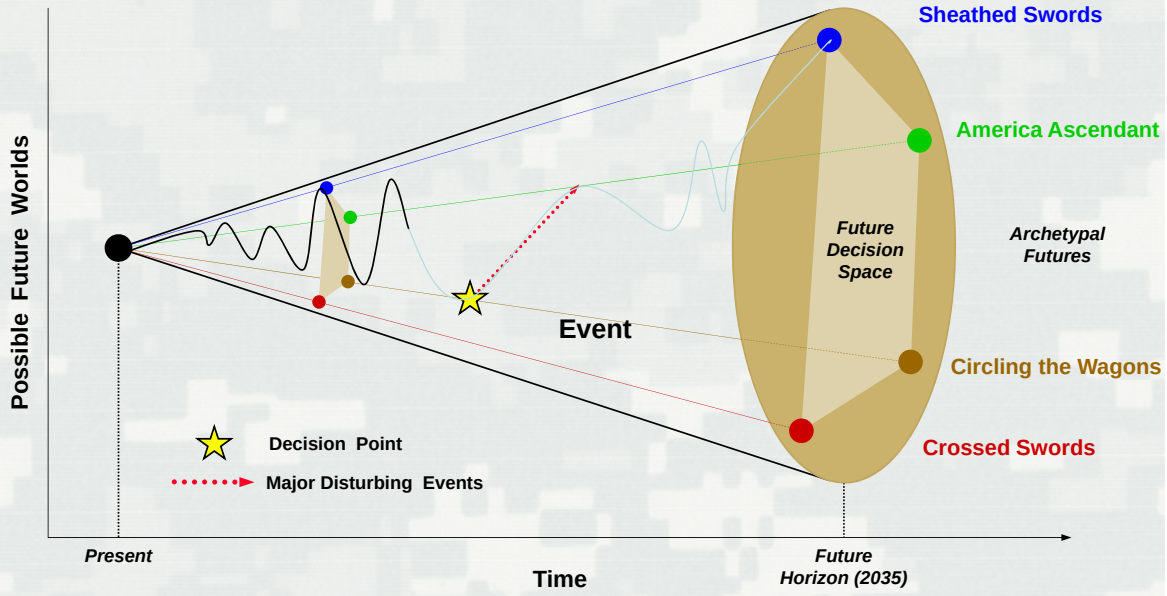
The basis of our value proposition….

"problems solved with you, for you"

Military Infrastructure Scenarios (2008)



" Cone" of Plausible Futures



How do we SHAPE and PREPARE USACE for multiple futures?

Strategic Concept

Military Missions Strategic Concept

Critical organizational capabilities necessary to achieve desired strategic outputs and outcomes now and in the future under a range of plausible scenarios

Foundational	Competitive	Distinguisher
Core Competencies	**Table Stakes**	**Critical Success Factors**
Execution Focus Integrated Project Delivery Accountability Diverse Tech Knowledge Expeditionary	Risk Management Cost Effective/ Efficient Value Proposition Employer of Choice Process Improvement Virtual Capability	Customer Relationships Strategic Sense Making Systems Thinking Alliance Development Learning Organization Innovation Scalability Flexibility

Portfolio of Initiatives

Culture

Critical Success Factors

Customer Relationships
Strategic Sense Making
Systems Thinking
Alliance Development
Learning Organization
Innovation
Scalability
Flexibility

f [• Managing Complexity • Driving Innovation • Leading Change • Building Relationships • Shaping Competency] = Solutions

Portfolio of Initiatives

Mil Missions Business Processes
- Enterprise Program Management Plans
- Codification of MILCON Transformed Processes

Energy & Sustainability
- Building-Level Optimization
- Installation-Level Energy Performance Strategies
- Operational Energy
- Deployment of Renewables
- Joint Service Engineer Strategies

Mil Missions Methods of Delivery
- Centers of Standardization
- Installation Support
- Acquisition Strategies and Tools
- Enterprise Delivery of Energy Solutions

COCOM Support
- Overseas Contingency Operations
- Theater Engagement Strategy Support

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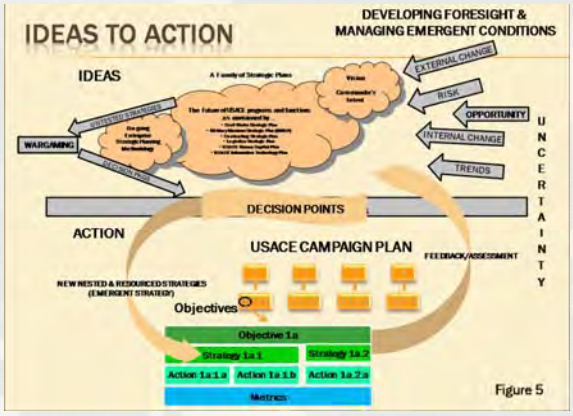
Military Missions (MM) Strategic Concept

IDEAS
- **MM Strategic Concept:** Strategic competencies that are important in executing the outputs and outcomes
- **MM Strategic Direction:** Annual statement of the "Way Ahead"
- **MM Portfolio of Initiatives:** Major focus areas based on current knowledge of anticipated requirements

ACTIONS
- **USACE Campaign Plan and Army Campaign Plan:** Drives decisions, resources, and actions to achieve measurable outputs and outcomes



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Support to COCOM Theater Engagement

Emerging Strategic Context

- Water/Food Security
- Energy Security/ Climate Change
- Disaster Response
- Strategic Engagement/ Build Partner Capacity
- Combat Terrorism & Illicit Trafficking
- Infrastructure
- Foreign Assistance Competition
- Maintain Stability

USACE Adds Value :

- Leverage strategic relationships and physical presence
- Develop enterprise processes with tailored solutions
- Build and exercise joint expeditionary capability
- Utilize JIIM partnerships and authorities
- Develop integrated R&D/S&T solutions
- Employ flexible and ready acquisition tools
- Apply Civ-Mil: integrated talent and solutions

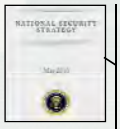
USACE Campaign Plan Objective 1d

Improve Interagency and International Support

USACE Value Proposition

Working with our joint, interagency, intergovernmental, and multinational partners, deliver innovative, holistic, and sustainable services and solutions to Combatant Commands to achieve global and theater objectives.

- 1 Support the COCOM and CENTCOM Commander in Winning the Current Fight
- 7 Enhance Our Interagency Disaster Response and Recovery Capability
- 8 Ensure critical enabling technologies
- 9 Strengthen and Further Teamwork in the Joint Engineer Force in Support of Joint Force 2020



"We must build and integrate the capabilities that can advance our interests and the interests we share with other countries and peoples"

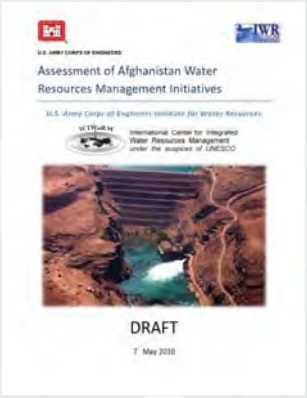
DoD Global Strategy

- Seek to be the partner of choice
- Conduct a sustainable pace of "presence" activities abroad
- Make thoughtful choices on these operations
- Develop innovative, low-cost, and small footprint approaches

***Army Vision**: The Army is globally engaged and regionally responsive; it is an indispensible partner and provider of a full range of capabilities to Combatant Commanders in a Joint, Interagency, Intergovernmental, and Multi-national (JIIM) environment. As part of the Joint Force and as America's Army, in all that we offer, we guarantee the agility, versatility and depth to Prevent, Shape and Win.*

Security Assistance

Not Just Construction!



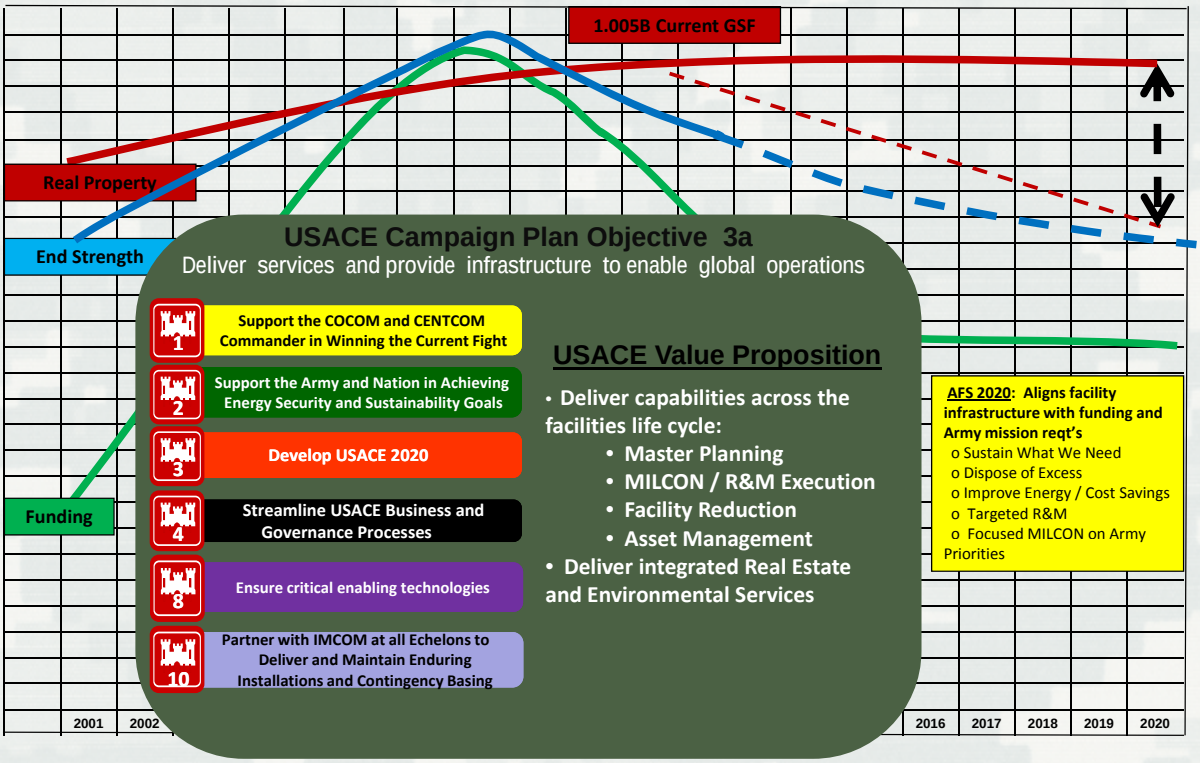
USACE Provides Collaborative Solutions :

- Engineering and Design Services
- Water Resources Planning and Development
- Energy Management
- Consensus Building/Conflict Management
- Capacity Development
- Construction Oversight
- Consequence Management and Preparedness
- Critical Infrastructure Protection

Improved Customer Outreach

- Participation in Theater Security Cooperation Planning
- Targeted Engagement Strategies with vertically aligned messaging
- Integration with the Army Security Assistance Enterprise
- Training Modules for Security Cooperation Officers

Army Facility Strategy (AFS) 2020



USACE Campaign Plan Objective 3a

Deliver services and provide infrastructure to enable global operations

1. Support the COCOM and CENTCOM Commander in Winning the Current Fight
2. Support the Army and Nation in Achieving Energy Security and Sustainability Goals
3. Develop USACE 2020
4. Streamline USACE Business and Governance Processes
8. Ensure critical enabling technologies
10. Partner with IMCOM at all Echelons to Deliver and Maintain Enduring Installations and Contingency Basing

USACE Value Proposition

- Deliver capabilities across the facilities life cycle:
  - Master Planning
  - MILCON / R&M Execution
  - Facility Reduction
  - Asset Management
- Deliver integrated Real Estate and Environmental Services

AFS 2020: Aligns facility infrastructure with funding and Army mission reqt's

- o Sustain What We Need
- o Dispose of Excess
- o Improve Energy / Cost Savings
- o Targeted R&M
- o Focused MILCON on Army Priorities

Installation Energy & Sustainability

USACE Adds Value…

- Support Net-Zero Initiative (NZI) at 21 installations
- Develop and implement a life-cycle approach for planning, design, commissioning, operation, sustainment, and disposal of facilities enabled by Energy Intensity Management and Metering.
- Support planning and execution of Alternative Financing Strategies
  - Energy Savings Performance Contracts
  - Utility Energy Saving Contracts
  - Power Purchase Agreements
  - Enhanced Use Leases

USACE Campaign Plan Objective 3b

Provide energy efficient and sustainable solutions for military communities and USACE facilities and activities

USACE Value Proposition

Create knowledge, build capacity, and delivery solutions required to meet installation energy and sustainability challenges.

2. Support the Army and Nation in Achieving Energy Security and Sustainability Goals
8. Ensure critical enabling technologies
10. Partner with IMCOM at all Echelons to Deliver and Maintain Enduring Installations and Contingency Basing

Operational Energy/Contingency Basing

USACE Adds Value…

- Provide technical assistance & electrical expertise to theater commanders and staff
- Save fuel by planning, designing and installing power plants and distribution networks
- Conduct medium and low voltage electrical safety inspections and make life, safety and health (LSH) repairs
- Assessing the host nation's electrical infrastructure
- Support the development of contingency basing and Operational Energy doctrine, baselines and metrics
- Facilitate tech-transfer and integration of lessons learned
  - Virtual FOB
  - Water/Wastewater for Contingency Basing
- Evolve the Army Facility Component System and Theater Construction Management System to the Joint Construction Management System (OCE-P and J-4)
- Champion development of Master Planning skills for application to contingency basing.

USACE Campaign Plan
Objective 3c

Provide sustainability and energy solutions for *Contingency Operations.*

USACE Value Proposition

Create knowledge, build capacity, and delivery solutions required to meet contingency operations energy and sustainability challenges. Reduce the logistics tail and permit units to focus on their primary missions.

1. Support the COCOM and CENTCOM Commander in Winning the Current Fight
2. Support the Army and Nation in Achieving Energy Security and Sustainability Goals
10. Partner with IMCOM at all Echelons to Deliver and Maintain Enduring Installations and Contingency Basing

Conclusion: Headlines 2020

Nation's Environmental Engineer

As the nation's environmental engineer, the Corps manages one of the largest federal environmental missions in the United States:

- Restoring degraded ecosystems
- Constructing sustainable facilities
- Regulating waterways and managing natural resources
- Cleaning up contaminated sites from past military activities.

Our responsibility to deliver environmentally sound projects and services to our customers touches every program within the Corps -- Military Programs, Civil Works and Research and Development.

The scope and magnitude of environmental issues that the Corps addresses make it stand out among other federal agencies. But it is more than one agency can do on its own, it requires working in partnership with others to ensure our environmental efforts meet the needs of the American public.

The Army Corps of Engineers continually seeks to partner with other federal and state agencies, non-governmental organizations and academic institutions to find innovative solutions to challenges that affect everyone – sustainability, climate change, endangered species, environmental cleanup, ecosystem restoration and more recently, the Army's NetZero installation initiative.

The Army Corps of Engineers' more than 6,000 environmental professionals are key resources for anyone inside or outside the Army family, wherever and whenever environmental solutions are sought. The breadth and depth of skills found within the workforce gives it the ability to seek the best solution to environmental challenges.

The recently reinvigorated seven Environmental Operating Principles, or the Corps' green ethics, are being incorporated into all Corps business lines to achieve a sustainable environment.

Restoring ecosystems

The Corps works to restore degraded ecosystem structure, function and dynamic processes to a more natural condition:

- Through large-scale ecosystem restoration projects, such as the Everglades, the Louisiana Coastal Area, the Missouri River, and the Great Lakes
- By employing system-wide watershed approaches to problem solving and management for smaller ecosystem restoration projects

-- more --

Constructing sustainable facilities
The Corps is designing and building sustainable communities and facilities for the Department of Defense by:

- Incorporating sustainable design criteria into military construction and training lands projects
- Developing techniques to divert military construction waste from landfills through recycling and finding reuse opportunities
- Minimizing the use of hazardous materials
- Establishing the Center for the Advancement of Sustainability Innovations, a one-stop shop for sustainable planning and design expertise.

Regulating waterways and managing natural resources
The Corps regulates work in the nation's wetlands and waters, with a goal of protecting the aquatic environment while allowing responsible development. The regulatory program works to ensure no net loss of wetlands while issuing about 90,000 permits a year.

With nearly 12 million acres of land and water to manage, the Corps is:

- Responsible for the well-being of 53 special status species
- Using Environmental Management Systems to integrate the Environmental Operating Principles into
  Corps operations to achieve waste reduction, recycling and energy efficiency goals
- Restoring environmental health to aquatic resources

Cleanup and protection activities
Corps environmental cleanup programs focus on protecting human health and the environment and seek to reduce risk to human health and the environment in a timely and cost-effective manner. The Corps manages, designs and executes a full range of cleanup and protection activities, such as:

- Cleaning up sites contaminated with hazardous, toxic or radioactive waste or ordnance through the Formerly Used Defense Sites program
- Cleaning up low-level radioactive waste from the nation's early atomic weapons program through the Formerly Utilized Sites Remedial Action Program
- Supporting the U.S. Environmental Protection Agency by cleaning up Superfund sites and working with its Brownfields and Urban Waters programs
- Supporting the Army with the Base Realignment and Closure program
- Ensuring that facilities comply with federal, state and local environmental laws
- Conserving cultural and natural resources

Bottom line
The Corps' goal for its environmental mission is to restore ecosystem structure and processes, manage our land, resources and construction activities in a sustainable manner, and support cleanup and protection activities efficiently and effectively, all the while leaving the smallest footprint behind.

For more information about the Corps environmental programs, visit the Corps Environmental Community of Practice Web site at: http://www.usace.army.mil/Missions/Environmental

Interagency and International Services (IIS) is a USACE program to provide reimbursable technical assistance to non-DOD Federal agencies, state and local governments, Indian nations, U.S. firms, international organizations and foreign governments. USACE executed about $2.8 billion of IIS services in FY 11 for over 70 Federal customers and through engagements in over 100 countries.

IIS in the US

Veterans Affairs. USACE Divisions are geographically aligned with regional Veterans Integrated Service Network (VISN) offices. USACE Districts provide direct reimbursable service to one or more of the 23 VISNs. and executed over $370 million in projects (minor construction and non-recurring maintenance) to modernize VA facilities during FY11.

EPA. USACE has been supporting EPA's Superfund program for over 30 years and executed $312 million of Superfund work during FY11. We expect to receive about $260 million in FY12.

Customs and Border Protection (CBP). In FY11 USACE delivered about $490 million of border security projects for CBP related to Ports of Entry, Patrol Facilities and Tactical Infrastructure along the borders with Canada and Mexico.

DOE. In FY11 USACE performed $60 million of work in support of a variety of DOE offices and programs. A new MOA is currently under development to enable future USACE support across the National Nuclear Security Administration (NNSA) national complex, with emphasis on the Uranium Processing Facility (UPC) at Oak Ridge, a national security priority project estimated to cost approximately $6B. .

IIS International

USACE international activities include water resource management collaborations, disaster response preparedness workshops, R&D activities and partnerships, humanitarian assistance in support of Combatant Commands (COCOMs), foreign military sales, civil reconstruction and development assistance for foreign governments and technical assistance for international organizations. Primary customers are the COCOMs, State Department, the U.S. Agency for International Development (AID), and the Millennium Challenge Corporation. Services may include technical assistance and training, planning, engineering, construction, contract management, and research and development. The Corps believes that providing such services furthers U.S. foreign policy objectives, contributes to the development of the receiving countries, opens opportunities for U.S. business, and is consistent with the President's Policy on Global Development.

Department of State. In FY11 USACE executed $440 million in support to the State Department Bureaus primarily in the Middle East to provide capacity development (Infrastructure O &M), Critical Infrastructure Protection (Oil, Energy, Water) and essential services (rule of law, health, water & sanitation). Supported Bureaus include Near Eastern Affairs, Diplomatic Security and International Narcotics and Law Enforcement.

USACE works closely with the Bureau of Oceans and International Environment and Science on worldwide water resource matters.

Millennium Challenge Corporation (MCC). USACE continues to assist the MCC on its infrastructure grant program to developing nations. FY12 activities are in Ghana, Jordan, Mozambique, Philippines and Zambia.

U.S. Agency for International Development (USAID): During the last year USACE has provided broad support to USAID through our LNO with synchronization and mutual support for a variety of Interagency efforts as well as provide a greater understanding of USAID to the DoD Engineer Community. These activities include information sharing to include Science &Technology, CIV/MIL disaster preparedness and response training, water resources support, infrastructure planning, construction and contracting support, and forum co-hosting. Regional program support includes delivery by POD during FY11-13 of $40 million of multipurpose cyclone shelters in Bangladesh.

Foreign Military Sales (FMS). USACE Foreign Military Sales (FMS) and related programs directly support Army's SHAPE role by enhancing and maintaining the strong relationships with key allies. FMS programs build the capabilities of our allies and help ensure strategic access with these nations. USACE has FMS programs with Egypt, Kuwait, Jordan, Bahrain, Qatar, Iraq, Israel, Saudi Arabia and others. These programs are providing the facilities that support the modernization and enhance the capabilities of the respective military forces. The current FMS program is around $2.3 Billion.

Afghanistan: USACE is supporting the US Forces and NATO security assistance and training mission in Afghanistan by designing and constructing bases, training facilities, police stations and other infrastructure for the Afghan National Security Forces (ANSF). Approximately $2.5 Billion of ANSF facilities have been completed and a further $5 Billion are under construction or planned. USACE is also supporting the civil-military campaign through the execution of Afghanistan Infrastructure Fund (AIF) projects including power distribution and other critical infrastructure.

Brazil. USACE signed an agreement in December 2011with the Brazilian Agency for the Development of the São Francisco and Parnaíba Valleys (CODEVASF) to provide reimbursable services of technical expert advisors in the area of Waterways Navigation with focus on riverbank erosion for a period of 3 years. Also underway are pending agreements between USACE and the Brazilian Civil Defense (equivalent to US FEMA) to provide consultants in the area of flood mitigation, response, and recovery (a joint effort with FEMA and US Army National Guard) and through the World Bank to enable USACE technical assistance in developing Brazil's National Dam Safety Program.

China. In 2009 HQDA tasked USACE to develop an engagement program with the People's Republic of China Engineers. In April 2011 MG Dorko, DCG-MIO led a USACE, USARPAC and TRADOC engineer team which traveled throughout China and engaged with the PLA and the Ministry of Water Resources. As result of these engagements, USACE is developing a proposed Memorandum of Understanding on Cooperation between USACE and Ministry of Water Resources of the People's Republic of China in coordination with the Assistant Secretary of the Army (Civil Works) and OSD.

Water Resources Collaboration. As host of the UNESCO International Centre for Integrated Water Resources Management (ICIWaRM) the Institute for Water Resources (IWR) interacts with UNESCO's global and regional water centers, including the Center for Arid and Semi-Arid Zones in Latin America and the Caribbean(CAZALAC); the Institute for Water Education (IHE) in The Netherlands; the International Centre for Water Hazard and Risk Management (ICHARM) in Japan. IWR also provides support to the State Department on international water issues including strategic cooperation with the Mekong River Commission, the World Water Council, the U.S. Water Partnership, facilitates USACE involvement on various interagency and international task forces and conferences, assisting water resources cooperation with other countries through USAID, the World Bank and other partners.

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**

MISSION/PURPOSE:
The Installation Support Division serves as the lead for the USACE part of the Installation Support Community of Practice which develops and maintains an effective and valued U.S. Army Corps of Engineers installation support capability to support the success of Army and other services installation public works activities at all levels. The key is to enhance national-level relationships with the Assistant Secretary of the Army for Installation, Energy and Environment (ASA(IE&E)), Deputy Assistant Secretary of the Army for Energy and Sustainment (DASA(E&S)), Assistant Chief of Staff for Installation Management (ACSIM), and Installation Management Command (IMCOM) so that USACE will be a member of the Army installation management team.

FY11/12/13 BUDGETS:
Installation Support funds provided by IMCOM in FY12 for Installation Directors of Public Works (DPWs) services/studies/surveys/inspection type work totaled to about $4.6M. The FY13 Projected budget for Installation Support funds to be provided by IMCOM for Installation DPWs services/studies/surveys/inspection type work is estimated to be about $5M. ISD also assists in the worldwide monitoring of services and SRM construction on Army and DoD installations which amounted to $3.5B in FY11. Projects for FY12 are still being developed or ongoing and are expected to amount to about $3.7B in services and SRM construction

SERVICES PROVIDED:

- Meeting military mission requirements supporting world-class sustainable installations where Soldiers call home.
- Assists HQIMCOM in the management and distribution of Installtion Support funds used for services/studies/surveys/inspection type work for IMCOM installations.
- Provides program management and oversight for the Army Sustainment, Restoration, and Modernization (SRM), Facilities Reduction Program (FRP) and other USACE IS Programs. As installations focus more on sustaining and maintaining facilities, SRM will be a large part of USACE's direction. Many facilities will be repurposed and thus reconfigured to meet changing mission needs. The ISD will monitor the larger SRM programs on Army and DoD installations to include the life cycle manangement of critical facilities.
- Provides analyses of Army initiatives, concepts, and force structure for use by the Army staff, DoD and DA materiel acquisition communities, and validates facility requirements for the Army throughout the Army Force Management Process (Combat Readiness Support Team).
- Supports USACE permanent membership on the Service and Infrastructure Core Enterprise (SICE) board, which is made up of representatives from more than 15 commands, organizations, and staff offices. This is co-chaired by the Commanding General of IMCOM and the ASA(IE&E). SICE is working through integration and collaboration to provide essential services, infrastructure and operational support to improve the livelihood of our Soldiers, civilians and their families.

-- more --

SERVICES PROVIDED (Continued):

- Serves as managing editor for the IMCOM *Public Works Digest*, which provides technical and human interest stories on public works, environment, housing, military construction and innovative engineering accomplishments. Each issue is coordinated with HQIMCOM to ensure the right message is relayed to the installations and USACE offices that follow Army policies and guidance.
- Provides technical support for the Real Property Master Planning, providing leadership, planning assistance, policy development, and course instruction to USACE, ACSIM, IMCOM, Office of the Secretary of Defense and Army installations. The IS Master Planning Team received in 2011 the "Workforce Development Through Training" award and in 2009 the "Outstanding Federal Planning Program" award.
- Serves as the defense sector lead for the DoD Critical Infrastructure Program (DCIP). Determines and maintains defense critical infrastructure asset data, and makes this information available in a website environment.
- Supports the MILCON process through execution of the Programming, Administration, and Execution (PAX) system. The Army Staff uses PAX to provide information on the planning, programming, budgeting and reporting of MILCON to Army, the Office of the Secretary of Defense (OSD) and Congress. PAX includes the 1391 processor for initiating military construction projects.
- Manages the USACE Installation Support Professional of the Year program. This year's winner was Ms. Helane Church from the South Atlantic Division, Savannah District.
- Serves as proponent and training coordinator for public works management profession development courses through the USACE Learning Center (ULC) at the Huntsville Center
- Provides services through an Engineering Services contract that performs management/industrial engineering analyses, studies, and recommendations, and other services incidental to this work in the areas of (1) engineering and construction management, and personnel and manpower analyses, re-engineering appraisals; (2) real property management and housing management; (3) engineering analyses related to privatization feasibility and optimization (4) specialized engineering and construction-related information systems appraisals and requirement; (5) facilities policy, management, and administration; (6) environmental management and remediation; and other related topics and issues.
- Serves as the HQUSACE lead on the fielding of BUILDER and other R&D programs that assist installations in their management of facilities and infrastructure.
- Maintains a San Antonio Office to coorodiante directly with major Commands in the San Antonio area, such as, IMCOM, MEDCOM, ARNORTH, ARSOUTH, AFCEE and other military related offices.

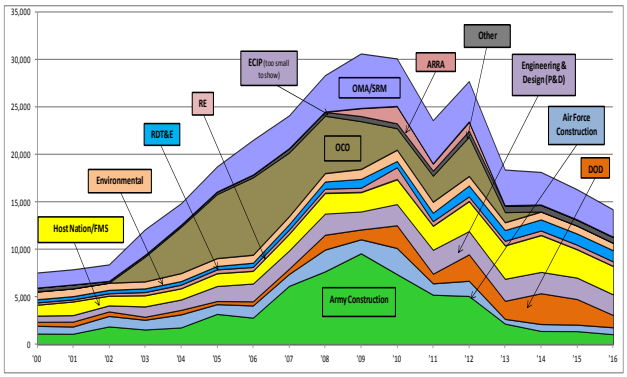
FUTURE DIRECTION/CHALLANGES:

- Building additional capabilities within the Installation Support Community of Practice team to accept the expanding the role of installation support to Army and DOD assets.
- Leading the technical way to provide energy savings in MILCON construction and sustainment, restoration and modernization projects.
- Managing very limited funds against large requirements of services and products.
- Ensuring the use of funds are in accordance with IMCOM Headquarters' programming and Army enterprise wide priorities.
- Continuing to build relationships with OSD, the assistant secretaries of the Army, ACSIM and IMCOM.

MILCON Overview

FY12 MILCON Programs

ARMY
- Army Military Construction: 127 projects @ $3.38B
- Army Military Construction-Overseas (OCO Base): 16 projects @ $351M
- Army Reserves: 29 projects @ $418M
- Army Family Housing (AFH): 6 projects @ $169M
- Army Energy Conservation and Investment Program (ECIP): 22 projects @ $21M



Air Force
- Military Construction: 59 projects @ $1.23B
- Overseas Contingency Ops: 8 projects @ $309M
- Air Force (Reserves): 3 projects @ $21M

DOD
- Defense Logistics Agency: 15 projects @ $163M
- Special Operations Command: 24 projects @ $451M
- Education Activities: 18 projects @ $682M
- TriCare Management Activity: 20 projects @ $1.0B

MILCON ARRA
- 1 Project @ $3.6M

The Corps executes our military missions across the globe, in over 100 countries. We continue to deliver positive impacts in our construction methodology, management of natural resources, implementation of energy and sustainability mandates, and support to installation functions which directly affect the Warfighters and their families' quality of life. In addition, the Corps maintains its support for the Overseas Contingency Operation with deployable engineering teams and reach back technical support.

The FY12 MILCON program remains robust with 348 projects at $8.93B. As we transition into an era of declining program budgets, FY13 MILCON PresBud programs' workload, excluding FY12 carryover projects, consists of 145 projects at $4.7B.

As we adapt to the new budget realities, USACE Military Missions is redefining our value proposition by working to expand our capabilities on both ends of the traditional facilities delivery life cycle; to include master planning, facilities condition assessment and asset management, management of restoration and modernization programs, and continued excellence as an environmental and real estate service provider. Our objective is to improve and optimize our services delivery through systems analysis to understand where policy or process changes can improve our performance, implement those changes, and sustain the gains. This builds upon our transformation of the MILCON delivery process centered around standardization of processes and facilities, which will continue to evolve to meet the current and future needs of our customers and partners.

ARMY (MCA)

For FY13, the Army MILCON program consists of 66 projects at $2.0B for execution. This program is a continuation of the Army's effort to transform and synchronize the stationing of troops and equipment to meet operational missions. In future years of the FYDP, the Army will maximize the value of the existing infrastructure base in an era of declining resources by implementing its Army Facility Strategy (AFS) 2020. AFS 2020 seeks to sustain existing facilities, demolish surplus, and target investment of restoration, modernization, and new construction to focus areas aligned with CSA imperatives, Army Senior Leadership initiatives, prevalent facility issues, and significant Command requirements. Current facility focus areas include the Organic Industrial Base, Organizational Vehicle Maintenance, Ranges, Reserve Component readiness, and training barracks.

AIR FORCE (AF)

For FY13, the Air Force program consists of 15 projects at $379M for execution. As in past program years, the AF program will include the construction of projects such as hangers, pavement work, dormitories and instructional facilities.

DEPARTMENT OF DEFENSE (DOD)

For FY13, the DOD MILCON programs consists of 47 projects at $2.1B for execution. The DOD agencies MILCON priorities are currently focusing on the recapitalization of DOD schools, modernization of hospitals, and related health care facilities, special operation training and maintenance facilities, and repair and replacement of hydrant fuel systems.

ENERGY CONSERVATION INVESTMENT PROGRAM (ECIP)

As part of DOD's energy strategy, ECIP is a key and expanding program. In support of DOD's energy goals, ECIP will focus on larger facility investments in order to reduce energy consumption and cost, and improve energy security. The current Army ECIP FY13 program includes 16 projects at $50M. Some of these projects will be in direct support of pilot installations selected in the Net Zero initiative. The Net Zero installations will showcase best energy management practices, and demonstrate effective resource management. Furthermore, these installations will establish a framework of reduction, re-purposing, recycling and composting, energy recovery, and disposal to guide them towards achieving net zero in an environmentally responsible, cost-effective and efficient manner.

Military Missions Portfolio of Initiatives 2012

US Army Corps of Engineers

BUILDING STRONG®

INTRODUCTION

The Military Missions Portfolio of Initiatives (MMPI) is the bridge between the USACE Campaign Plan (UCP) and the Military Missions Strategic Concept (MMSC) (released April 2012). The UCP is an enterprise-level document with defined goals, objectives and outcomes to deliver value to stakeholders. As such the UCP retains primacy in USACE's strategic management and performance assessment processes.

The Military Missions Portfolio of Initiatives shapes future initiatives, strategies and actions that will eventually be integrated into the USACE Campaign Plan, as part of the USACE strategic planning cycle. It offers opportunities to test ideas, learn the new lexicon, and develop the capabilities found in the MMSC. In this way, Military Missions can both deliver desired USACE Campaign Plan objectives and outcomes today, while sustaining existing core competencies and developing new critical success factors necessary for USACE to excel well into the future.

INTEGRATION OF MMSC INTO THE MILITARY MISSIONS PORTFOLIO OF INITIATIVES

The MMSC identified three types of capabilities necessary for MM's continued success: Core Competencies, Table Stakes, and Critical Success Factors. Core Competencies are existing, foundational capabilities. They are powerful and robust. Every aspect of work currently undertaken by Military Missions touches on at least one existing Core Competency, usually several are utilized, and sometimes all five are applied.

As in all things, past accomplishments provide a great foundation, but more is needed if we expect to excel in the future. To ensure continued success, additional capabilities are identified in the MMSC that will increase MM's value to the military and to the Nation. These new capabilities, Table Stakes and Critical Success Factors, are described in the MMSC along with the Core Competencies. The MMSC is posted on the Military Missions intranet site along with other useful information.

Military Missions Intranet: https://hqintra1.hq.ds.usace.army.mil/pao/MMSD2012/

Military Missions Strategic Concept

Critical organizational capabilities necessary to achieve desired strategic outputs and outcomes now and in the future under a range of plausible scenarios

Foundational	Competitive	Distinguisher
Core Competencies	**Table Stakes**	**Critical Success Factors**
Execution Focus Integrated Project Delivery Accountability Diverse Tech Knowledge Expeditionary	Risk Management Cost Effective/ Efficient Value Proposition Employer of Choice Process Improvement Virtual Capability	Customer Relationships Strategic Sense Making Systems Thinking Alliance Development Learning Organization Innovation Scalability Flexibility

IDEAS

- **MM Strategic Concept:** Strategic competencies important in executing the outputs and outcomes
- **MM Strategic Direction:** Annual statement of the "Way Ahead"
- **MM Portfolio of Initiatives:** Major focus areas based on current knowledge of anticipated requirements

ACTIONS

- **USACE Campaign Plan and Army Campaign Plan:** Drives decisions, resources, and actions to achieve measurable outputs and outcomes

The FY12 Military Missions Portfolio of Initiatives is the beginning of a journey to develop new capabilities while delivering immediate outcomes and objectives. In FY12, we will begin applying Critical Success Factors with the highest potential to improve MM's performance. These Critical Success Factors will be developed through the thoughtful execution of four focus areas in the FY12 Military Missions Portfolio of Initiatives.

Military Missions Business Processes: During the recent surge in military construction we transformed business processes to meet mission requirements. With the surge now complete we will employ Systems Thinking and leverage Customer Relationships to best capture lessons learned, vertically align enterprise governance, and codify major construction doctrine.

Methods of Delivery: In this era of reduced MILCON, we must improve, and align the tools and techniques used to deliver energy efficient infrastructure in an environment with increased emphasis on Restoration and Modernization (RM) of existing facilities. Tools and techniques must focus on enterprise approaches that lower acquisition costs and reduce delivery timeframes.

Energy and Sustainability: While energy and sustainability have long been considerations in our projects, they are now key drivers of customer success. At the enterprise level we will leverage expertise across the MSCs utilizing a systems approach to provide effective solutions and anticipate future needs. We will also build alliances and develop partnerships with other DoD, Federal, academic, business and non-governmental organizations leaders in these fields to share information and streamline resource requirements and enhance our own organizational learning.

COCOM Support: We will continue to support the COCOM's and Army Service Component Commands in execution of the National Security Strategy and National Defense Guidance by utilizing Strategic Sense Making and Disciplined Innovation to match USACE capabilities to COCOM requirements and develop efficient and effective solutions to expeditionary challenges.

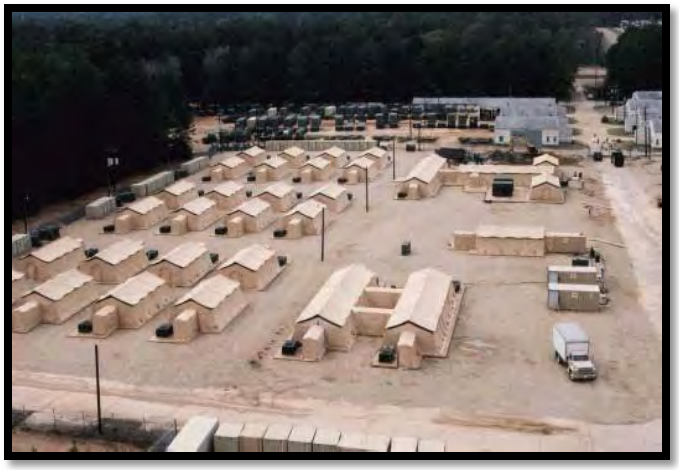
WAY AHEAD

Leaders at HQ, MSCs, and Districts should review and understand the concepts found in the MMSC, Strategic Direction and Military Missions Portfolio of Initiatives. There will be opportunities for all leaders to participate in the development and execution of the initiatives identified. The learning achieved during the development of the initiatives - to include application of the associated CSFs - will inform and shape the refresh of our USACE Campaign Plan.

PORTFOLIO OF INITIATIVES DELIVERABLES FOR HQ MILITARY MISSIONS			
Military Missions Business Processes			
Initiative	Description	Primary CSF	Lead Office
Enterprise Program Management Plans	Develop consistent enterprise business practices while building customer relationships via Enterprise Program Management Plans. These Plans will identify roles and responsibilities and describe how we define teaming relationships across Districts, Divisions, HQ, and Centers of Expertise to sustain technical competence, collaborate, and execute Military Missions in the post-surge MILCON environment.	Customer Relationships	Program Integration Division
Codification of Transformed Processes	Codify MILCON transformed business processes by evaluating the MILCON delivery Life Cycle, i.e. the system from planning to closeout. Identify lessons learned, analyze gaps in existing business processes, and incorporate best practices. Key tasks include updating the MILCON Business Process Engineering Regulation, capturing Environmental and Real Estate Transformation Best Practices within QMS.	Systems Thinking	Program Integration Division
Methods of Delivery			
Initiative	Description	Primary CSF	Lead Office
Centers of Standardization	Evolve Centers of Standardization to meet increased customer expectations for more flexible enterprise solutions in an environment of significantly reduced MILCON program and number of projects, significant increase in requirements for energy and sustainability products and services, and increased requirement for Restoration and Modernization of existing facilities.	Organizational Learning	Engineering & Construction
Installation Support	Provide technical support to Installations for facilitating MILCON, SRM, environmental services, 3rd-party capital investment planning and essential engineering services.	Systems Thinking	Installation Support
Acquisition Strategies and Tools	Develop integrated enterprise acquisition strategies and tools across MSCs that reduce acquisition timeframes and administrative costs, while producing competitive results. Support DoD initiatives on Better Buying Power and Management and Oversight of Acquisition of Services in which USACE has the lead for AE services.	Systems Thinking	Program Integration Division
Enterprise Delivery of Energy Solutions	Draft a Services Acquisition Strategy Policy memorandum for all USACE service acquisitions. Develop integrated enterprise technical and acquisition capabilities that pool our best technical capabilities and contracting tools to deliver responsive, leading-edge sustainable solutions to a range of energy challenges – conservation, renewables, and security.	Systems Thinking	Engineering & Construction

Energy and Sustainability			
Initiative	Description	Primary CSF	Lead Office
Building-Level Optimization	Establish Energy CXs to promote advanced understanding of methods to reduce building-level energy consumption through active and passive measures in order to comply with energy mandates and to meet Army energy and sustainability goals.	Organizational Learning, Systems Thinking	Engineering & Construction
Installation-Level Energy Performance Strategies	Develop energy efficient facility and infrastructure solutions that look beyond single-building projects to find opportunities across multiple projects, building grids and networks to distribute and use energy more efficiently. Execute master planning doctrine to create sustainable communities that meet rapidly changing national military needs and preserve long term installation military capabilities. Expand USACE energy competencies, knowledge creation and sharing across the enterprise through active regional energy technical centers of expertise. Support and execute a cost efficient portfolio of energy investments and renewable energy projects using enhanced use leases and third party financing authorities along with our own technical expertise and energy support capabilities and contracts.	Systems Thinking	Installation Support
Energy & Water Security in Contingency Operations	Leverage the capabilities across the USACE enterprise to build relationships towards an Army-approach to operational energy which integrates planning, water security and base camp design. Emphasis will be placed on the use of appropriate technologies (to include renewable energy sources, water reuse and others) and integrate initiatives with other Army elements to provide optimal solutions.	Customer Relationships, Systems Thinking, Disciplined Innovation	Interagency and International Support
Joint Service Engineer Strategies	Coordinate and build alliances with our Joint Service Engineer partners to achieve consistent DOD-wide strategy for compliance with energy and sustainability mandates.	Alliance and Partnership Development	Engineering & Construction
COCOM Support			
Initiative	Description	Primary CSF	Lead Office
Overseas Contingency Operations	Develop integrated, enterprise COCOM support strategy and match/align USACE capabilities to fill contingency engineering gaps. Assess performance, best practices, and lessons learned and publish into guidance.	Systems Thinking, Organizational Learning	Interagency and International Support
Theater Engagement Strategy Support	Leverage our LNO relationships and senior leader engagements to ensure that the right USACE capabilities are aligned and made available to existing and potential customers. Support the COCOM's and Army Service Component Commands in execution of the National Security Strategy and National Defense Guidance by applying those capabilities in an innovative, efficient and effective manner.	Strategic Sense Making	Interagency and International Support

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG ®**



Where We've Been—Where We're Going
The last year has seen USACE in a strong supporting role in the field of operational energy—providing the engineering services to improve energy security for our warfighters in theater (mostly Afghanistan). The 'tether of fuel' is an increasing burden to commanders in the field and the logisticians responsible for supply. We hear that more lives are lost in convoy operations than in battle. Anything we can do to reduce the need to transport large volumes will save lives, save money and allow more time for the warfighter to focus on their primary missions. The following describes some of the highlights of continuing USACE Operational Energy efforts:

Distribution Grids in Theater
The 249th Engineer Battalion (Prime Power) frequently installs generating plants and distributions grids to replace spot generators at base camps. This practice is recognized as critical in saving fuel, reducing the need for trucks on the road and saving lives lost in convoy support missions. The 249th leverages the suite of Worldwide Power Contracts, administered by Philadelphia District. The 249th and CENAP gained visibility at the end of FY11 when they were able to obligate over $100 million in 37 new grids with year-end funds, with most of these installations now completed.

Contingency Basing
OCE-P is leading the effort to modernize the AFCS system with a view to making it a Joint system. The Middle East District has stood up a Center of Standardization (COS) for Contingency Design and is assisting in updating AFCS designs. This work is reflected in the Army Campaign Plan under Major Objective 2.8.4.

Sand Book Revisions
CENTCOM has revised the Sand Book for contingency construction within the AOR. The revisions address smooth evolution to distribution grids (from spot generation) and use of efficient appliances and insulated structures.

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V-FOB
Stands for the Virtual Forward Operating Base. It is an ERDC product under development that will provide computer simulation of contingency base design and layout for contingency base commanders. It will be tied to ERDC models related to energy use, water, wastewater and force protection parameters.

Army Campaign Plan
The ACP includes two closely related Major Objectives that are relevant to Operational Energy. They are 2.8, titled Institutionalize Contingency Basing and 8.2, titled Enhance Operational Energy Effectiveness. We are participating with the HQDA G-4 (from both the OCE-P and HQ-USACE) in developing specific tasks and metrics to realize these objectives. Distribution Grids, energy-efficient contingency designs, AFCS and VFOB are all part of the Engineer contribution.

Operational Water
"Liquid Logistics" is the term being used to describe the process of moving fuel and water to the forward bases. Water is gaining equal visibility to fuel as a critical element in the fight. In Afghanistan, it takes 7 gallons of fuel to move EITHER one gallon of fuel OR water to the front. We're working with ERDC, the Army G-4 and the private sector to explore opportunities to reduce/reuse water in forward bases.

More information can be found at http://www.usace.army.mil/Missions/OperationalEnergy

Real Estate Support

As of Aug. 17, 2012

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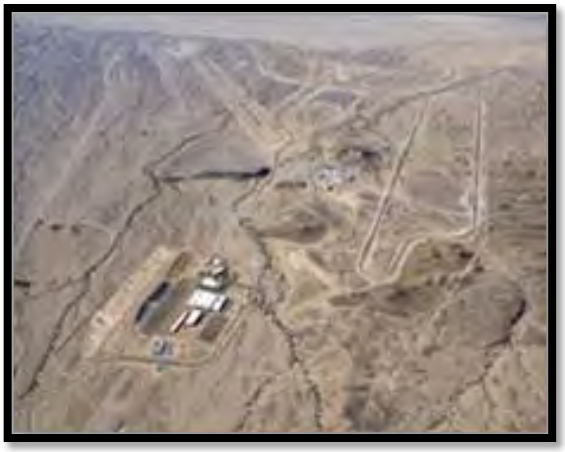

Overview

Real Estate is executing a large and complex program with total expenditures in excess of $1B. The program includes the DoD executive agent programs such as the Joint Facilities Recruiting Program, the Homeowners Assistance Program, and the Defense National Relocation Program. The program also includes BRAC acquisitions and disposal, continued support to the Overseas Contingency Operation (OCO), and various other efforts.

BRAC2005 and Legacy BRAC Disposal

We are working closely with the Deputy Assistant Secretary of the Army (Installations, Housing, and Partnerships) as well as the BRAC Division to establish priorities for disposal based on the environmental aspects of each site. Legacy BRAC consists of BRAC rounds in 1989, 1991, 1993, and 1995. More than 178,555 Legacy acres have been transferred, with about 30,737 acres or 15 percent remaining. More than 33,319 BRAC 05 acres have been transferred, with about 36,992 acres or 53 percent remaining. We are utilizing various tools, such as Early Transfer authority when appropriate, to dispose of property. We have successfully disposed of over 347 BRAC 05 acres to date this fiscal year, and have scheduled additional conveyances of at least 6,698 additional acres for the remainder of the FY. We anticipate matching or disposing of even more acreage in FY2013.

DoD Recruiting Facilities Program

The Recruiting Facilities Program is a program to locate and lease adequate retail and/or commercial space to upgrade and expand facilities for the Military Services. We continue to execute a program in excess of $250M annually. Other special initiatives include developing plans for performing space utilizations/reduction surveys and cost review. The goal of the initiative is to reduce space and cost of over $35M by FY16.

Asset Management

Congress passed the Chief Financial Officers Act in 1990, which requires accurate accounting and costing of infrastructure for the complete set of annual, audited financial statements. USACE is responsible for more than 240 billion dollars of water resource infrastructure assets that provide a diverse and critical service to the Nation. As stewards of these assets, USACE has a responsibility to sustain the infrastructure at its highest level of performance. USACE has completed audit for Civil Works financial statements, and real estate is actively updating data for all assets in preparation for the upcoming audit of military data.

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Homeowners Assistance Program
This program offsets some of the losses experienced when government personnel must relocate due to a DoD closure or realignment, and the government-announced action has adversely impacted the housing market at the location where the closure is happening. This program was expanded, under the American Recovery and Reinvestment Act of 2009, in response to the mortgage and credit crisis. This program expansion authorizes benefits for three homeowner groups: (1) BRAC 2005 impacted service members and civilian employees, removed the requirement for proof of the causal relationship between the BRAC announcement and the real estate market decline (authorization expires end of FY12); (2) Service members under a military directed permanent change of station (authorization expires end of FY12; (3) Wounded, Injured, or Ill service members and DoD employees along with surviving spouses of fallen deployed personnel (enduring authorization). Over 8,580 applicants have received benefits totaling over $1,437.3M from this program since November 2009.

Defense National Relocation Program
This program is a civilian employee relocation service, which is implemented under the Joint Travel Regulations and executed by USACE as a result of Defense Management Report Decision (DMRD 974). DNRP provides relocation services to eligible DoD civilian employees so they may quickly and efficiently sell their homes at the prior duty station and locate housing appropriate to their needs at the new duty station. DNRP services are authorized by the activity issuing PCS orders to the relocating employee. Eligible Army employees include the following groups: employees moving into or out of Senior Executive Service (SES) positions; employees moving under provisions of a mandatory mobility agreement; and employees moving as a result of a management – directed action such as a Reduction-in-Force (RIF), transfer of function, or BRAC. This program has an annual expenditure of over $75M, and will provide relocation assistance to over1000 transferring DoD employees in FY2012.

OCO/CONUS Natural Disaster Response
Real estate plays a vital role in support of overseas military contingency operations. We currently have personnel deployed in Afghanistan resolving complex issues regarding ownership and acquisition (leasing) and/or right to use host nation land as needed to support US military operations. We also ensure the districts have real estate staff trained and ready to respond to additonal requests from CENTCOM and ARCENT. Real estate transactions in foreign countries are extremely challenging, as we must follow local customs and title or ownership rules are unique to each country.

For CONUS natural disaster response, real estate supports through deployment of realty personnel for execution of rights-of-entry for the blue roof mission, debris removal, and to assist in leasing of land, warehouse, office space and housing.

FUTURE DIRECTION-2013 AND BEYOND
We will continue to transform real estate through business governance updates, streamlining processes, driving consistency through use of the Quality Management System and national Quality Management Plan checklists, capturing best practices, and following metrics for our 25 products and services.

USACE Environmental Operating Principles (EOPs)

Refreshed Aug 2012

1. Foster Sustainability as a way of life throughout the organization.
2. Proactively consider environmental consequences of all Corps activities and act accordingly.
3. Create mutually supporting economic and environmentally sustainable solutions.
4. Continue to meet our corporate responsibility and accountability under the law for activities undertaken by the Corps which may impact human and natural environments.
5. Consider the environment in employing a risk management and systems approach throughout life cycles of projects and programs.
6. Leverage scientific, economic, and social knowledge to understand the environmental context and effects of Corps actions in a collaborative manner.
7. Employ and open, transparent process that respects views of individuals, groups, and businesses interested in and affected by Corps activities.

Military Missions Strategic Direction 2012

US Army Corps of Engineers

BUILDING STRONG®

By Bob Slockbower
USACE Director of Military Programs

In the last decade USACE Military Programs experienced an unprecedented surge in military construction (MILCON) as the result of two major overseas contingency operations, BRAC 2005, Grow the Army initiative, Modularity, and the American Reinvestment and Recovery Act of 2009. During this time, MILCON was largely viewed as a commodity to be delivered. As these initiatives draw down, we usher in a "post-surge era" where we will deliver a wide variety of engineering solutions to customers facing a dynamic and complex environment.

During the surge, we demonstrated our ability to meet customer requirements on time and on budget. In this new era, the total program value and the number of projects will decrease. However, customer expectations for value will remain high. The demand for enterprise standards and accountability will increase. Further, new requirements for energy efficiency and sustainability will be integrated into the delivery of all engineering services. We anticipate increased demand for USACE to function as a systems integrator. Our value to our customer will not always be defined by our ability to "own" process through all stages of completion. In many cases, we may have to apply a lighter touch, offering our technical expertise in new ways as our customer's business models change.

As we transition from providing services at historic levels to delivering integrated, innovative, sustainable solutions, we do so in anticipation of the rapidly changing operating environment that impacts our customers, our stakeholders as well as our organization. The next phase/ iteration of our transformation will require both a shift in paradigm and capabilities.

We will need to shift our mindset from Military Programs to a more holistic Military Missions. The "Military Programs" mindset was strongly influenced by "stovepiped" organizational units, programs, and associated funding streams. To function as a system integrator, we will adapt a Military Missions mindset and draw upon the collective capabilities of USACE located in a number of Directorates to include Military Programs, Civil Work, Research and Development, Human Resources, Resource Management and Contracting, as well as other functional directorates and staff offices. Military Missions captures all USACE organizational support for our military mission rather than just those offices inside the Military Programs Directorate. It is an expansive term acknowledging our matrix organization and the interconnectivity of the whole organization.

Delivering high value engineering services for our enterprise customers in an era of severely constrained resources will remain a driving future issue for USACE Military Missions. Several of the factors currently shaping the Military Missions strategic context in the post-surge era include:

- Significant reduction in MILCON program and number of projects
- Significant increase in requirements for energy and sustainability solutions
- Change in customer mix
- Increased potential requirements for Restoration and Modernization of existing facilities
- Increased potential requirements to support COCOM theater engagement
- Increased customer expectation for enterprise solutions

BUILDING SOLUTIONEERS

Delivering solutions is the heart of our organization. It applies to all our offices and business lines. It is the primary reason that Military Missions exists. It is the reason other agencies come to us—to get something done. This mission includes meeting legislative mandates, as in the MILCON projects, and meeting customer requirements for scope, cost, time, and quality for many types of work.

Although execution of projects is critical, delivering solutions goes beyond that. It means solving problems through systems thinking and delivering sustainable solutions. It means defining the project requirements and understanding collateral effects. Performing at this level, both domestically and globally, requires fully integrated and comprehensive teams with all the capabilities required for effective collaboration and execution. It requires accountability in multiple areas—financial, operational, and technical. It requires a culture where keeping commitments is paramount.

Continuing to meet military mission requirements in this budget-constrained environment is a challenge the U.S. Army Corps of Engineers is addressing head-on. Now more than ever, our engineers are faced with managing complexity while driving innovation to meet the current and future infrastructure needs of our military and our Nation. They are really more like "solutioneers" as they blend creative imagination with technical know-how.

To fully develop our USACE employees into solutioneers, we will continue to develop skill sets within the identified core competencies, table stakes and critical success factors that will distinguish us as leaders in our field. We've already built a strong foundation upon our identified core competencies more fully explained in the Military Missions Stategic Concept FY12-15 document. What we must do now is focus on the Table Stakes that will make us competitive and Critical Success Factors (CSFs) that will distinguish us from other organizations.

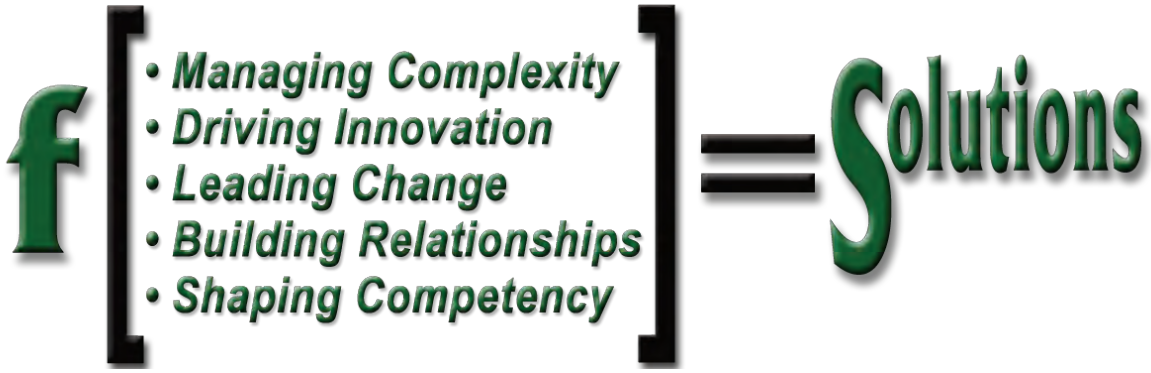


TABLE STAKES

Table Stakes are minimum capabilities required to be competitive. They are what we need "just to be at the table." The Critical Success Factors are what will distinguish us as the premier engineering organization of choice. The Table Stakes pertinent to the MMSC include the following:

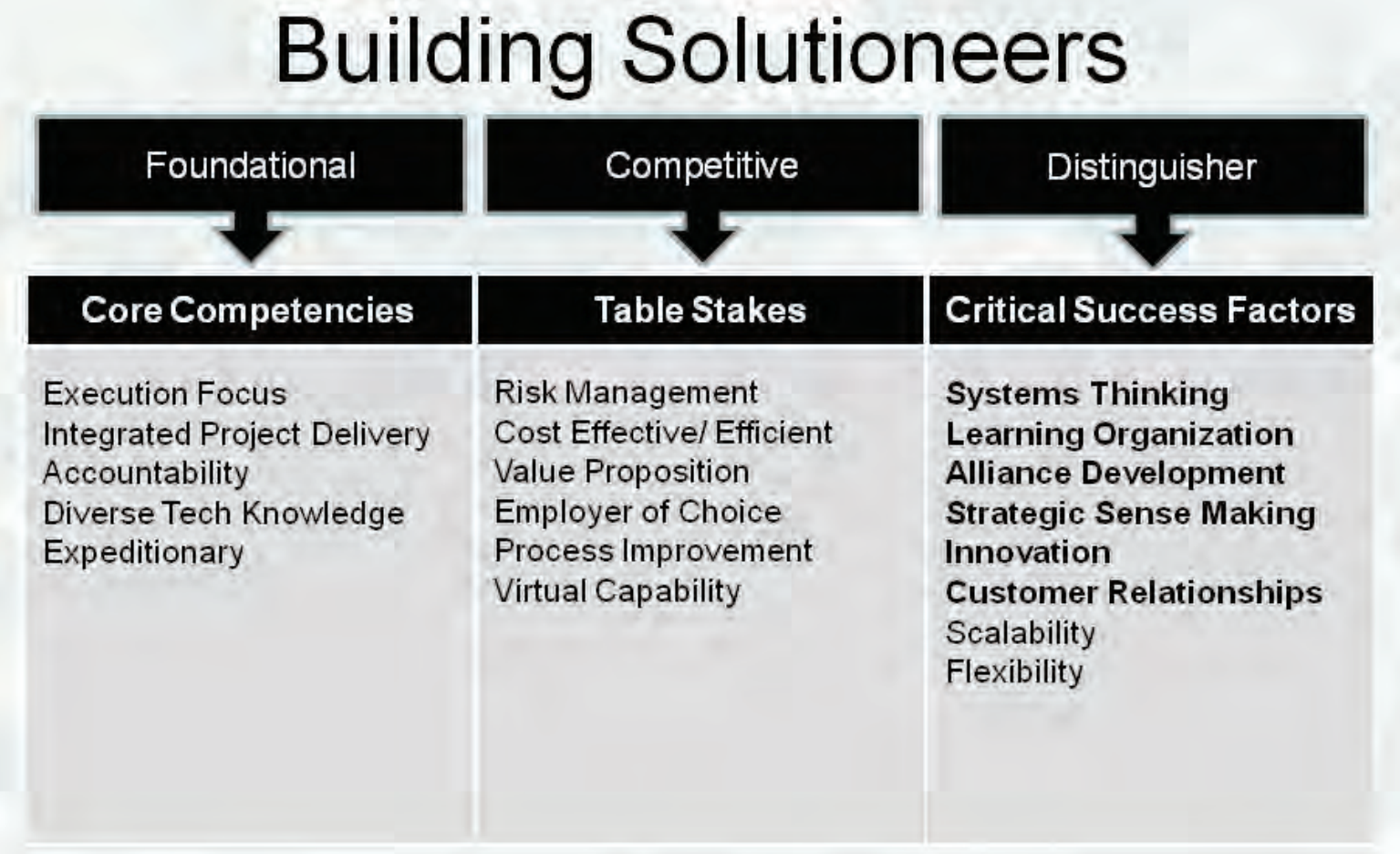
1. **Risk Management:** The ability to systematically identify, analyze, and assess risk; advise decision makers both within USACE and externally on their options to control, avoid, minimize, or eliminate unacceptable risks; monitor significant risks; and take appropriate actions. Risk management is part of the project management business process and important for identifying potential pitfalls and developing ways for early detection and either avoidance or mitigation.

2. **Cost Effectiveness and Efficiency:** The ability to provide best value solutions within customer time and quality standards, at acceptable risk levels, at the least possible cost. Cost effectiveness involves analyzing cost options and selecting the best course of action that delivers the desired outcomes at the least cost.

3. **Value Proposition:** The ability for USACE to add value by supporting customers with the best possible combination of services, cost, responsiveness and quality.

4. **Employer of Choice:** The ability to attract, optimize, and hold top talent, by setting the standard for leadership, culture, and best practices.

5. **Process Improvement:** The ability to systematically close process or system performance gaps through streamlining and cycle time reduction.



6. **Virtual Capability:** The ability to leverage technology to integrate seamlessly with other organizations, assets, and resources for the purpose of communication, monitoring, problem-solving, learning, and knowledge management. This capability allows sharing skills, costs, capabilities, markets, and customers to collectively solve problems or provide specific products or services.

Table Stakes and CSFs are key ingredients to our future organizational success. We must be good at Table Stakes, but they are not the signature abilities by which we want to define our organization. In other words, for table stakes we must be as good as our peers, whereas for CSFs we want to be among the best.

CRITICAL SUCCESS FACTORS

CSFs are discriminating future capabilities that Military Programs must possess to excel in any scenario. CSFs cannot be bought or sold and must be developed from within; should attract and retain savvy talent and create differentiation; drive the organization's present and future success; are based on a unique capacity or expertise; and are applicable to multiple potential future requirements instead of scenarios and segments. CSFs move beyond the core competencies of an organization. They create substantial difference or advantage for an organization in achieving its mission. These elements need to be performed at superior levels for the organization to excel.

The Critical Success Factors that USACE Military Missions will need to develop to further distinguish itself in the future include:

1. **Systems Thinking:** The ability to identify the forces and interrelationships that shape the behavior of a system. Systems thinking enables an organization to discover critical patterns of change rather than focusing on the performance of individual components. This capability can be used to build a comprehensive understanding of how a complex systems works and where the best leverage points are to make improvements. Systems Thinking includes principles and tools that aid organizational learning and as such it is a primary driving CSF for implementing all of the other MM CSFs.

2. **Learning Organization:** The ability to continually expand capacity and to achieve extraordinary results by nurturing new and expansive patterns of thinking supported by USACE employees' commitment to learn, individually and collectively, at all levels of the organization. A learning organization is characterized by: (a) being inquisitive and externally focused and committed to improving service to its stakeholders; (b) being experimental and innovative and willing to question existing solutions, processes and dominant routines; (c) ability to share information and knowledge; (d) being fluid in its organizational boundaries and structures; (e) relying on cross-functional teams for generating collective learning and enhancing thinking processes that lay behind organizational decision making; (f) using learning to find ways of doing things better, faster, and cheaper, balanced by an outward focus on how the organization needs to change to succeed in the future. These characteristics permeate the culture of the learning organization and help promote knowledge creation and sharing.

3. **Alliance Development and Management / Partnering with Academia, Industry, Other Agencies:** The ability to form strategic alliances and partnerships with academia, industry, and public and private organizations to share knowledge and expertise between partners as well as reduce risk and costs in areas such as development of new products and technologies.

4. **Strategic Sense Making:** The ability to detect and sense signals in the external environment and subsequently respond to potential changes. This includes monitoring, detecting and understanding changes in the major uncertainties that you expect will drive your strategic environment (known unknowns) and scanning and interpreting the weak signals from the periphery (unknown unknowns). Monitoring includes understanding how changes in the major uncertainties interact to create a new future and adapting your strategic plans to capitalize on opportunities and minimize the risk from emerging threats. Scanning the periphery includes: knowing where to look; knowing how to look; interpreting what you see; identifying where to probe more deeply; modifying strategic plans and making managerial decisions on the insights you identify.

5. **Innovation:** The ability to make incremental and emergent or radical and revolutionary changes in thinking, products, and processes. This is the idea and belief that we cannot add value to the Nation and assist customer success through cost reduction and reengineering alone but rather should have innovation as a key element in providing aggressive top-line products that increase effectiveness and delivery. It is the introduction of "new good" ideas with which the customer is not familiar. It also embodies the culture of doing more work with fewer resources. Specifically, it is the ability to deliver new value to a customer, and of finding new methods of meeting customers' needs that save energy, time, money, life cycle costs, and/or natural resources.

6. **Customer Relationship Development and Sustainment:** The ability to assist customer's success by: understanding their culture and needs; helping to shape innovative, cost effective solutions; and promoting collaborative management and information sharing that keeps customers involved and informed. To assist customers in developing requirements. To improve responsiveness and communications through forward deployed and imbedded technical and management personnel.

7. **Scalability:** Ability of an organization to increase total outputs under an increased workload with added resources or to reduce outputs with decreased resources with no adverse effect to the organization. Scalability is a desirable property of an agile organization and is a highly significant capability in the Federal Government to scale up or down as budgets and missions fluctuate. It is particularly desirable when applied to unforeseen situations.

8. **Flexibility:** The ability to adapt and respond to changing environments decisively and successfully. Thus, flexibility for an engineering organization is the ease with which the system can respond to user requested variations or external changes. Uncertainty is a key element in the definition of flexibility. Uncertainty can create both risks and opportunities in a system, and it is with the existence of uncertainty that flexibility becomes valuable.

Customer Value in Action: DOD Education Activity (DODEA)

Customer Problem: DODEA, in response to changing needs in delivering a quality education for the children of military families, is making major investments in the development of new schools. The first step is defining exactly what that means in terms of delivering a "21st Century school" that meets not only today's education requirements, but future requirements as well.

Solution: Our "Solutioneers" are working with our DOD customer to overcome this overwhelming challenge with creative solutions that will meet tomorrow's needs. Our USACE Design Center for DODEA has participated in the DODEA workshops with their educators/academicians, and our A/E community to discuss the future of education and education in DOD. Together we are determining the criteria, standards, and requirements for 21st Century Education.

Studies are showing that evidence-based design in schools measurably improves academic performance. This is what we hope to incorporate in "21st Century" School Design. Examples are increasing the use of natural lighting (windows & skylights) which has been shown to dramatically improve learning (reading and math), acoustical design to reduce external noise and vibration helps improve academic concentration, adjustable furniture helps support good physical posture, and improved air quality to help reduce sickness and absenteeism.

USACE established a DODEA Design Center at Norfolk District several years ago and we've now completed translating DODEA Education Specifications into standard design modules for elementary, middle, and high school facilities. The design modules have helped to standardize functional configurations, square footage, communicate with educators, and capture design improvements based on lessons learned. DODEA has indicated that our "21st Century solution" for DOD schools will serve as a model for public and private school systems across the country as well. One lesson learned during the school re-design effort is that desired workforce habits can be more easily achieved if the habitat reinforces and facilitates those behaviors. This lesson can apply to any facility. We can raise customer satisfaction if we focus early in our relationship on those habits that are important to the customer.

THE WAY AHEAD

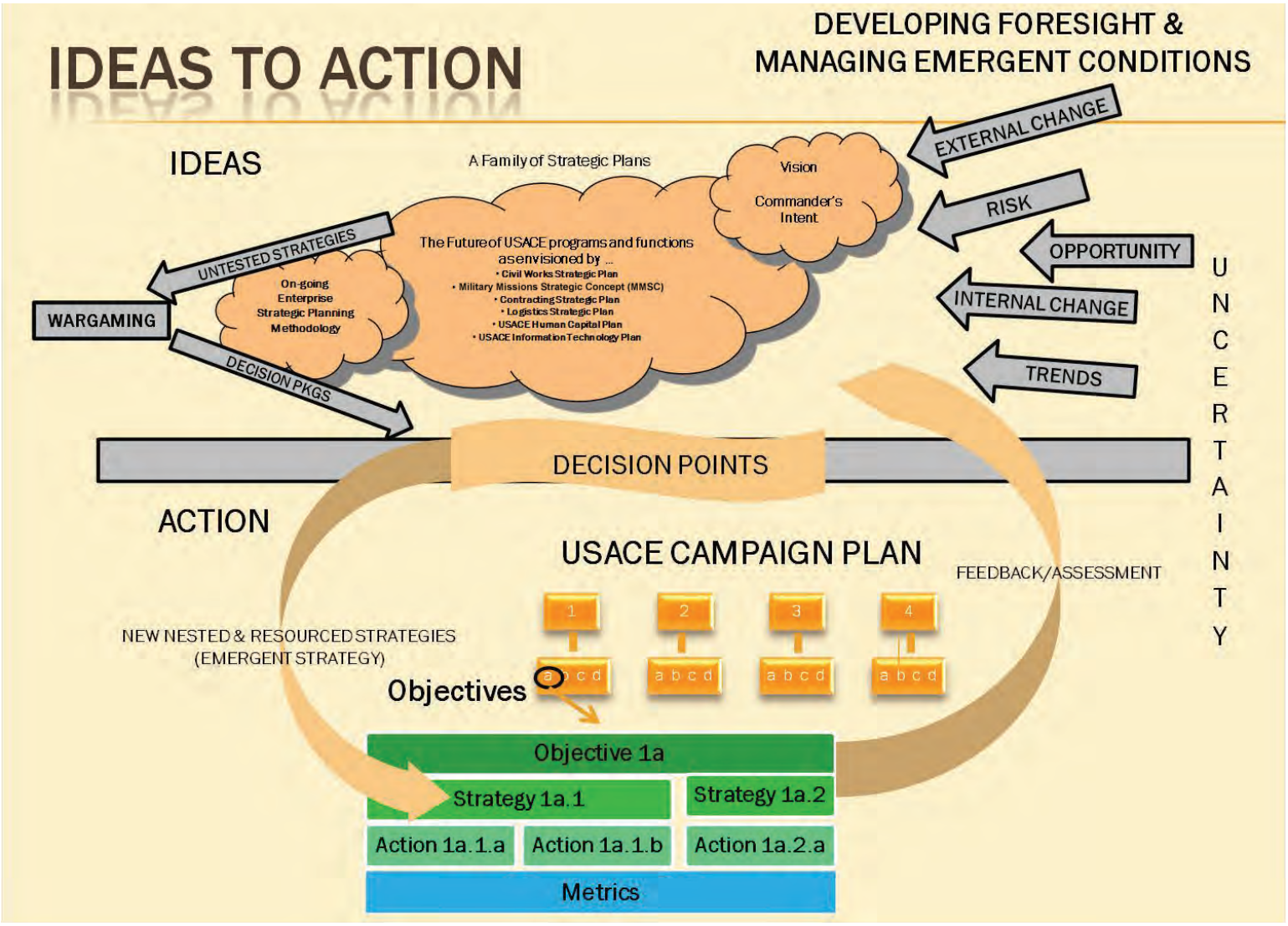
The Relationship between the USACE Campaign Plan, Military Missions Strategic Concepts, and the Military Missions I-Plan matrix.

The USACE Campaign Plan is the enterprise level strategic plan, the essence of which is to define the ways that USACE will deliver value to its customers and stakeholders. The USACE Campaign Plan retains primacy and is the central focal point.

The Military Missions Strategic Concept (MMSC) document provides a lens with which we look to shape future initiatives, as well as strategies and actions that will eventually be integrated in the USACE Campaign Plan. The MMSC defines intended actions to address those military activities where USACE has a direct or an indirect role. The MMSC may result in proposed changes to Campaign Plan goals, objectives and/or strategies or lead to new strategic initiatives.

To develop a systematic, disciplined process by which concepts from the MMSC will be integrated into the USACE Campaign Plan, the Directorate of Military Programs has established a portfolio of initiatives. This portfolio identifies key mission areas and explores how the critical success factors can better facilitate improved delivery in these areas. These initiatives will be rolled out throughout the year to allow USACE to further explore how these concepts can be shaped into new USACE Campaign Plan actions in future updates to the Campaign Plan.

The Military Missions I-Plan Matrix will track both Campaign Plan actions and deliverables, as well as key deliverables from the portfolio of initiatives.



U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG ®**

A Core Function

For the better part of the past decade, the U.S. Army Corps of Engineers has been seeking balance and synergy between natural systems and human development activities when it comes to its missions, facilities and operations. The Corps also seeks to ensure that its activities do not negatively impact the resource needs of future generations.

This ethic for sustainability has been part of the Corps' culture since March 2002, when it adopted its *Environmental Operating Principles,* reinvigorated in August 2012. With these principles as its foundation, the Corps strives to not only meet the energy, water and waste reduction targets for the federal government as described in Executive Order 13514: *Federal Leadership in Environment, Energy and Economic Performance*, but also to think strategically to anticipate the need for adaptation to climate change challenges Corps missions may face in the not so distant future.

Building the Management System

At the present time, USACE is not meeting the Executive Order targets as indicated on its Sustainability and Energy Scorecard published by the Office of Management and Budget along with the scorecards of other federal agencies. Despite this reality, the Corps is committed to transparency, accountability, and continuous improvement.

Having established the program in Fiscal Year 2010, several years after many of the federal sustainability requirements came into existence, USACE has focused on establishing the management system to emphasize the importance of sustainability and improved performance. As with any new program, employees need time to build an understanding of the requirements in the context of their mission before they can effectively plan, budget, and implement. Despite being on a steep learning curve, by taking the time to learn and educate and put the Sustainability Management System in place, the Corps of Engineers is positioning itself for more rapid and effective progress in the future.

Leading the USACE sustainability efforts is Ms. Jo-Ellen Darcy, the Assistant Secretary of the Army (Civil Works), who is serving as the Corps' Senior Sustainability Officer. She is assisted by three Corps senior leadership governance bodies: the Strategic Sustainability Committee, which oversees the Corps sustainability program; the Energy Governance Council, which oversees all energy activities within the Corps; and the Climate Change Adaptation Steering Committee, which oversees the Corps efforts to make its infrastructure more resilient to changes in climate. Sustainability performance is tracked through the Army Campaign Plan and the USACE Campaign Plan using the Army Strategic Management System and existing management review processes.

-- more --

Sustainability Plan
The USACE Sustainability Plan (SP) serves as the roadmap to achieve the environmental, economic and energy goals called for in Executive Order 13514. The USACE SP is a dynamic document that will change and expand as the Corps does more to make sustainability a reality in all aspects of its missions. In addition to establishing eight overall sustainability goals and identifying the methods to achieve them, the plan also sets the following sustainability priorities for fiscal years 2012-2013:

- Leverage $2.5 million performance-based contracts for energy and water efficiency in Corps-owned facilities;
- Implement the USACE Non-tactical Vehicle Fleet Management Plan;
- Develop and implement a USACE Sustainable Acquisition Program;
- Expand the High Performance Sustainable Buildings program to encompass Civil Works and Corps-owned buildings;
- Complete energy and water evaluations at Covered Facilities; and,
- Develop and implement the Corps national policy on sea-level change for coastal projects and develop and deploy a national policy on adaptation measures for inland hydrology.

The ASA (CW) and USACE leadership have placed special emphasis on funding for sustainability and energy efficiency projects in the Civil Works budgets for FY12-13. This fiscal year (FY12), the Corps of Engineers is executing more than 100 energy and water efficiency and renewable energy projects at facilities Corps-wide. These projects include simple, every-day initiatives like installing LED lighting and new thermostats in buildings, as well as renewable technologies such as ground source heat pumps and photovoltaic (solar power) systems. The Corps of Engineers also will be implementing a non-tactical vehicle fleet management plan to streamline and improve the fuel efficiency of its fleet, and will be leveraging its nine new Regional Energy, Sustainable Design and Life Cycle Cost Analysis Centers of Expertise to implement the right mix of infrastructure projects using both appropriated funds and alternative financing mechanisms.

The most significant positive accomplishment reported in the SP is the reduction in floating plant petroleum consumption and greenhouse gas emissions, which as of FY11 year-end, was reported as 12.4 percent, compared to the FY11 target of 3.25 percent. USACE attributes this accomplishment to systematic investments during the past three years in fuel efficiency on its major vessels, as well as the ongoing USACE navigation community initiative to increase use of biodiesel.

Recognizing Achievements
For two years now the Corps has executed an internal Sustainability Awards Program to recognize and reward excellence for the development, management, and transference of activities and/or programs that improve environmental quality, enhance the mission and help USACE reach its sustainability goals. Winners are selected in each of six categories, all of which go on to compete in the annual GreenGov Presidential Awards Program.

Bottom line
The Corps is taking a system-based, continual improvement approach to meet the requirements laid out in Executive Order 13514 and in statute, to train personnel, and to refine priorities, programs, and metrics on the journey toward sustainability.

More information can be found at http://www.usace.army.mil/Missions/Sustainability

Regimental Update for USACE Emeritus Leaders

BG Duke DeLuca
Commandant
US Army Engineer School

Engineer Warriors leading to serve maneuver forces:
A Regiment inspired to overcome all challenges to enable victory

Agenda

- Mission / Vision
- Regimental Framework (the “boxtop”)
- Campaign Plan (USAES, USACE, Crosswalk)
- The Wars We Fight
- Structure (Total Army Analysis, Brigade Engineer Battalion, Echelons Above Brigade Re-design, Army 2020)
- Training / The Army Learning Model
- Geospatial Training Move
- Materiel Systems
  - 1-n list, Key systems / decisions, Spider
- Operational Energy
- Take Aways for BCT Commanders
- The Engineer Network

Army Engineers: Who We Are… And Our Professional Culture

Sappers are the Soldiers that make battle possible, the stagehands of the theater of operations, without whose brave and laborious efforts armies could scarcely find the means to come to grips with each other.

-- Keegan

Before the end of this decade, almost 99 percent of the Army will be stationed in a US state leaving just over 1 percent forward deployed. We have not seen this situation since 1941.

Engineer Vision and HQs Mission

MISSION : ENGINEER HQs and SCHOOL generates the military engineer capabilities the Army needs; training and certifying Soldiers with the right knowledge, growing professional leaders, organizing and equipping adaptive units, establishing a framework of doctrine for integrating capabilities with operations, and remaining an adaptive institution in order to provide Commanders with the freedom of action they need to win decisive action as part of JIIM-IA ("Whole of Government", "Whole of Society") team.

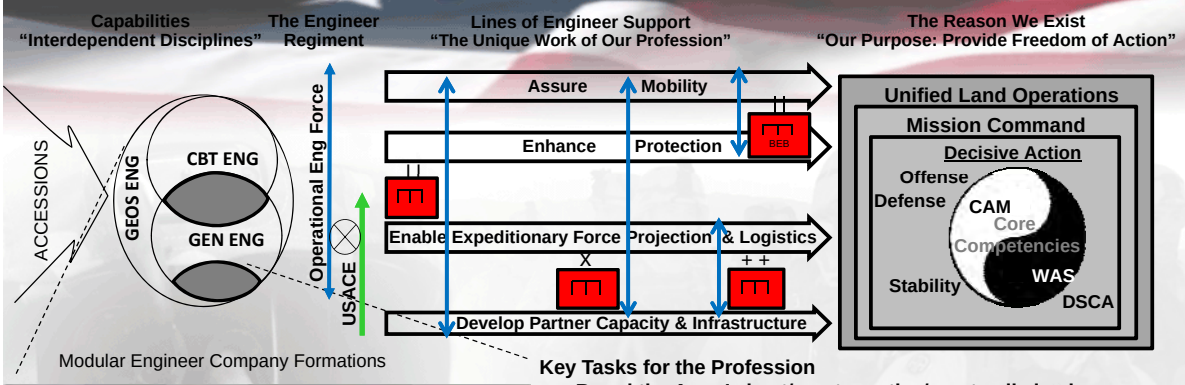
VISION: *Engineers are the "Swiss-Army Knife" of the Army*

- The World's Best and Most Versatile Military Engineers
- *Technically as well as Tactically Expert*
- *It's lonely in the lodgement !*
- Warriors Always
- *Expeditionary Training and Mindset*
- Regimental Family
- Most Flexible and Adaptive Units and People
- Soldiers and civilians that inspire each other
- Soldiers who dare to demand "Let Us Try"…and get it done

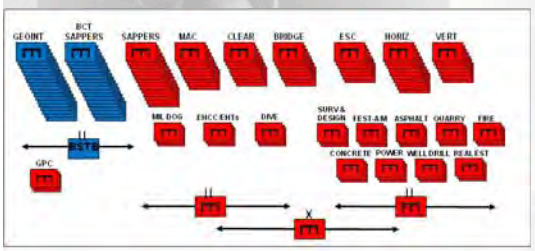
Engineer Warriors leading to serve maneuver forces:

"A Regiment inspired to overcome all challenges to enable victory"

The Army Engineer Profession: A Model



Modular Engineer Company Formations



• *Addressing "Over-modularization" of the engineer force*

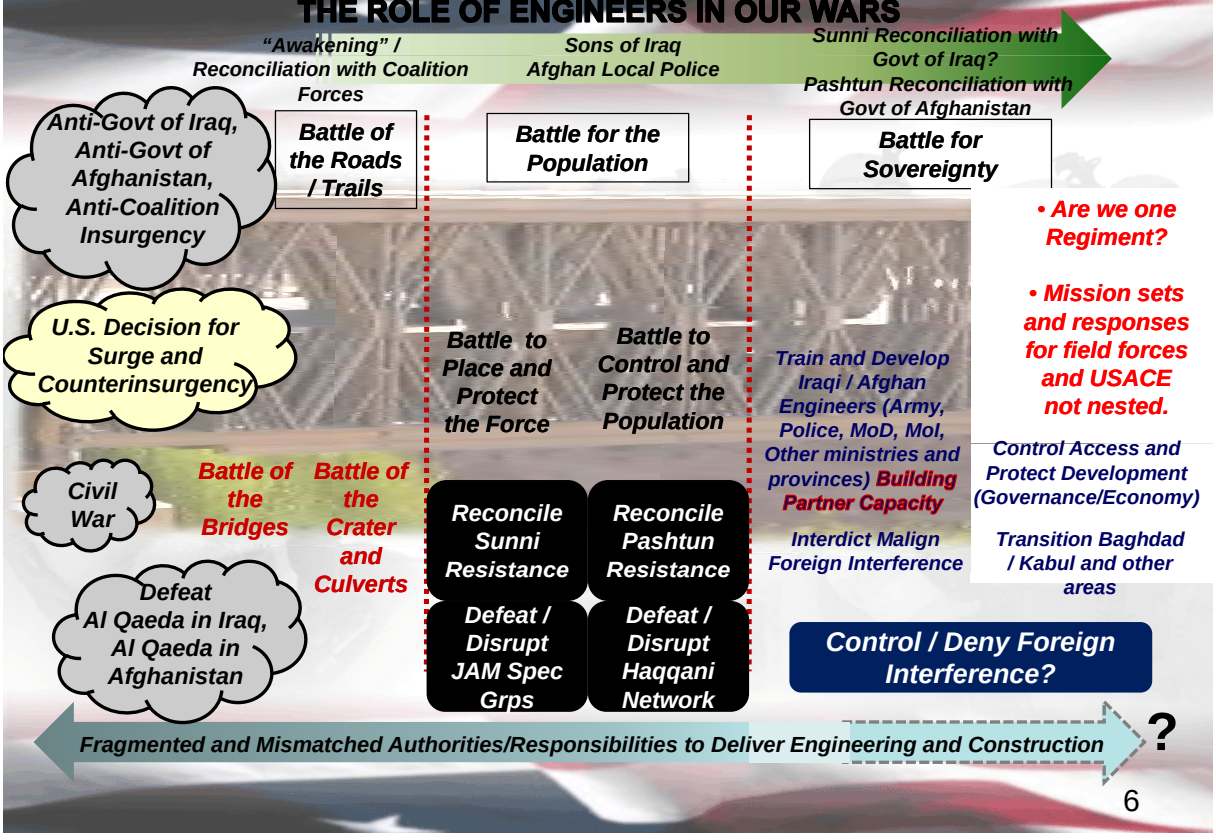
Key Tasks for the Profession

- Breed the Army's best/most creative/most agile leaders… inspired with passion
- Focus on the unique skills and capabilities our Regiment provides
- *Support the forces in contact (expeditionary ops, SOF, Cyber, HLD, theater shaping ops; partner capacity and infrastructure prep of theater). Engineers units are always in the fight.*
- *Capture what we have learned (or relearned) in a decade of war… apply to it all DOTMLPF*
- *Weigh the Main Effort by remissioning engineers- no engineers not applied to our missions (no Engineers in the reserve)*
- Build Great Engineers… warriors always
- *Readiness is key… revolutionize home station and functional Engineer training*
- Win as a team…JIIM-Industry-Academia
- *From dawn of warfare to today and in the first and last 300 meters to any objective- maneuver, fires and engineers … serving proudly with a Sapper's heart*

5

CAPTURING ENDURING ASPECTS of MODERN WARS

THE ROLE OF ENGINEERS IN OUR WARS



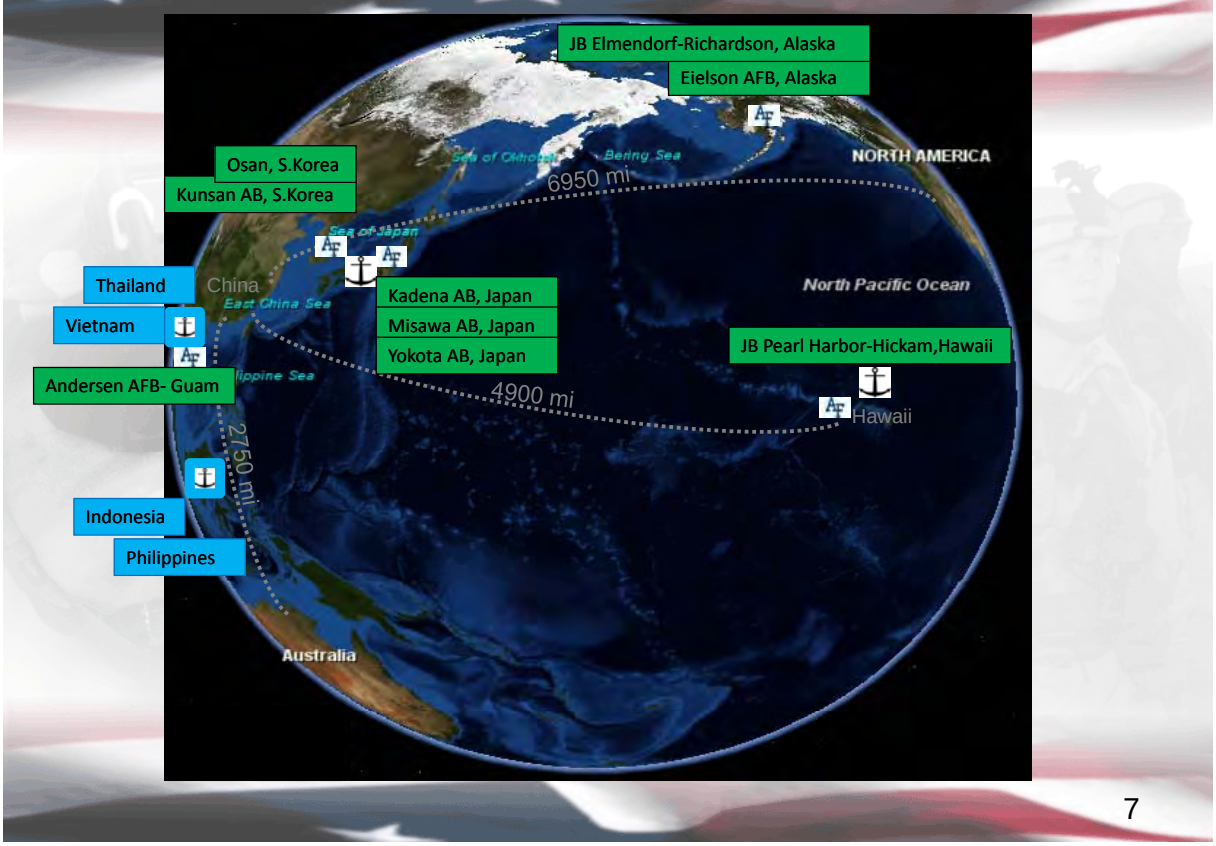
- *Are we one Regiment?*
- *Mission sets and responses for field forces and USACE not nested.*

Control Access and Protect Development (Governance/Economy)

Transition Baghdad / Kabul and other areas

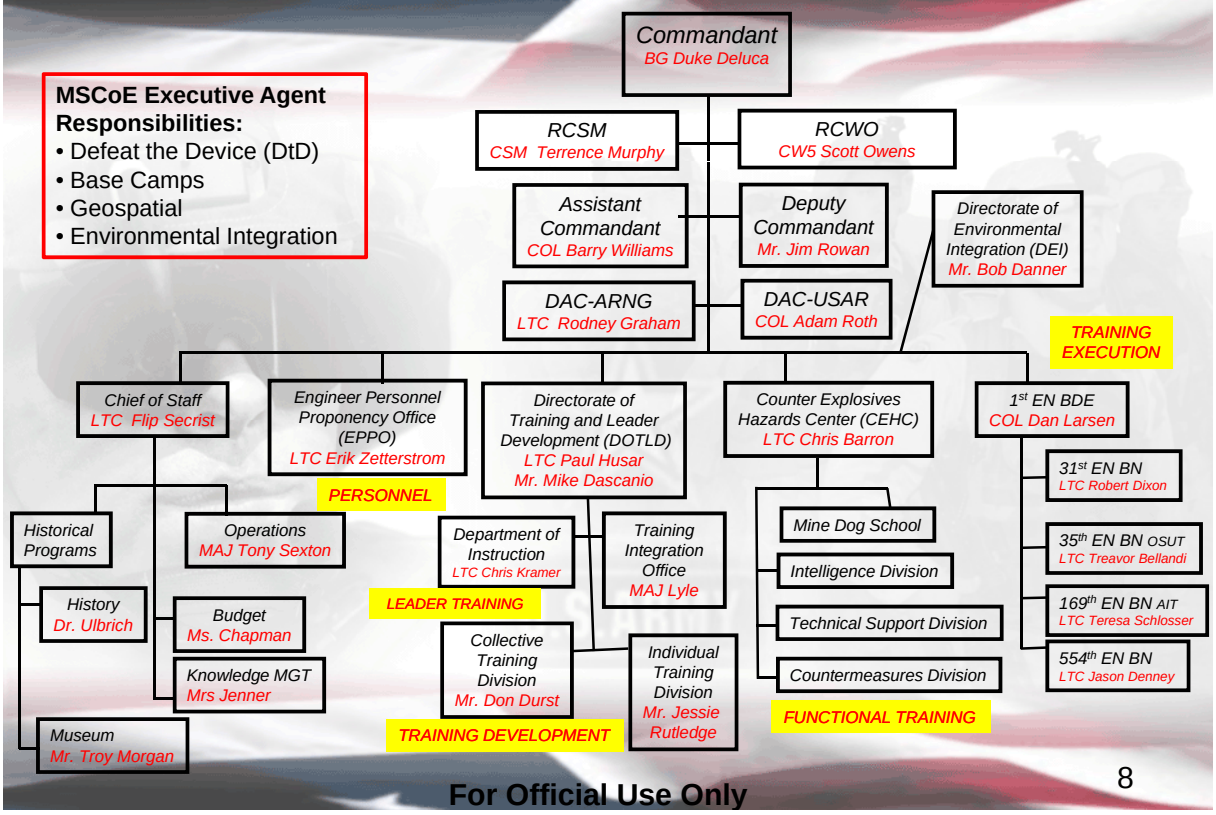
6

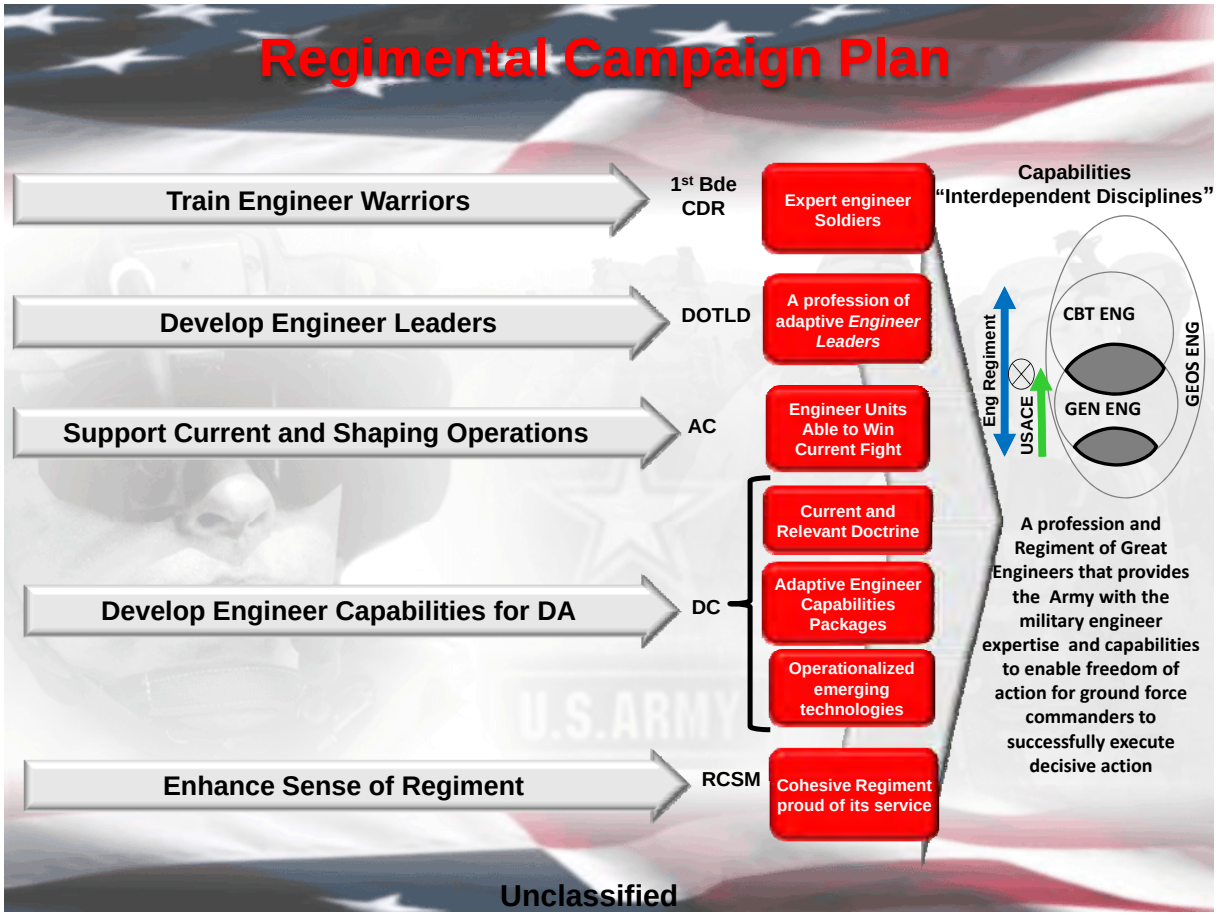
Emerging Operational Environment Requires Active Component Theater Opening Enablers

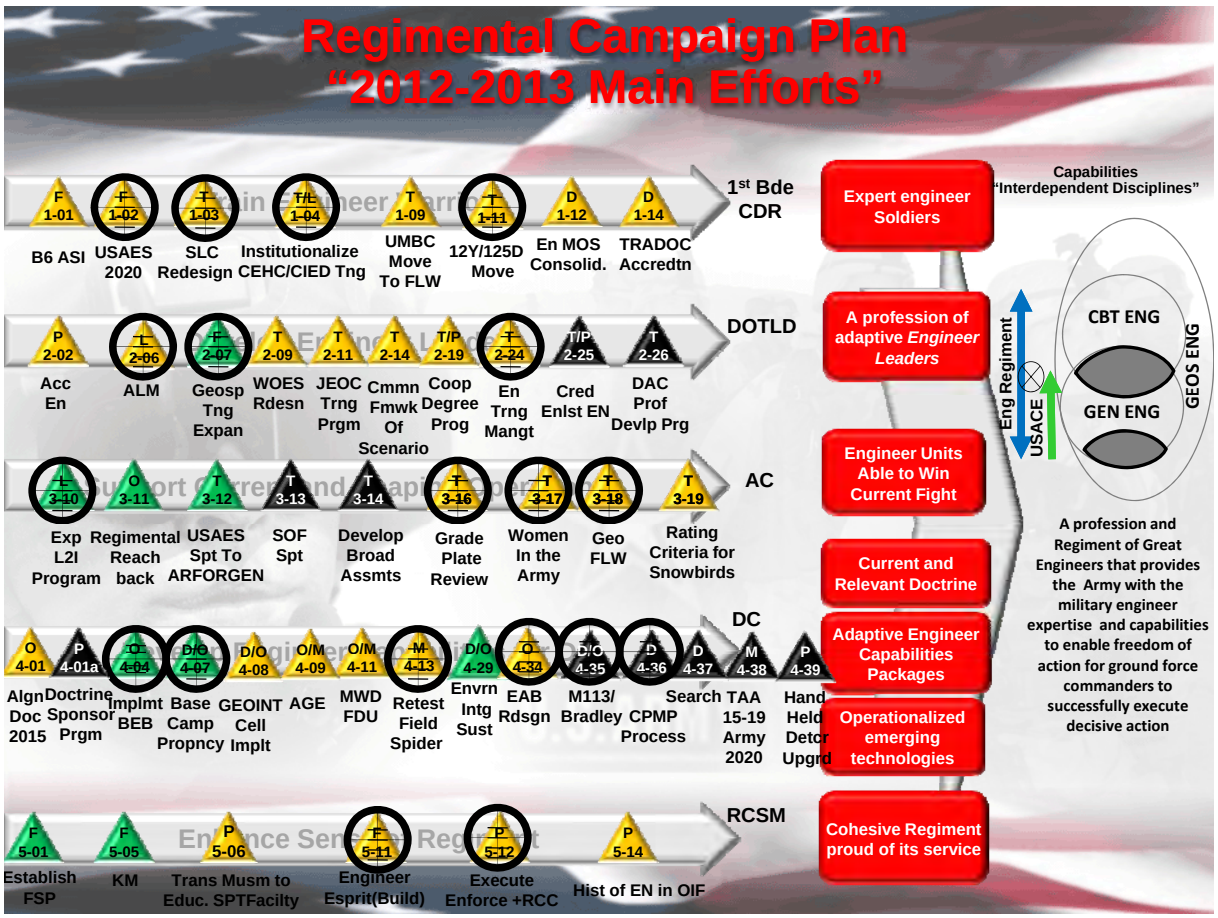


US Army Engineer School

MSCoE Executive Agent Responsibilities:
- Defeat the Device (DtD)
- Base Camps
- Geospatial
- Environmental Integration




Regimental Campaign Plan
Train Engineer Warriors
1st Bde CDR
Expert engineer Soldiers
Develop Engineer Leaders
DOTLD
A profession of adaptive Engineer Leaders
Support Current and Shaping Operations
AC
Engineer Units Able to Win Current Fight
Develop Engineer Capabilities for DA
DC
Current and Relevant Doctrine
Adaptive Engineer Capabilities Packages
Operationalized emerging technologies
Enhance Sense of Regiment
RCSM
Cohesive Regiment proud of its service
Capabilities "Interdependent Disciplines"
CBT ENG
GEN ENG
GEOS ENG
Eng Regiment
USACE
A profession and Regiment of Great Engineers that provides the Army with the military engineer expertise and capabilities to enable freedom of action for ground force commanders to successfully execute decisive action
Unclassified


Regimental Campaign Plan
"2012-2013 Main Efforts"
1st Bde CDR
B6 ASI
USAES 2020
SLC Redesign
Institutionalize CEHC/CIED Tng
UMBC Move To FLW
12Y/125D Move
En MOS Consolid.
TRADOC Accredtn
DOTLD
Acc En
ALM
Geosp Tng Expan
WOES Rdesn
JEOC Trng Prgm
Cmmn Fmwk Of Scenario
Coop Degree Prog
En Trng Mangt
Cred Enlst EN
DAC Prof Devlp Prg
AC
Exp L2l Program
Regimental Reach back
USAES Spt To ARFORGEN
SOF Spt
Develop Broad Assmts
Grade Plate Review
Women In the Army
Geo FLW
Rating Criteria for Snowbirds
DC
Algn Doc 2015
Doctrine Sponsor Prgm
Implmt BEB
Base Camp Propncy
GEOINT Cell Implt
AGE
MWD FDU
Retest Field Spider
Envrn Intg Sust
EAB Rdsgn
M113/ Bradley
CPMP Process
Search
TAA 15-19 Army 2020
Hand Held Detctr Upgrd
RCSM
Establish FSP
KM
Trans Musm to Educ. SPTFacilty
Engineer Esprit(Build)
Execute Enforce +RCC
Hist of EN in OIF
Expert engineer Soldiers
A profession of adaptive Engineer Leaders
Engineer Units Able to Win Current Fight
Current and Relevant Doctrine
Adaptive Engineer Capabilities Packages
Operationalized emerging technologies
Cohesive Regiment proud of its service
Capabilities "Interdependent Disciplines"
CBT ENG
GEN ENG
GEOS ENG
Eng Regiment
USACE
A profession and Regiment of Great Engineers that provides the Army with the military engineer expertise and capabilities to enable freedom of action for ground force commanders to successfully execute decisive action

USACE Campaign Plan

Goal 1

Ready for All Contingencies

Deliver USACE Support to combat, stability, and disaster operations through forward deployed and reach back capabilities.

Goal 2

Engineering Sustainable Water Resources Solutions

Deliver enduring and essential water resource solutions through collaboration with partners and stakeholders.

Goal 3

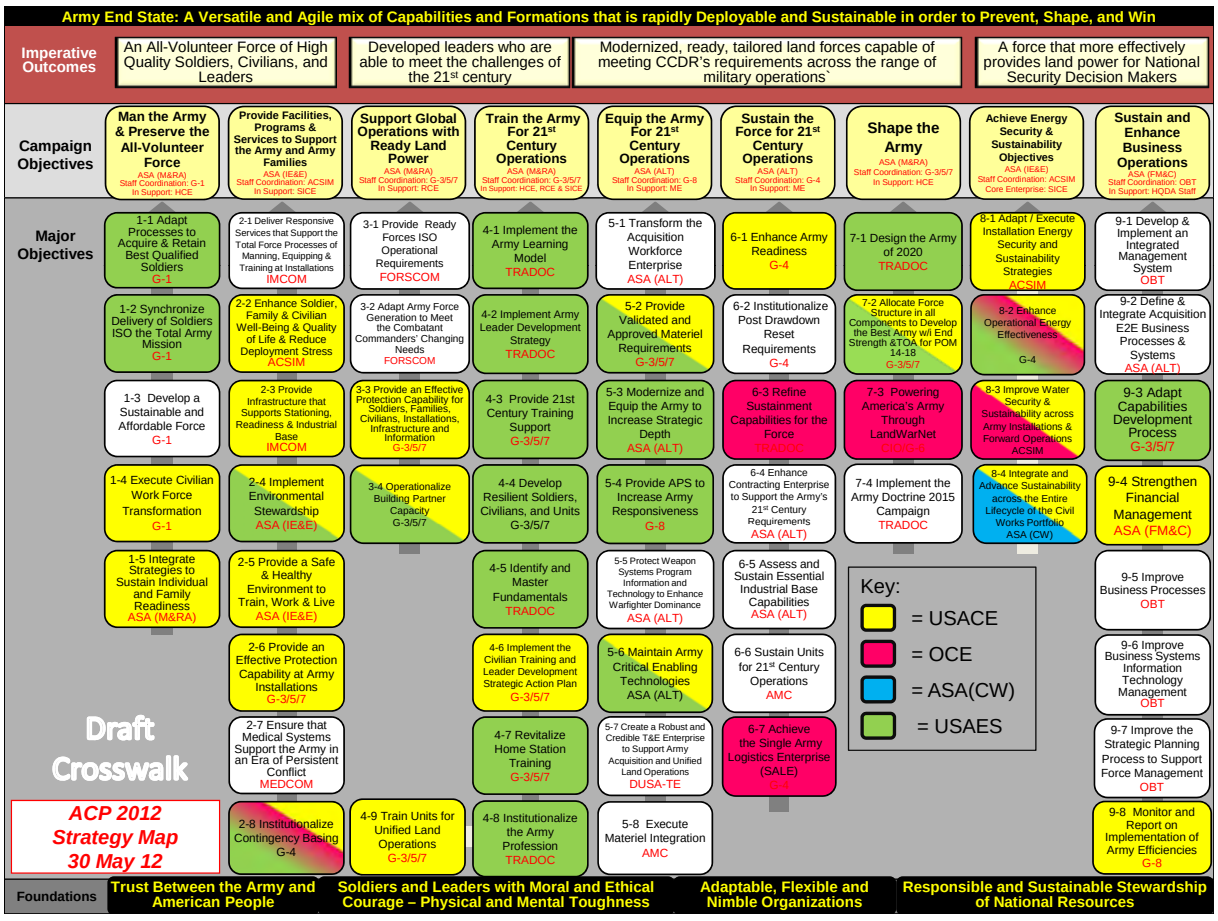
Building Effective, Innovative, Sustainable, Solutions

Deliver innovative resilient, sustainable Solutions to the Armed Forces and the Nation.

Goal 4

Recruit and Retain Strong Teams

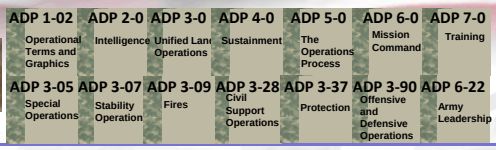
Build and cultivate a competent, disciplined, and resilient team equipped to deliver high quality solutions.



EN Doctrine Reengineering 2015

Army Doctrine Publications (ADP) 0/15

Fundamental principles
- Ten pages
- Suspense 31 AUG 2012



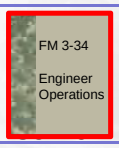
Army Doctrine Reference Publications (ADRP) 0/14

Detailed information on principles
1 per ADP (minus ADP 1); 75-100 pages; Suspense 31 AUG 2012

EN Doctrine nested

Field Manuals (FM) 1/50

Tactics and Procedures
- Enduring
- No more than 200 pages
- Suspense NLT 31 DEC 2013

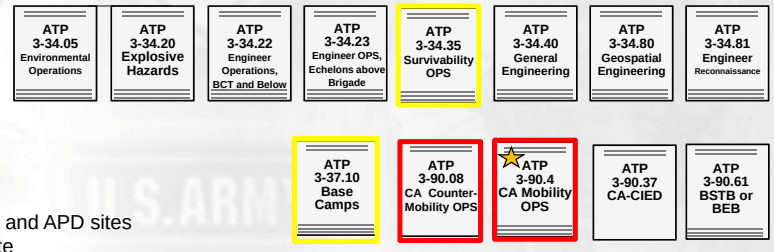


EN Operations - Remains primary foundation and be incorporated into ADPs and ADRPs.

Army Techniques Publications (ATP) 13/Unlimited

EN Techniques
- No limit to number of ATPs or pages
- Non-enduring
- Maintained, Accessed, updated through MilWiki
- Suspense NLT DEC 2015

*2 versions of ATPs
-Published version for guidance found on RDL and APD sites
-Draft version for comment found on milwiki site



Technical Manuals (TM) 32/Unlimited

General subject technical information; -
Suspense NLT 31 OCT 2012
(As of 1 JAN 12)

Legend

Under Development | Out for Staffing | Prep for Publication | Published

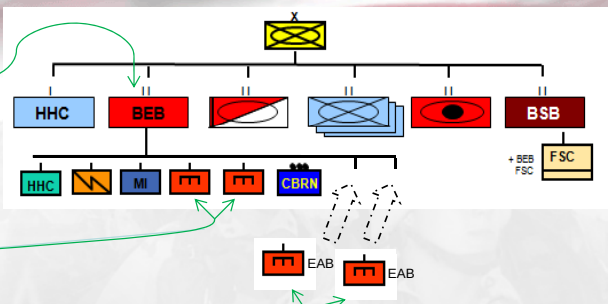
★ denotes change since last brief

Total Army Analysis

- Very intense time: TAA 14.1 still not finalized, TAA 15-19 underway
- USAES/MSCoE/OCE did extensive work this year to update the TAA models
  - Updated all existing rules of allocation (ROAs)
  - Developed ROAs for stability operations
  - Developed ROAs for both the 2 and 3 maneuver battalion BCT options
  - Updated all construction planning factors
- Proposed Engineer cuts for the TAA 14-18 are just under 2300 (all active component EAB)
- BEB decision is part of TAA 14.1 (along with 3rd maneuver bn)
- Army will reduce AC BCTs from 45 to ____
- We will likely go from 6 to 4 Engineer Brigade Headquarters in the Active Component
  - Tied to Maneuver Enhancement Bde (MEB) discussions, but the latest information shows that we will be cut no matter how many MEBs the Army retains
  - Red line is that we cannot go below one AC function Engineer Bde per Corps HQs
- Our AC/RC (im)balance remains a concern for early entry or surge requirements

Brigade Engineer Battalion

- **Aligns Engineer C2 with BCT centric Army**
  - Expert advice to commander for mission command
  - Plan for and employ EAB assets
- **Provides all BCTs with full spectrum stance with a baseline* of organic engineer capability**
  - Gap Crossing
  - Breach Capability
  - Route Clearance
  - Horizontal Construction
- **Makes employment of EAB Engineers in support of BCTs more effective and efficient***
- **Synchronizes Engineer capability with ARFORGEN and improves Campaign Continuity**



BEB Size

H	I	S
443	425	485

Status:
- BEB FDU returned to TRADOC for inclusion in BCT Redesign (with 3rd Maneuver Bn)
- Part of TAA 14.1 (Out of Cycle)
  - Begin implementation as early as FY14
- Vertical Plt and Horizontal Support Sqd removed to meet BCT Force Cap
- Unit reference sheets posted at ESKN site

* BEB is designed to provide a baseline of Engineer capability for a 2 Bn BCT. Additional specialized capabilities to include support to the 3rd Bn is provided by EAB augmentation based on rules of allocation

As of 21 FEB 12

Unclassified

Engineers in ARMY 2020

Doctrine	**Doctrine 2015: ENGR Integration into Capstone Manuals and ADRPs, Sponsor for Army ENGR Doctrine; 3-34 publication; LL Integration; Codify Army as a Profession, CBRN Incident Response and Mitigation**
Organization	**BEB Implementation as part of BCT Redesign, shifting focus to EAB** **Redesign: AC Support Early Entry, SoF, Geo Int, COCOM Support, ENGR Prep for Theater, Multi-Purpose Units- Now IN BCT, needed at every Echelon. Relook ENGR Staff**
Training	**AIT; CCC Backlogs; Staffing of CTC/MCTP, Project Warrior, Enhancing Inter-service Training Review Organization (ITRO), NO revolution in training yet, CBRN Incident Response and Mitigation**
Material	**Equipment Recapitalization; SPIDER, Engineers in base plan for GCV, Upgrade BFVs, Funding of RCE, JAB, BEBS, LOCB, Capturing the Theater Opening Special Requirement**
Leadership	**ALM 2015; ILE Re-Greening; One Army School System; OIF History Project; ALC/SLC/WOBC/WOAC/EBOLC/ECCC POI updates, JEOC Expansion**
Personnel	**Engineer Officer Certifications REQD-ASI for PMP, Degreed EN, PE, Sapper Leader, Facilities Planner, Geospatial EN, Project EN, Environmental Off; Enlisted Credentialing Path; 12A E9 MOS Merger (12X/12Z), Green Pages into ACT, BDE CDR Mentoring** **No Single-Purpose People - Technically and Tactically Expert!**
Facilities	**USAES 2020/Sapper Campus; BEB implementation with zero MILCON Growth; HST + FLW Range Requirements; ASMO Issues w/AMDS. Geospatial school Restationing**

Army Learning Model for 2015

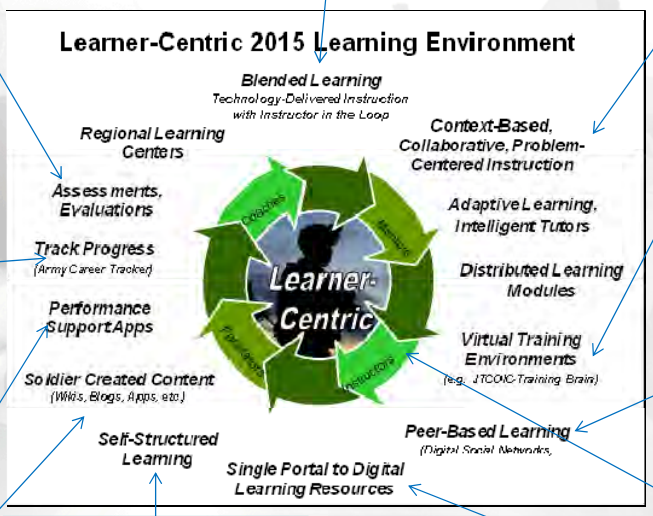
Dept model: 100/200/300 courses avail. to all OES & NCOES based on ALA Systems (SMDR, ATRRS, etc.) to truly resource electives? Synchronization among courses, modules vs classes/terms

Green Pages for talent tracking, assignment to capitalize, continual CDPs and certs.

Point of need learning via tablets, smart phones, ETN2GO apps, quicker feedback, Connectivity infr, WiFi

RC SMEs to assist in development Accreditation

Expanded partnership w/ USMA, USACE, ERDC, CDPs; Common core for non ABET; CCC/EBOLC/WOBC/SLC/ALC



Certifications (PE, PMP, ASEM) & CDPs for all Accreditation, MU MPA

Blackboard and network challenges, CAC enabled access, secure info sharing

"Deploy" to MSCoE, Use TBOC to create common scenarios, Progressively complex situations/ "scrimmage" Remodeling the A/C in flight…with a backlog

Leverage geospatial training and tools, "*52nd ID*" UICs for TNG MGT road to war Cultural training

Peer redefined in terms of experience, talent and knowledge; employ TAs "Ability group" dynamics

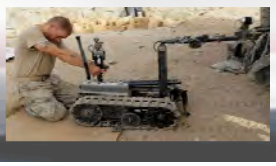
FDP-2 for Engineers, "Project Warrior" like reemphasis for selection

Training Support to the Warfighter

CEHC conducts contingency-based training to provide deploying forces with the skills they need to plan and conduct C-EID missions. Most training is designed for 12Bs executing route clearance missions, but some is MOS-immaterial. Current courses are:

- ***Route Reconnaissance & Clearance (Operator, Leader, Sapper; E-EOCA*)***
- ***Maintainer (R2C2 & HMDS)***
- ***Intermediate Search***
- ***Counter Explosive Hazards – Planner***
- ***ENG CoIST***
- ***EHUT-Afghanistan***
- ***Area Clearance***
- ***Mine Detection Dog***
- ***Puma UAS & M160 / Handhelds***

How do we align CEHC mission and resources with the Asymmetric Warfare Group and whatever the "son of JIEDDO" is?





Counter IED Military Working Dog Key Points

1. The IED threat will be a part of the battlefield for the foreseeable future.
2. The MWD is the best sensor we have in many situations (particularly dismounted movement).
3. An off-leash capability is critical in order to keep the handler out of the blast radius.
4. The past 5 years of combat operations have shown that it is not simple, quick, cheap, or quickly effective to contract for this capability.

Echelons Above Brigade Redesign

- Efforts for the past 3 years have focused on fixing our structure in the BCT
- Currently developing a concept for the re-design of the EAB with the following Commandant guidance:
  - Increased support to SOF
  - Re-alignment of geospatial assets (GEOINT Bn, new GPC, SOF, …….)
  - Correct instances of “over-modularization”
  - Adequate structure to meet “early entry” requirements
  - Restoration of Utilities Detachments in the reserve component

Materiel 1-n List

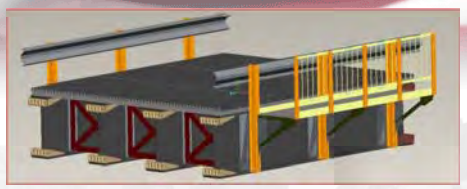
Rank	System / Capability Name
1	Medium Mine Protected Vehicles (MMPV)
2	Route Clearance Interrogation System (RCIS)
3	Husky Mounted Detection System (HMDS)
4	Enhanced Rapid Airfield Construction Capability
5	Joint Assault Bridge (JAB)
6	Assault Breaching Vehicle (ABV)
7	Bridge Erection Boat (BEB)
8	High Mobility Engineer Excavator, HMEE
9	Virtual Clearance Training Suite MODS
10	Construction Equipment SLEP
11	EMM (Water Distributor only)
12	Spider Network Munitions System & Inc 2
13	Light Assault Gap Crossing Capability (LAGCC)
14	HYEX
15	Family of All Terrain Cranes (FOATC Type II)
16	Explosive Hazard Pre DET (Roller, Blower, WNS)
17	HSTAMIDS AN-PSS 14 (PIP)
18	Items <5M (En Spt Equipment) SKO
19	Bridge, Float Ribbon, Transporter (A4 MOD)
20	Selectable Lightweight Attack Munition (SLAM) (PIP)
21	Global Positioning System-Survey (GPS-S)
22	Engineer Survey Took Kit (ESTK)
23	High Mobility Engineer Excavator, HMEE (PIP)
24	Line of Communication Bridge (LOCB)
25	ENFIRE

Rank	System / Capability Name
26	Tractor Full Tracked Med T-9 Dozer (D-7)
27	Buckeye
28	Hydraulic, Electric, Pneumatic, Petroleum Operated Equipment (HEPPOE)
29	Autonomous Minefield Detection System (AMDS)
30	Improved Ribbon Bridge (IRB)
31	Explosive Hazard Protection for Mounted Clearance
32	Loader, scoop, DD 4 wheel, 2.5 yards
33	Forward Recon & Explosive Hazard Detection
34	Engineer Equipment Set, Urban Operations, Platoon
35	TCMMD replaces Nuclear Densometer
36	Dismounted Engineer Mobility (R&D only)
37	SOF Demo Kit, Urban Operations Supplement
38	Route Remediation
39	Bridge Supplemental Set
40	Construction Simulator (R&D only)
41	Explosive Hazard Interrogation Arm, EHIA
42	Explosive Breacher (MICLIC Replacement)
43	Engineer Equipment Set, (EES) Urban Operations Squad Set
44	Items <$5M (Gen Eq) (Power plants)(Prime power SKOs)
45	Rapidly Emplaced Bridging System (REBS) (MODS)
46	Family of Airborne Excavation Equipment (HMEE/Grader)
47	Tactical Explosive System, TES (R&D only)
48	Fire Protection Equipment, FPE
49	Engineer Training Leader products
50	HSTAMIDS INC II

Unclassified

Key Materiel Issues

- Line of Communications Bridge
  - PoR record panel bridge (Mabey Johnson) terminated for convenience
  - TARDEC designing our next LOCB



- Joint Assault Bridge (JAB)
  - Army took over program from USMC
  - Contract has been awarded for prototype vehicles for testing
  - M1 chassis with AVLB bridge

- Assault Breacher Vehicle (ABV)
  - System being fielded in 3rd ID
  - B6 ASI course being taught at FLW

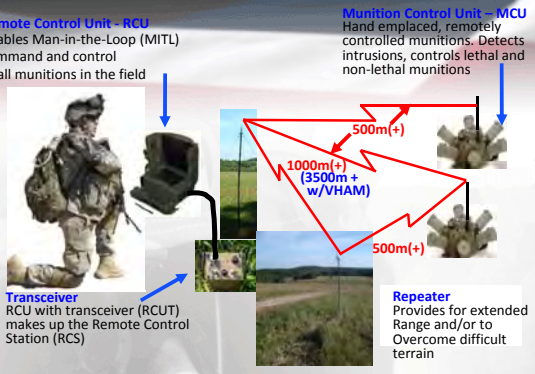
- Bradley / M113 replacement
  - Engineer Bradley (M2A2 ODS-E) not compatible with M2A3 or M2SA
  - Army will replace the entire M113 fleet in the next few years – AMPV?

- ACE / DEUCE strategy
  - Replace the ACE with a new program of record
  - Recap some DUECE systems, replace some with T5 light dozer

- Spider
  - Remains our most contentious and high maintenance program

Unclassified

Networked Munitions: SPIDER



Description and Capabilities

Spider Inc 1: New AP weapons system denies dismounted enemy freedom of maneuver while preserving friendly freedom of maneuver.
- Used in current operations as a protective obstacle for COPs/FOBs to deter or defeat limited enemy intrusions up to major attacks by a single operator located in the TOC or BDOC.
- Successfully employed in terrain denial & ambush operations
- Compliant with U.S. National Landmine policy; also compliant with Ottawa Treaty

Spider Inc 1a: Goal is for an improved controller, seamless integration into the tactical network, and an anti-vehicular capability (both point and area). Requirements documents are being worked.
.

Spider Inc 1 System Capabilities/Features:

- ✓ Command fired; safe for friendly passage
- ✓ Scalable Effects (Lethal / Non Lethal / Demo)
- ✓ Point coverage to large area coverage
- ✓ Intrusion Detection
- ✓ Reusable
- ✓ Anti-tamper/Self Protection
- ✓ Highly Versatile & Cost Effective: multiplies effects of direct/ indirect fires & sensors allowing small unit to defend against much larger force.

Operational Energy (OE)

- OE is the energy and associated systems, information, and processes required to train, move and sustain forces and systems for military operations.
- OE is fundamental to Army capabilities and performance, and represents a significant resource investment.
- Multiple Army initiatives and programs are ongoing to reduce OE requirements in three lines of effort (Contingency Basing, Soldier Power, and Tactical Vehicles).
- The Engineer Regiment's support to the Army's OE initiatives and programs includes
  - Providing an OE Advisor as part of a larger Army initiative in Afghanistan, to advise the 173rd ABCT's leadership on efficient power generation and distribution methods
  - Establishing a Contingency Basing Integration Technology Evaluation Center (CBITEC) on Fort Leonard Wood to integrate, demonstrate, assess and evaluate contingency basing capabilities and technologies and provide a training facility for base camp staffing units and engineer leaders.
  - Developing the Virtual Forward Operating Base (VFOB), a tool to assist engineers in analyzing energy, water, waste, and protection systems within a contingency base in order to enable more efficient base designs & facilities.
  - Developing the Joint Construction Management System (JCMS) which contains a library of standard designs that incorporates sustainable design features and efficient construction materials and facilitates planning and construction of effective and efficient contingency bases.
  - Executing multiple projects on bases throughout Afghanistan to eliminate spot generators and to improve the efficiency of power generation and distribution
  - Conducting research and development in the areas of water reuse, conversion of solid waste to energy, sustainable wastewater treatment and tent and building energy efficiency improvements

Geospatial EN Training Move AR 5-10 Ft Belvoir to FLW

Realignment and relocation of six geospatial courses from Fort Belvoir to FLW

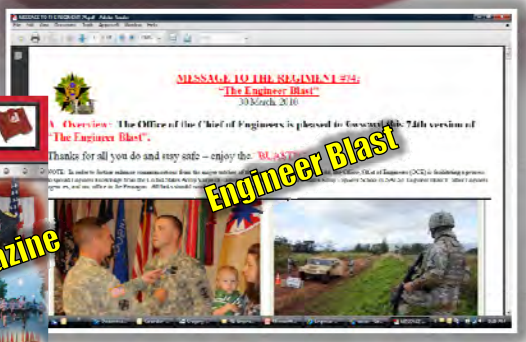
- Conducting training at the USAES, FLW will co-locate engineer training assets
- Move supports overall EN enlisted, noncommissioned officer, and officer training objectives
- Supports overall Army training objectives, allows for cross-training opportunities with other Engineer MOSs
- Allows all initial military training to be conducted at a single Army training center
- Aligns all NCO leader enlisted courses under the Non-Commissioned Officer Academy at FLW
- AR 5-10 Staffing Location as of Aug 2012:
  - Resides at DA for AR 5-10 Approval
  - Pending RMD (Resource Management Decision)
- Geospatial EN POI and CAD submitted complete by Jan 2013 meeting suspense of FY16 SMDR

Engineer Take-Aways for Brigade Combat Team Commanders

- **The Modular Engineer Force provides multi-functional engineer capabilities (but must be managed across the force)**
  - The engineer force has gone under dramatic changes to meet the challenges of decisive action – more balance than ever before – you must think in terms of capability….not units
  - The BCT does NOT have a dedicated decisive action engineer capability all the time
    - Must train integrating EAB engineers to achieve success and maximize engineer support
    - BEB initiative addresses a significant portion of current BCT engineer shortfalls
    - Staff engineer sections at BCT-DIV-CORPS are entry points for engineer capability RFFs
- **Organic Engineer Capability in the BCT is limited – Your BCT Engineer is the Critical Link**
  - Not enough organic engineers to conduct all operations – must reach back to the total Engineer Regiment
  - Success Depends on good Mission Analysis in order to request the right engineer capability from the force pool
  - Critical node is the BCT Engineer and relationship with BSTB Cdr and Staff
    - Engineer C2 is a challenge within the BCT – must continue to work this, need your help as you organize your staff
- **Senior Leader Mentorship**
  - Need for Senior Engrs to Teach, Coach, Train, and Mentor – need you to let them engage your young Engrs!
    - Technical Competency (Building Great Engineers Campaign) and FSO Skills
    - Inspire and Retain them!
  - Reach out to engineer experts (school house or nearest engineer brigade (battalion) headquarters)

Your Regimental Network

www.wood.army.mil



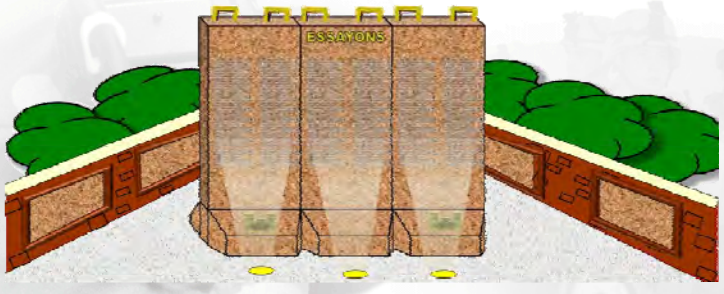
Direct push via "The Rivenburgh Network"

AKO enabled link from the public website

Twitter.com/#!/usaes1

Facebook.com/usarmyengineerregiment

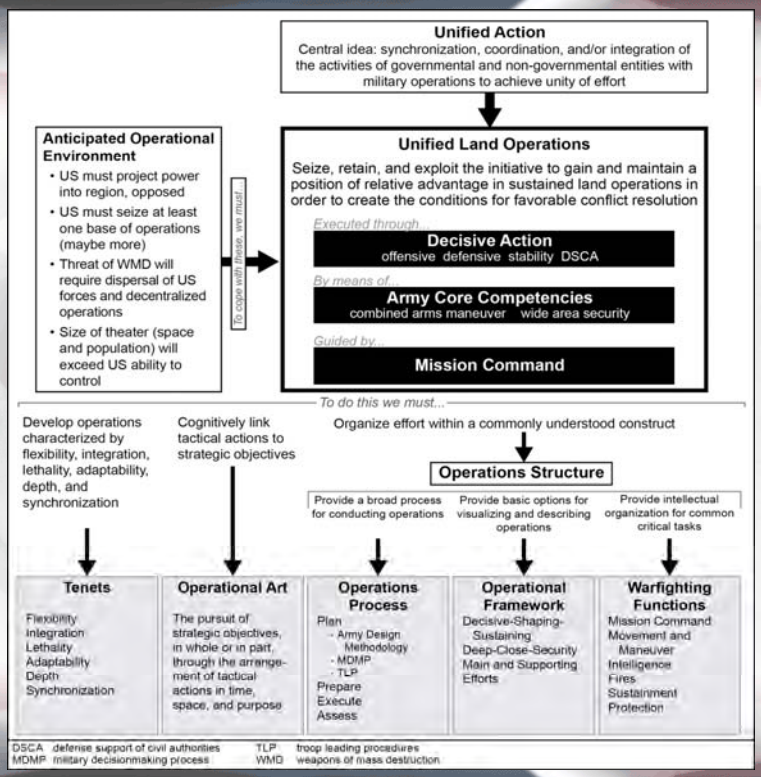
Questions/Discussion



- 7 April 2011 Fallen Sapper Memorial Dedication
- 19 April 2012 Fallen Sapper 2012 Memorial Ceremony
- 18 April 2013 Fallen Sapper 2013 Memorial Ceremony

Back Up Slides

FM 3-0 Unified Land Operations



Notes:

1. FM 3-0 published 10 Oct 2011
2. Operational Environment replaces term Battlespace.
3. Unified Land Operations replaces Full Spectrum Operations as the Army's operating concept
4. Decisive action replaces full spectrum operations as the collective term for simultaneous offense, defense, stability or defense support of civil authorities.
5. Defense support of civil authorities (DSCA) replaces civil support.
6. Mission command replaces the Army doctrinal term command and control. The function of command and the function of control are still valid, but not when combined into a single phrase or function. When discussing Army operations, command and control (including the shortened form C2) is an obsolete term.
7. Range of military operations (ROMO) replaces both spectrum of conflict and operational themes. Intelligence, surveillance, and reconnaissance (ISR) is rescinded. Use reconnaissance and surveillance to refer to the collection of information tasks.

Spider

- Spider remains our most contentious and hi-profile materiel system
- Currently in Low Rate Initial Production (LRIP). PEO Ammo authorized LRIP increase on 10 JAN 12.
- SCORPION was terminated during the FY 10 CPR and we were directed to develop Increment 2 and 3 of Spider in order to include anti-vehicular capability
- Spider Increment 2 and 3 requirements still being developed
- Spider has OSD oversight since it is the Anti-Personnel Landmine Alternative
- Spider decisions carry over into areas such as US landmine policy, Ottawa Treaty considerations, and FASCAM inventories

CHALLENGES

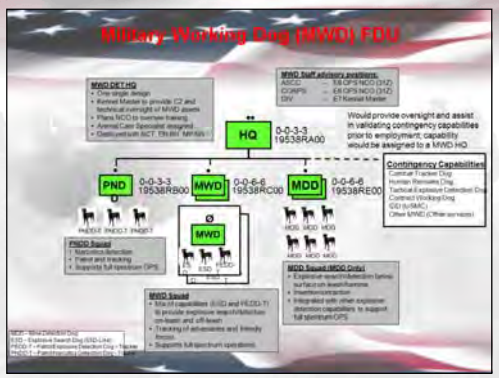
- Testing issues / concerns
  - Software concerns
  - Sterilizations
  - Training issues
  - Effectiveness and Suitabililty concerns
- Initial ONS fielding was done in a "drive-by" manner and results were poor
- Program was delayed to implement Man-in-the-Loop (MITL) guidance

SUCCESSES

- Numerous software upgrades
- Program or record of fielding has begun
- **Some documented operational successes in OEF**
- Units have requested more systems for OEF use
- Employment at CTCs
- Successful FOT #2 conducted during the NIE at Ft Bliss in FY '11

Military Working Dog (MWD) FDU

- MWDs can be a key enabler in the CIED fight (especially dismounted)
- Army has a range of MWDs, each with capabilities and limitations:
  - PEDD, PNDD, MDD, SSD, IEDD, TEDD, …..
- MWD program has not performed as well as expected in combat operations
- Engineer and Military Police have NOT been able to find synergy with a common program
- We will have to buy back Mine Dog Detachments during the next TAA and re-establish our CIED dog program



- FDU returned from HQDA
- Key aspects of FDU:
  - consolidated MWD handler MOS (31K)
  - MWD headquarters (w/vet tech)
  - Documented TOE equipment

Brigade Engineer Battalion (BEB)

- BEB remains the Commandant's top priority for organizational change
- BEB continues to have strong support from Army leadership
- Highlighted at the CPR on 20 October 2011
  - VCSA expressed very strong advocacy but concerns with MILCON costs
  - OCE provided the VCSA with an info paper that showed how BEB can be implemented with zero MILCON bill
- CSA expressed strong support during a recent OEF visit.
- MCoE remains our partner and advocate for the BEB FDU
- BEB is linked to a major BCT re-design (3rd Maneuver Bn) and reduction in numbers
- BEB design is being modified to reduce the size of the BEB and BCT. BEB will not have vertical assets.
- We think BEB decision will be made as part of TAA 14.1

Unclassified

Geospatial Training Move - Ft Belvoir to FLW

As of: 15 August 2012

US ARMY ENGINEER SCHOOL **BUILDING STRONG®**

The US Army Engineer School (USAES) relocated to Fort Leonard Wood (FLW), MO, in 1988. Geospatial Engineer training had remained at Fort Belvoir since, under the Defense Mapping Agency (DMA), later reorganized/renamed as the National Geospatial-Intelligence School (NGS) in 2002.

In March 2011, the National Geospatial Agency (NGA) moved this training off Fort Belvoir proper as part of a BRAC directive to consolidate NGA activities in new facilities at the old Fort Belvoir Engineer Proving Grounds. This most recent move created logistical and management challenges for Army Geospatial Engineer training, and moved this Army MOS training from a military environment to a DOD academic arena.

With Geospatial Engineer training conducted at Fort Belvoir, VA, under the supervision of NGA, students lacked the opportunity to receive integrated Engineer training and the benefits co-located training provides. Over time, training at NGA did not allow the Army to meet increased MOS training throughput demands, or provide adequate barracks space due to facility limitations. Therefore, the Commandant, USAES, decided to relocate Geospatial Engineer training back under the USAES at Fort Leonard Wood, MO, beginning with the Warrant Officer Basic Course (WOBC) in Jan 2012 and the remainder enlisted and NCO training to follow beginning April 2012. The relocation of the Army's Geospatial Engineer training to Fort Leonard Wood, MO, will provide: co-location of engineering training assets; support of Noncommissioned Officer and Officer Education Systems' (NCOES and OES); support of USAES's overall training objectives; ample barracks space; capability to meet throughput requirements; training certification possibilities through local universities; and USAES cross-training opportunities between Engineer MOS's.

Establishing Geospatial Engineer training under TRADOC will provide an environment conducive to shared training with tremendous savings of resources. Preliminary cost analysis shows a substantial long term savings to the Army by moving Geospatial Engineer training to Fort Leonard Wood. Relocating MOS 12Y (Geospatial Engineer) and MOS 125D (Geospatial Engineering Technician) courses will provide a single point of entry for all Geospatial Engineers. Conducting 12Y Enlisted and 125D Warrant Officers training at Fort Leonard Wood will provide co-located Engineer training assets, which also support the USAES NCOES and OES overall training objectives. This will also enhance the Engineer Regiment's Geospatial influence throughout NGA and Military Intelligence communities and will foster a sense of Regiment among all Engineer disciplines.

Department of Army approval of the requested stationing package will result in official realignment and relocation of one DA civilian and 38 military authorizations to the USAES. The USAES requested realignment of the civilian position within the 1st Engineer Brigade in its TDA submission to TRADOC. The primary operational considerations are that this move will provide efficiencies and synergy in training.

The point of contact at USAES for further questions on the Geospatial Move is the Assistant Commandant, COL Barry Williams, at barry.williams@us.army.mil or (573) 563-8080.

The Army defines operational energy (OE) as the energy and associated systems, information, and processes required to train, move and sustain forces and systems for military operations. Operational energy is fundamental to Army capabilities and performance, and represents a significant resource investment. Operational energy performance does not just mean using less energy; rather, using energy to our greatest benefit through energy-informed operations. The Soldier is the Army's platform for building combat power through energy-informed operations.

At the strategic level, energy is a critical component of economic, political and social stability. Operationally, logistical resupply limits the Army's force projection capabilities. Tactically, fuel and water resupply requirements constrain maneuver and divert resources from assigned missions and Soldiers carrying excess loads to power their mission essential equipment. Fuel and water comprise 70% to 80% of resupply volume. In 2010, there were 2,599 fuel convoys in Afghanistan and one in 46 of these convoys incurred a casualty. The Army spent $3.7 billion on liquid fuel in FY11, an increase of $1 billion over FY10 due to higher fuel prices and a 5.7% increase in overall volume. The Defense Logistics Agency (DLA) charges $3.95 per gallon for fuel in Afghanistan, but intra-theater distribution security and handling increase the fully-burdened cost to as high as $56.00 for small units at the edge of the battlefield. The Army accounts for 72% of the DLA's battery demand. Soldiers require approximately seven different types of batteries to operate radios, optics, and infrared devices equating to nearly 16 pounds per individual Soldier for a 72 hour mission.

The Deputy Assistant Secretary of the Army for Energy and Sustainability is the Army's Energy Executive and the DCS G-4 is the Army's Staff proponent for OE. In November 2011, the G4 established an OE office to synchronize business processes and initiatives to improve the capabilities of our formations and increase commanders' freedom of action through better use of energy. The Army has established three lines of effort (contingency basing, Soldier, and vehicle) in which to explore measures to increase operational effectiveness, reduce consumption, increase efficiency, and expand alternative sources in order to assure availability in the future.

There are many initiatives ongoing across the Army to find solutions to reduce energy requirements across the force. Initial solutions currently in use in theater include:

- REPPS (Rucksack Enhanced Portable Power System): a 9 lb. system that uses a solar panel to charge a battery, scavenge power from a half-charged battery, or power a device.
- SPM (Soldier Power Manager): similar to REPPS, a 10 lb. system that can charge/power multiple devices, draw power from vehicles, the grid, generators, or solar power.
- SWIPES (Soldier Worn Integrated Power Equipment System): a Soldier-worn rechargeable conformal battery and distribution system to power Soldier devices from a single battery. Appropriate for high energy consumption applications.
- AMMPS (Advanced Mobile Medium Power Sources) – medium-sized generators with 21% better fleet fuel economy, more parts commonality and less maintenance required.

The Engineer Regiment is fully engaged in developing solutions within the contingency basing line of effort. The Engineer Research and Development Center is supporting multiple efforts to improve the sustainability of contingency bases. These efforts include:

- Supporting the Maneuver Support Center's development of the Contingency Basing Integration Technology Evaluation Center (CBITEC) at Fort Leonard Wood. The purpose of the CBITEC is to integrate, demonstrate, assess and evaluate contingency basing capabilities and technologies for a 600 personnel base and serve as a training facility for base camp staffing units and engineer leaders.
- Development of Virtual Forward Operating Base (VFOB). A tool to assist engineers in analyzing energy, water, waste, and protection systems within a contingency base in order to improve base facilities and designs to improve efficiency and effectiveness.
- Research and system development to address efficient water reuse technologies.
- Research to develop a sustainable wastewater treatment system to convert wastewater contaminants into harvestable products for energy production.
- Research to develop a system to convert solid waste to energy.
- Research to improve energy efficiencies of fabric shelter systems and to improve the building envelope efficiency of semi-permanent theater structures.
- Research and evaluation of power metering and monitoring systems to use in a contingency environment.

Other initiatives across the Regiment include:

- USACE's execution of multiple electrical distribution improvement and removal of spot generation projects across bases in Afghanistan.
- Incorporating sustainable design features and efficient construction materials into the standard designs contained in the Joint Construction Management System (JCMS).
- Support to the Project Manager Mobile Electric Power's initiative to improve tactical power efficiency in the 173rd Brigade Combat Team's (BCT) footprint. The 249th Engineer Battalion (Prime Power) is providing a Chief Warrant Officer to serve as the Operational Energy advisor. The OE advisor and a contract team is collectively executing the mission of assessing the current power situation in forward bases by metering energy usage and analyzing areas for improvement in order to implement solutions to make power generation and distribution more efficient. This mission will result in providing quantifiable data to the Army that reflects precisely how much energy savings are achievable with specific types of energy solutions implemented at the troop level.
- The US Army Engineer School is in the process of updating power doctrine to address continuum of power from tactical generators to commercial grid utilization.

The point of contact at USAES for further questions on OE is the Deputy Commandant, Mr. Jim Rowan, at james.rowan@us.army.mil or (573) 563-4363.

USAES & CGSC Majors' Re-greening Program

As of: 15 August 2012

US ARMY ENGINEER SCHOOL **BUILDING STRONG®**

Engineer officers attending the US Army Command General Staff College lacked current Engineer Regimental knowledge as it relates to Unified Land Operations, given their recent experiences more narrowly focused on stability and counterinsurgency operations over the past decade of war.

The USAES provided a small Mobile Training Team (MTT) education program focused on refamiliarizing US Army Engineer CGSC Students with current Engineer Regimental information. The "Engineer Re-greening" program consisted of a 5-day lecture workshop at a ratio of 1:50 and small groups in a ratio of 1:15. The program was conducted at Fort Leavenworth, KS prior to the start of the formal CGSC Class from 23-27 July 2012.

Key Tasks:

- Familiarize Army Engineer Students with Engineer Regiment focused on:
  - **Doctrine:** MDMP (Combined Arms w/ Engineer integration), EBA, latest Engineer Qualification Tables (EQT) & Standard in Weapons Training (STRAC)
  - **Organization:** Route Clearance Company, Brigade Engineer Battalion (BEB)
  - **Training:** C-IED, Combined Arms obstacle breaching, bridging
  - **Material:** Line of Communication Bridge (LOCB), C-IED, Systems
  - **Leader Development:** Joint Engineer overview, Engineer LL/CALL overview and collection
  - **Personnel:** Summary of personnel efforts within the Regiment
- Familiarize Army Engineer Students with Joint Engineer information- all CGSC ENs enroll in (Joint Engineer Officer's Course distance Learning) JEOC dL
- Potentially leverage CGSC's Department of Joint, Interagency and Multinational Operations (DJIMO) and Battle Command Training Program (BCTP)
- Leverage USACE Reachback Operations Center (UROC) for VTC support

.

Endstate:

Increase knowledge level of newly assigned ILE Engineer students prior to the start of CGSC in order to ensure they are more readily able to integrate into combined arms teams during decisive action in unified land operations.

The point of contact at USAES for further questions on the Re-greening Program is Mr. Shawn Howley, at shawn-howley@us.army.mil or (573) 563-5088.

In October 2010 TRADOC introduced the Army Learning Concept for 2015 (ALC 2015) in order to meet the challenges associated with training the 21st Century Soldier. In 2011 this concept was renamed the Army Learning Model for 2015 (ALM 2015), and TRADOC Pam 525-8-2 details a central theme of adaptability, where *"the Army must continually adapt to changing conditions and evolving threats to our security. An essential part of that adaptation is the development of new ideas to address future challenges."*

Problem. As the operating force tends to be retrospective in its approach to training and development, it is therefore incumbent on TRADOC to avoid the temptation to focus on the last conflict, and instead look to the future. Having been in a state of persistent conflict for more than a decade, the U.S. Army needs to remain sufficiently agile and adaptive to meet the demands of Unified Land Operations, but ensure that lessons learned from Iraq and Afghanistan are not lost. TRADOC has a responsibility to ensure that the training and preparation provided to the operational force is rigorous and relevant, and incorporates emergent education and training methods appropriate for the all-volunteer force.

Predicting the future. Iraq and Afghanistan should not be considered blueprints; however, they do provide signposts of what to expect in the future. Hybrid threats will continue to avoid conventional strengths, and although state-on-state conflict is not dead, it is likely to look very different from Cold War models. TRADOC Pam 525-8-3, The U.S. Army Training Concept 2012-2020, describes some characteristics of the future operational environment; however, it is important to place these characteristics in context. As briefed by CIA Director, General (Retired) David Petraeus, in his address to ENFORCE 2012, *"don't practice doing something you wouldn't do in combat [and] don't have nonsensical scenarios in our training centers."*

Solution. In 2010-2011, General Dempsey released a series of six articles in *ARMY* magazine highlighting the need for TRADOC to support the future of the Army.[1] Reinforcing the characteristics detailed in ALM 2015, these articles describe what is expected from TRADOC in developing best practices for individual Soldier and leader learning during initial military training, professional military education and functional courses.

To meet the needs of the future force, USAES and DOTLD are continually developing training approaches and opportunities to realize the intent of ALM 2015. Current initiatives include:

- **Technology.** ALM 2015 does not use technology as a panacea, but instead seeks to provide the right capabilities to enable learning at the point of need. DOTLD has piloted issuing Galaxy tablets to EBOLC (alleviating the need for textbook issue), and MSCoE is developing 'Apps' for use with smartphones and other electronic devices. Improved knowledge management capabilities, to include the Engineer School Knowledge Network, milSuite and social sites such

[1] http://www.ausa.org/publications/armymagazine/archive/2010/10/Documents/Dempsey_1010.pdf; http://www.ausa.org/publications/armymagazine/archive/2010/11/Documents/Dempsey_1110.pdf; http://www.ausa.org/publications/armymagazine/archive/2010/12/Documents/Dempsey_1210.pdf; http://www.ausa.org/publications/armymagazine/archive/2011/1/Documents/Dempsey_0111.pdf; http://www.ausa.org/publications/armymagazine/archive/2011/2/Documents/Dempsey_0211.pdf.; and http://www.ausa.org/publications/armymagazine/archive/2011/3/Documents/Dempsey_0311.pdf.

as Army Professional Forums (platoonleader.army.mil; nco.net and leader.net) all contribute to peer-based learning. Of note, there is a constant tension between extant policy relating to technology, and the ALM 2015 desire for innovation. Issues such as limitations on the use of Wi-Fi technology, the need for Data-at-Rest security, restrictive network policy and the requirement for 'platform agnostic' software can suppress the capabilities and initiative of technically capable instructors and students.

- **Common Framework of Scenarios.** Currently, in both EBOLC and ECCC, students are presented a number of disparate training scenarios as they progress throughout the course. DOTLD is currently adjusting the DATE (Decisive Action Training Environment) scenario used in Combat Training Centers and home station training for use with Officer Education courses. This will allow students to 'deploy' to the School, and undertake progressively complex problems as they increase in confidence and competence.

- **Multi-echelon training.** Where appropriate, the opportunity to link Noncommissioned Officers and Warrant Officers with future Platoon Leaders and Company Commanders in a safe (learning) environment should be exploited. Currently, ECCC students receive and critique briefings from graduating BOLC classes, an activity which is well received by both LTs and CPTs. As the Common Framework of Scenarios is developed, this will allow further opportunities of this kind, to included involvement from Warrant Officer and Noncommissioned Officer courses.

- **Self-structured Learning.** By partnering with Missouri University of Science and Technology, USAES maintains a cooperative degree program offering ECCC students the chance to obtain graduate qualifications in a range of engineering and engineering management disciplines. Additionally, on four occasions per year, DOTLD coordinates and funds Project Management Training which can be used to gain certification as a Project Management Professional (PMP). Conceptually, this model could develop towards a 'Sapper University', where prospective students would complete core education requirements, but then have the ability to tailor their learning outcomes to achieve both individual and institutional benefit.

- **Instructor Selection.** Developing staff and faculty to support a dynamic, learner-centric environment is a key focus. As the operational force reduces deployment tempo, initiatives such as 'Project Warrior' and the use of Green Pages will assist in ensuring the right person is employed to mentor, coach and instruct at TRADOC schools and centers.

Conclusion. ALM 2015 is descriptive – rather than prescriptive – in proposing ways of developing training. As General Dempsey indicates, *"I don't want to be vague about this, so let me put a little finer edge on what it will mean to be adaptable: faster, flatter, more collaborative and always resource sensitive. It means […] revision of doctrine, training methodologies and leader development programs every [one to two] years."* ALM 2015 seeks to provide an adaptive development and delivery system that will meet Soldiers' learning requirements during an era of persistent conflict and exponential change. USAES and DOTLD are constantly working to improve the approach to learning and education, accepting prudent risk where appropriate in order to create Engineer leaders comfortable operating in volatile, uncertain, ambiguous and complex environments and therefore able to meet the demands of future conflict.

The point of contact at USAES for further questions on ALM 2015 is the Director, Directorate of Leader and Training Development, LTC Paul Huszar at paul.huszar.mil@mail.mil or (573) 563-4093.

Echelons Above Brigade (EAB) Redesign

As of: 21 August 2012

US ARMY ENGINEER SCHOOL **BUILDING STRONG®**

At the conclusion of ENFORCE 2012, the Commandant, USAES directed that a hard look take place for the EAB engineer forces ICW MSCoE CDID. With the Brigade Engineer Battalion (BEB) a certainty, the challenge was to now look at what formations and capabilities remained to support the close-held and developing Army of 2020 (A2020) concept. The realities of that future Army included a predominantly CONUS-based force. The EAB Redesign was charged with looking holistically at our Regiment, not only for the capabilities that we may need for A2020, but equally to look at the capabilities that we may have lost in the past 10+ years of operations. The best example of "lost" institutional capability would be our use of well established key terrain in the form of APODs and SPODs (Iraq and Afghanistan) that have fueled the mountains of steel that have become the American way of war. The engineers of A2020 must be able to seize lodgments, be technically and tactically capable, operate in austere environments, setting conditions for success of the joint maneuver commander, and simply put, serve as the "Swiss Army knife" of the Army.

The EAB Redesign formed a community of practice (CoP) across all three compos, all ASCCs, DA, USACE, USARC and NGB staffs, and anyone that wanted to share the responsibility for the stewardship of the Regiment, and have met both via teleconference and in person with regularity since ENFORCE. The major initiatives that the EAB Redesign CoP is currently working are:

- **Engineer Company Construction Company** – the CoP held a seminar in JUL 12 (attended by 57 from across the Army, four BDEs, nine battalions and two ASCCs) that took numerous COAs to get a more versatile company that combined both vertical and horizontal capability. This was based on the Commandant's hypothesis that the Regiment "over modularized". Of the five COAs, a modified COA was selected as one potential solution with both light and heavy variants (in a mixture of both vertical and horizontal platoons) that will allow for both engineer effort ISO the lodgment (predominantly horizontal), as well as what is required in later phases (vertical). A survey out to the field is expected imminently seeking feedback on the COAs and will fuel the next Force Design Update (FDU) in the fall of 2012.
- **SOF Engineer Support Squadron** – The Commandant delineated in his ENFORCE remarks that SOF will remain as the "11th Army Division" in contact for the next generation. With the pending reduction in NMCB units, and loss of OCO funding, the CoP ICW the SOF community, is developing a concept unit that would be employed much as the 249th EN BN (PP), with linkages at the ASCC level for tailored force packages of highly skilled, cross-trained, and credentialed engineer Soldiers engaged in the full range of military operations. The concept continues in its development ICW MSCoE CDID and a teleconference will be held in SEP 12 to continue development.
- **Geospatial Planning Cell (GPC) Redesign** – There are currently not enough GPCs for every ASCC element, and the CoP is finishing what will become an FDU that will account for not only GPCs at every ASCC (some larger than others), but will also ensure key 125D/12Y geospatial leadership in key mission command nodes, and will also ensure career progression within the GPCs. A teleconference with all ASCCs and GPCs is anticipated in SEP 12 to finalize input for the FDU ICW TCM Geospatial and MSCoE CDID.
- **Early Entry and Setting the Theater**– A key area for discussion and development by the CoP is the determination of early entry (and forcible entry) requirement capabilities that support both amphibious (littoral) maneuver, as well as vertical maneuver (airborne/air assault), both to secure a lodgment to support the expeditionary A2020. A key strategic partnership with the US Army Transportation School is being formed in support of this initiative and the Commandant and key staff recently attended the Joint Logistics Over the Shore (JLOTS) exercise at Ft. Story, VA in late AUG 2012. Key lessons learned from that training event, coupled with numerous VTCs in both secure and unsecure means will drive the true requirements and capabilities determination process, which will then feed how the complexion of both EAB and BEB forces will look. As stated earlier, this is an

area where few have had the opportunity to conduct either training or real operations since the start of the Global War on Terror due to operations in "mature" theaters. Here is where we need to recoup the institutional knowledge within our Regiment (to include extensive use of historical study).

- **AC/RC Roles and Integration** – By FY18, the Engineer Regiment will be comprised of 19% Active Army and 81% Reserve Component. The first order of the CoP is to determine the answer to the question "what must be done?" The second portion of that process will be answering the question of "who will do this?" The term "Operational Reserve" takes on a significant meaning when speaking of the EAB Engineer force. This may connote certain units may be at higher level of readiness and accessibility. The CoP will be looking at the "how" to keep the Reserve Component operational and relevant to these plans and concepts, and do so with the backdrop of declining fiscal resources. The Army Reserve Engineer GOSC, the Army National Guard's Engineer Advisory Team, and the combined Chief of Engineers Reserve Component Council are all partners in the determination of how the Reserve Component will be able to remain relevant and ready in support of Engineer Regimental requirements supporting A2020.

Starting in FY13, the CoP will be addressing the following initiatives to inform the 16-20 POM process:

- **Combat Company Force Design Update (FDU)** – the key determinant of this FDU will be what is actually approved in MToE for the BEB. At that point, a definitive gap analysis can be conducted to ensure that whatever reinforcing capabilities to support (M/C/S) as well as unique capabilities that the EAB may be required to provide at both the BCT-level as well as for setting conditions for theater success will be studied and rapidly staffed to the field.
- **EAB Engineer Battalion FDU** – Key and critical to this discussion will be answering the question as to whether the A2020 requires sole purpose battalions (either combat or construction) at EAB, or multi-functional battalions. An additional concern expressed by the Regiment is that a reversal of modularization (the return of A, B, and C companies) might also serve to not only better habituate engineer support, but also to serve as a more stable platform for mentoring. It should be noted that these EAB Battalions will most likely be critical in future planning for both "setting the theater" as well as early entry operations working hand-in-hand with logistics and joint partners. The other question that must be considered is how this battalion will be effective across the entire range of military operations, meaning supporting Theater Security Cooperation in Phase Zero, support to the initial fight in Phase 2 and 3, and then also being capable of supporting the transition to Stability Operations in Phase 4 and beyond.
- **Urban Search and Rescue Concept Plan –** The US Army Engineer School has assumed proponency for this unique capability. Units such as 911th Engineer Company as well as numerous formations under Defense CBRNE Response Forces (DCRF) and Homeland Response Forces (HRF) are reliant on this capability. The US Army Engineer School, ICW MSCoE, continues to define requirements and conducts numerous experiments across the DOTMLPF domain, moving this capability towards institutionalization.
- **Concept Plan for Contingency Basing Management and Operations –** this will serve as the focus for many evolving concepts that include Contingency Basing Integration Technology Evaluation Center (CBITEC), Operational Energy, Base Camp Development, expansion, and closure. Lessons learned from both the Operation Enduring Freedom and well as Army-level Lessons Learned Forums are fueling the discussion in furthering these concepts towards integration and institutionalization. The more that these concepts can be integrated, the outcome will be a less

logistics-intensive tail for the expeditionary A2020, which in the future will forced to operate in austere environments, and do so with efficacy.

- **Theater Engineer Command (TEC) Re-design** – The TEC, currently the highest echelon of Engineer mission command in our Regiment requires re-evaluation. The TECs have not been effectively utilized as intended, to include their subordinate Deployable Command Posts (DCPs), since the start of OIF. Additionally the inception of the TEC structure focused on mission command and moved away from technical competence which had been the strength of the ENCOM. Whereas personnel from these formations have supported the current warfight starting with the initial invasion in 2003 (the 416th ENCOM (the TEC's predecessor) did deploy as the last deployment at that echelon) but later devolved into numerous personnel filling theater-specific Joint Manning Document (JMD) requirements. The TEC Re-design will look at how best to potentially bring back technical competence and not only incorporate all Army components into this unique and critical asset in a theater of war, but also to look at the inclusion of joint equities (perhaps creating a JTEC), and most importantly to create a unit that will be deployed and employed.

The USAES point of contact for further questions on the EAB Redesign is the Deputy Assistant Commandant (Army Reserve), COL Adam S. Roth, at adam.roth@us.army.mil or (573) 563-8045.

Since 1951, Army Engineers have maintained a system to facilitate contingency construction planning and to serve as a guide to engineer field units in the Joint Operations Area (JOA). Today Army Engineers know this system as the Army Facilities Component System (AFCS) and the Theater Construction Management System (TCMS), the software application that automates the construction data contained within the AFCS database. The AFCS design data repository currently contains 1,413 facility designs, 213 component designs, and 5,802 drawings, which includes 36 Navy facilities with 95 unique Navy drawings and 137 CENTCOM facilities with 2,803 unique drawings. The AFCS also include construction support data to include Design Drawings (2D, 3D, and Animations), listings of materials needed for construction, Theater Oriented Guide Specifications (TOGS), and labor and equipment requirement estimates for construction.

The Army is leading the efforts to transition the Army Facilities Component System (AFCS) and the Theater Construction Management System (TCMS) into the Joint Construction Management System. The transition to the Joint Construction Management System will occur in May of 2013 per the 2012 Joint Engineer Work Plan for the Joint Operational Engineering Board (JOEB). Why are we transitioning? Engineer experiences in Iraq and Afghanistan have again highlighted the need to standardize contingency basing standards and designs across the Joint Engineer Community. The use of multiple standards and designs for similar facilities creates inefficiencies in the use of resources and creates challenges for turning facilities over for contracted operations and maintenance. Inconsistently applied master planning principles also led to reduced efficiency and effectiveness in our contingency bases. Future operations will require each Service's Engineers to work together to meet all Engineer requirements of the Joint Force. The Joint Construction Management System will provide a single system that all Services can use to plan and execute construction in support of the Joint Force Commanders.

The Joint Construction Management System will

- Contain a common data base of Joint standard designs for contingency facilities and bases that are compliant with Unified Facilities Criteria for Non-Permanent Facilities
- Master planning tools that have the capability to integrate geographic information system (GIS) data to support base planning and design
- Be interoperable with commercial software used for construction management and facility design
- Be interoperable with Service logistical systems to streamline bill of material acquisition

These enhanced capabilities will enable the Joint Engineer Community to plan and construct more effective and efficient bases in the future.

The transition from AFCS to JCMS includes the following major efforts:

- Development of metric designs and a complete review and update to both existing AFCS designs and designs from Sister Services to ensure compliance with the Department of Defense Unified Facilities Criteria (UFC) for Non-Permanent Facilities in Support of Military Operations
- Significant software programming upgrades to improve the functionality of the TCMS software, and to ensure interoperability with existing commercial construction management and design software and Service specific logistical systems to streamline bill of material acquisition.
- Validation and approval that the AFCS software and data servers are fully compliant with DoD Information Assurance policies and regulations in order to migrate into the NETCOM domain.
- Working with DLA and AMC to catalog metric construction materials and to develop the process by which the AFCS/JCMS material data is updated to reflect changes made within the Federal Logistics Database

Joint Engineer Operations Course (JEOC)

As of: 21 August 2012

US ARMY ENGINEER SCHOOL **BUILDING STRONG®**

The JEOC is a Joint Engineer Staff course under the Joint Operational Engineering Board (JOEB). The course consists of 4 classes per year with a 40 hour distance learning (dL) phase and a 40 hour resident phase. Each class consists of 60 multi-service engineer students. The first JEOC course was offered in the spring of 2006 and was designed to address the educational needs of service engineers to effectively execute joint engineer staff requirements.

The US Army Engineer School is the Lead Development Agency (LDA) for the JEOC and provides daily support for the 3 person JEOC Rotational Training Team (RTT). JEOC is offered in the Army Training Requirements and Resource System (ATRRS) under course number 4A-F16/030-F20.

The course is administered by the Rotational Training Team (RTT) and augmented with two facilitators, from the US Navy Civil Engineer Corps Officer School (CECOS), US Air Force Institute of Technology (AFIT), US Marine Corps Engineer School (USMCES), and the US Army Corps of Engineers (USACE).

Online registration for dL and Resident Phases is through the JEOC portal at

http://www.wood.army.mil/wood_cms/195.shtml

The schedule for FY13 is below:

Date	Location	Host Institution
29 Oct-02 Nov 2012	Quantico, VA	USMCES
15-19 Apr 2013	Ft. Leavenworth, KS	USAES
24-28 June 2013	Wright-Patterson AFB, OH	AFIT
12-16 Aug 2013	Port Hueneme, CA	CECOS

Additionally, the success of JEOC has led USAES DOTLD to pursue future instructor exchanges with the AFIT.

The point of contact at USAES for further questions on the Joint Engineer Operations Course Program is Mr. Shawn Howley, at shawn-howley@us.army.mil or (573) 563-5088.

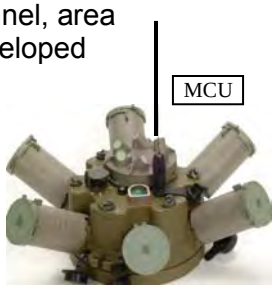
Returning Lethal Countermobility to the Army

As of: 21 August 2012

US ARMY ENGINEER SCHOOL **BUILDING STRONG®**

Operations in Afghanistan and Iraq have demonstrated the effectiveness of being able to attack vehicles. The IED has been the number one killer of US soldiers on the battlefield. Due to changes in US landmine policy and our historic reluctance to employ FASCAM, we have largely ceded lethal countermobility to the enemy. We plan to recover this with the Spider Network Munition System.

The XM-7 Spider Networked Munitions System is a portable, hand-emplaced, anti-personnel, area denial system with lethal and non-lethal capabilities. The Army developed Spider in accordance with U.S. landmine policy, as an alternative to persistent anti-personnel landmines (APL) such as the M14 and M16. It is not victim activated and therefore not a landmine. It requires the operator to make a deliberate decision to engage the enemy. Spider meets all U.S. treaty obligations and those of our allies, providing greater flexibility for use in coalition operations. Spider is a Man-In-The-Loop (MITL), self-destructing / self deactivating system. A single remote control station can operate 42+ Munitions Control Units (MCU), each containing six miniature fragmentation grenades or via the use of a Munitions Adapter Module, lethal or non-lethal Claymores. One of the best features of Spider is the ability to remotely activate or deactivate emplaced Spider Fields. These fields can be turned on to deny the enemy access to an area or for Combat Outpost (COP) security, and then deactivated to allow friendly units safe passage through the same terrain. On operator command, Spider can launch from one to 252 grenades or Claymores simultaneously.



The Spider is currently in Low Rate Initial Production and is in use in Operation Enduring Freedom. The first combat engagement using Spider occurred on 13 June 2011 in RC-South when the system was employed to provide area denial and COP security. 14 BCTs have been fielded the Spider system. Units receive New Equipment Training (NET) and doctrinal training on Spider at their home station followed by use of the system during a Combat Training Center rotation prior to deployment to theater.

The Spider system completed Limited User Test 2 (LUT2), Force Development Test 2 (FDT2), and was part of the Network Integration Evaluation (NIE) capstone event at Fort Bliss in July 2011. Spider will also undergo a Follow-on-Operational Test 3 (FOT3) in November 2012 as a part of NIE 13.1. Spider Increment 1A will provide an improved Controller and an MCU that is capable of employing an array of existing AP and anti-vehicular (AV) Army munitions with a full range of effects. This is the necessary materiel solution to restore our lethal countermobility capability.

The point of contact at USAES for further questions on the Spider Networked Munition is the Deputy Commandant, Mr. Jim Rowan, at james.rowan@us.army.mil or (573) 563-4363.

The Total Army Analysis (TAA) process is used by HQDA to determine organizational authorizations. TAA determines the proper mix of organizations required and resourced that comprise a balanced and affordable force to meet the guidance issued by the President, Congress, OSD or Army leadership. It develops the total requirements for peacetime, wartime, rotational force and DOD tasks. Subsequently the TAA process defines the authorizations for the force structure the Army must build, raise, provision, sustain, maintain, train and resource to meet OSD / Army guidance, Combatant Commanders' requirements and force structure initiatives. The resulting force structure is the Program Objective Memorandum (POM) force, the force that is recommended for resourcing to OSD in the Army's POM submission. TAA takes into account force guidance and resource availability to produce a balanced and affordable force structure. It determines and/or verifies the affordability, supportability, and executability of the organizational model.

TAA 14-18 resulted in significant reductions for the Engineer Regiment. The AC Echelons Above BCT (EAB) Engineer force was reduced from 15,839 to 13651 (-2188; -14%). There was no change to Army Reserve (AR) or National Guard (NG) engineer force structure. The Brigade Engineer Battalion (BEB) was deferred to TAA 15-19 in conjunction with other BCT redesign options. Further, in conjunction with the Joint Sufficiency process, the TAA confirmed shortfalls in contingency facilities engineering (Engineer Facilities Dets & Utilities Dets) which AR and NG will consider for growth.

TAA 14.1 was an out of cycle force structure and sizing procedure. TAA 14.1 took into consideration the incorporation of BCT reorganization (3 Maneuver BNs w/BEB design) which will set the conditions for TAA15-19 to determine BCT enabler requirements. In addition, it relooked select emerging growth for incorporation into the force via efficiency gained through the BCT reorganization. For a number of reasons, the Army Structure Document for this TAA has not been published.

TAA 15-19 began at the end of Jan 12 and runs through Oct 12. TAA 15-19 will significantly impact engineer force structure as it considers engineer support to BCTs through the inclusion of the BEB in the BCT redesign. TAA 15-19 will shape POM 15-19 by refining the future Army force structure required to meet the new defense strategy and budget realities. TAA 15-19 will incorporate mature Army 2020 force structure initiatives, include a redesigned BCT (TAA 14.1), and inform the operational reserve concept. However, with the results of TAA 14-18 and TAA 14.1 not yet officially published, decisions made during this iteration of TAA may lead to incorrect assumptions and actions in the out years. The G-3/5/7 began the requirements phase of the TAA process in late Jan 12 by setting the analytic agenda for the models that will drive the force structure. OCE and USAES have been engaged in providing updated Rules of Allocation, Construction Tasks, and Engineer CONOPS for the Campaign Scenarios to ensure engineer requirements are realistically modeled. Upon completion of the requirements phase, the G-3/5/7 will lead the resourcing phase which will include a series of meetings in the Aug-Nov 12 timeframe.

Throughout the TAA process the engineer position has been to ensure preservation of sufficient force structure to ensure Army mission success. In order to ensure the Army remains agile, responsive and flexible with a smaller overall force, the AC engineer force structure must be sufficient to meet early entry (AC Force) requirements, be re-balanced between BCT and EAB and be able to efficiently receive and employ RC enablers (AC Engr Bdes and BEB). The BEB remains the Engineer # 1 priority as it addresses documented BCT engineer capability gaps: engineer mission command, assault gap crossing, route clearance, preparation of protective positions and breaching operations. The Regiment must focus on

retaining sufficient AC engineer structure to meet early entry (as outlined in the Gain and Maintain Operational Access (GAMOA) concept) and surge requirements as well as identify key RC capabilities to include in the Operational Reserve pool. Finally it is imperative that we retain a minimum of one AC Engineer Brigade per Corps to mitigate much of the risk associated with our AC/RC imbalance by providing a HQ to modular units, and an organization to foster coordination between the components.

The point of contact at USAES for further questions on TAA is the Deputy Commandant, Mr. Jim Rowan, at james.rowan@us.army.mil or (573) 563-4363.

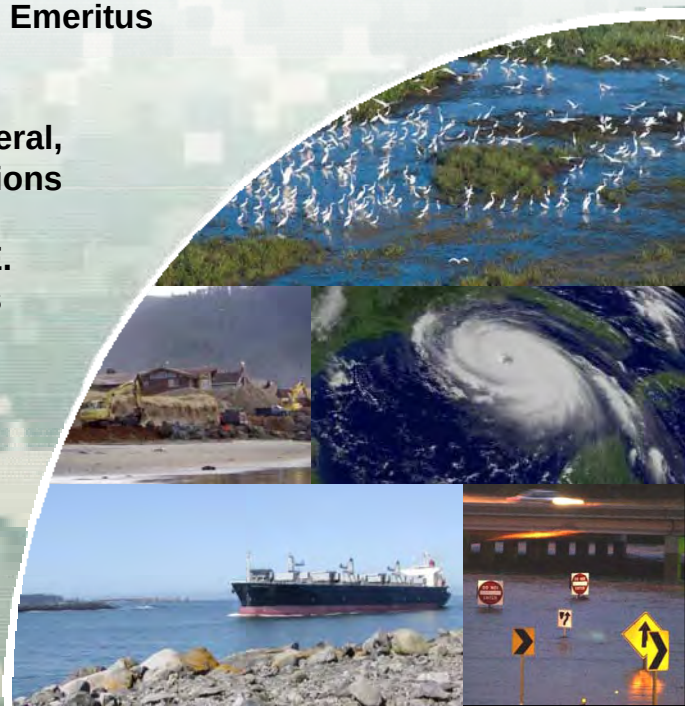
Transforming Civil Works

Presentation to USACE Leaders Emeritus

MG Michael J. Walsh
Deputy Commanding General,
Civil & Emergency Operations

Steven L. Stockton, P.E.
Director of Civil Works

13 September 2012

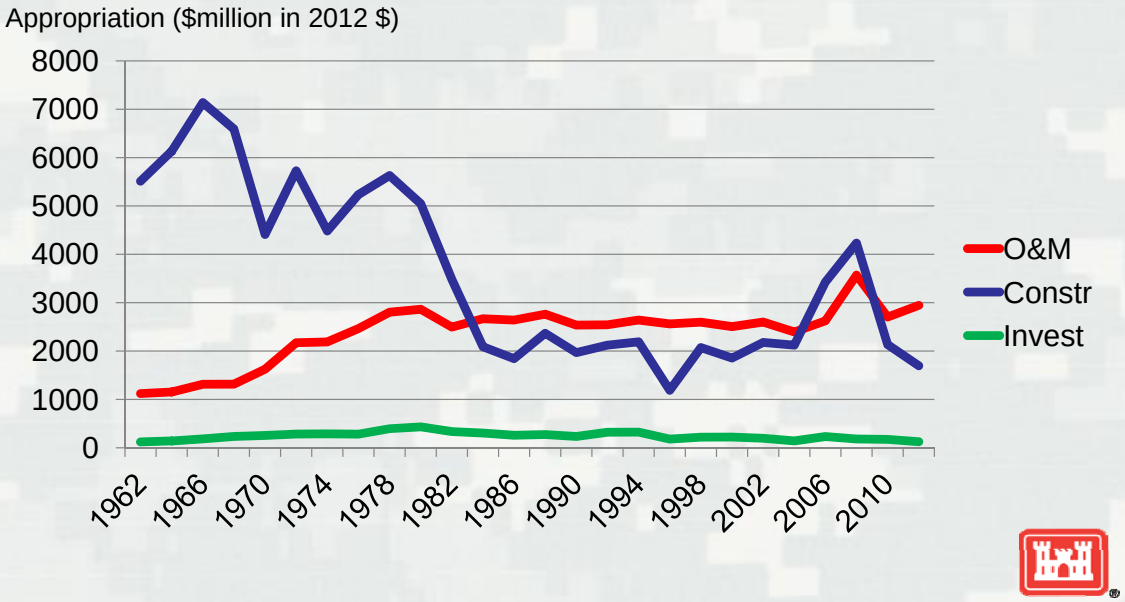


US Army Corps of Engineers
BUILDING STRONG®

Trends Influencing CW's Future

- Aging infrastructure: Critical need for robust asset management & a long-term recapitalization program
- Domestic discretionary funding: Need for innovative financing, capital stock divestment, market-based solutions
- Globalization: Waterborne trade implications, homeland security, international water resources, expansion of Panama Canal
- Political and Governance turmoil. No focus on America's infrastructure needs and investment
- Water resources challenges:
  - Lack of a National Water Resources Vision to elevate water infrastructure to a national level of attention
  - Need IWRM perspective to holistic solutions, collaborative planning
  - Competition for water, including increasing environmental & water supply needs
- Climate change adaptation & water-food-energy nexus
- USACE organization: Performance, technical capability , delivery

Are We on the Way to Becoming an O&M-Only Organization?



BUILDING STRONG®

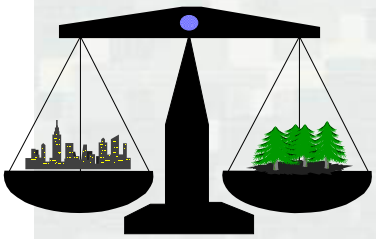
Shaping Strategic Direction

- Integrated Water Resource Management
- Systems-Based Approach
- Risk-Informed Decision Making & Communication
- Collaboration & Partnering
- Asset Management/ Recapitalization
- State-of-the Art Technology

BUILDING STRONG®

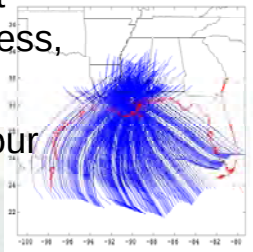
Core Competencies: What Sets Us Apart

- **Integrator**
- **National/Global Perspective**
- **Balancer**
- **Systems Thinking**
- **Diverse Technical/Scientific Workforce**
- **Marshall Capabilities**
- **Integrated Delivery**



Growing Our Capabilities

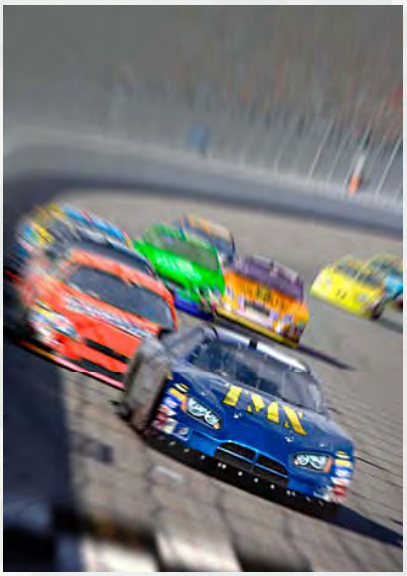
- Become <u>leading agent</u> in systems-based watershed planning and management
- <u>Communicate</u> <u>transparently</u>, be responsive at all levels and <u>engage partners</u> in our processes
- Build a ready, responsive and <u>capable workforce, Recruit</u> the best in key skills
- <u>Maintain</u> key <u>core</u> <u>skills</u> (e.g., H&H, Cost Estimators, PDTs and the planning process, etc) in centers/virtual teams
- Develop <u>risk</u> <u>competencies</u> throughout our workforce, <u>communicate</u> <u>risk</u> openly
- Build a <u>cost and time conscious culture</u>
- Teach/Learn to do <u>Less with Less (Prioritize)</u>



National Priorities/Goals

- Reduce the Deficit
- Create Jobs and Restore the Economy
- Improve Infrastructure
- Restore and Protect the Environment
- Maintain Global Competitiveness
- Increase Energy Independence
- Improve Quality of Life

Win in the Turns



- Win in the turns - Invest in our infrastructure
- New starts - Think future water resources direction
- Use systems-based and watershed approach
- Find ways to finance the Nation's infrastructure
- Become the Nation's water resource solutioneer

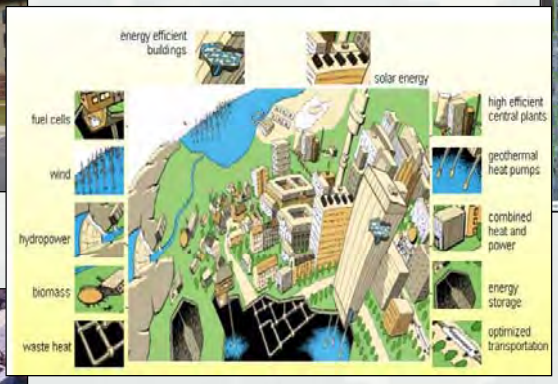
Imperatives for Action

- We are now in a non-earmark environment
- We fund too many studies/projects at less than capability
- It takes too long to get studies and projects completed
- It costs too much!!

- We make sponsors and stakeholders unhappy due to lack of timeliness and cost effectiveness
- We try too hard to justify unviable projects
- We need to get back to basics – “blocking and tackling”
- In a budget constrained era, we must do what it takes to Be RELEVANT!!

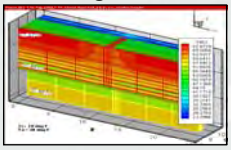
Net Zero Energy (NZE) Installations

Energy Conservation
(New & Existing Facilities)



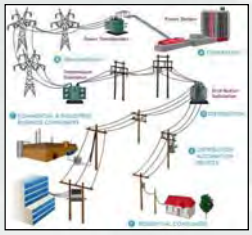
Holistic NZE Installation

Modeling & Simulation



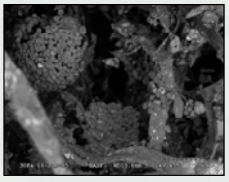
Renewable Power Production

Technology Demonstrations



Power & Energy
Architecture & Controls

Operational Issues
Humidity & Mold

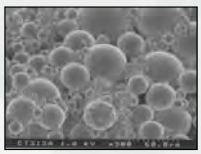


Phase change materials

BUILDING STRONG®

Corrosion Prevention and Control

Self Healing Coatings



Sustainable Materials

4.7 ton load limit

70-plus ton load limit

$23.9B in costs to DOD in FY09

Tank Washrack Water pipe
Fort Bragg, NC

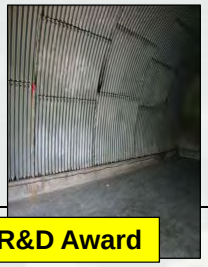
Deluge Tank for fire suppression at Fort Campbell Army Airfield, KY

Reactive Vitreous-Coatings on Reinforcement Steel

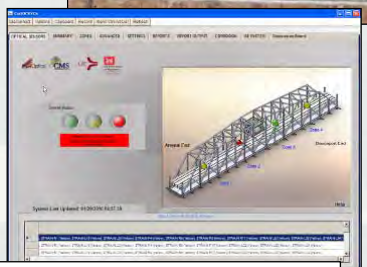
Electro-Osmotic Pulse

Before

After



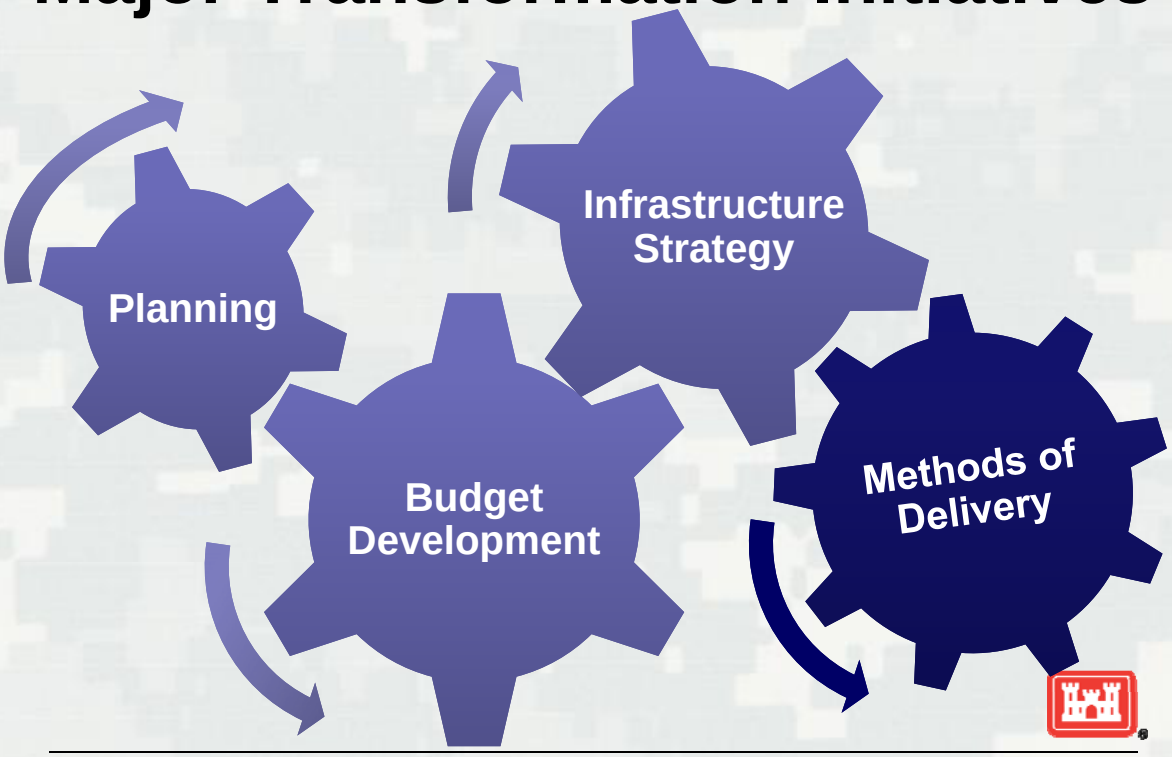
2010 Army R&D Award



Remote Structural Health Monitoring and Corrosion Rate Modeling of Bridges

2010 FLC Award
2010 R&D 100 Award
2011 Army R&D Award

Major Transformation Initiatives



Planning Modernization

Top Four Performance Priorities

- Improve planning project delivery (investigations and CG) and instill accountability at all levels
- Develop a sustainable national & regional planning operational and organization model
- Improve planner knowledge and experience (build the bench)
- Modernize planning guidance and processes

Budget Transformation

- Establish a goal-oriented, program based approach to budgeting
- Vertical alignment and integration of programs/BLs to National goals and objectives
- Institutionalize our CW Strategic Direction; move IWRM into our budget development framework
- Develop a budget framework that identifies relevant, important and smart decisions
- Improve justification & defense of budget allocations

End state: Sustainable and reliable water resources infrastructure

Methods of Delivery

- Relook our methods of delivery to be more efficient, cost-effective & timely
- Link technical capabilities to desired levels of service
- Integrate a Human Capital Plan to maintain core competencies
- Improve operation and management of our water infrastructure-reduce enterprise risk
- Focus areas-Centers of Expertise (CXs):
  - Dam safety, inland navigation design and deep draft navigation economics

Infrastructure Strategy

- **Infrastructure Comprehensive Strategy:** An integrated approach to manage our assets, the life cycle of the system and seeking alternative financing:
  - ✓ **Asset Management:** Comprehensive approach to asset management
  - ✓ **Life cycle system:** Ensure future systems' viability through risk assessment and management, funding prioritization and sound decision making
  - ✓ **Alternative financing:** Provide a safe and reliable infrastructure by looking into alternative financing options
  - ✓ **CW decision making:** Develop a decision framework and process that enables a cross-cutting systems approach, supported by user friendly decision tools (WISDM, Money Ball, etc.)
  - ✓ **Strategic communication:** A robust strategy with key messages to increase national attention to water infrastructure, its value to the nation, critical needs and sustainability of our systems

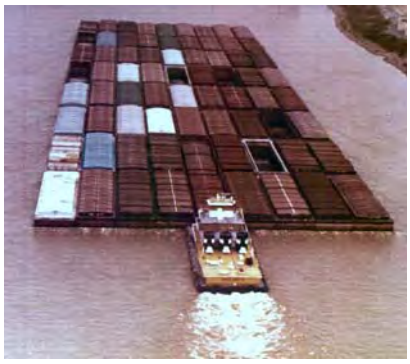
End state: A reliable and sustainable infrastructure FUTURE!!

Headlines We'd Love to See in 2020

US Army Corps of Engineers
BUILDING STRONG®

ST. LOUIS POST-DISPATCH

Rivers Deliver!



Waterways Seen as Backbone of U.S. Infrastructure

The Marine Transportation System provides safe, reliable and efficient movement of cargo to maintain America's role as a premier trading partner in the global market place.

Actions:

1. Lead the development of a national freight transportation policy that recognizes the necessity and benefits of waterborne commerce to the nation's economy and environmental sustainment and links navigation into the intermodal transportation system**.**

2. Identify and implement innovative financing mechanisms to fund navigation infrastructure maintenance and improvements.

3. Deepen ports to accommodate international commerce.

Corps Waterways Have Positive Impact on Economy

Maximum reliability and sustainability of the navigation program are ensuring customer satisfaction, quality projects and a valued and demonstrable return for navigation expenditures**.**

Actions:

1. Streamline identified processes for more efficient delivery of the navigation mission including budget development by watershed, flexibility for regulatory compliance, open communication and partnerships with stakeholders, and project management and execution

2. Increase availability of navigation channels and locks through existing revenue sources (HMTF and IWTF) as well as other innovative financing mechanisms including streamlined processes for collaborative resourcing of funds from other federal and non-federal stakeholders.

NATIONAL ENQUIRER

MORE PHOTOS INSIDE

WORLD EXCLUSIVE

Corps Offers Tools for Comprehensive Water Information

Actions:

Build the Federal Support Toolbox for IWRM.

Build partnerships.

Share data and information, Seek collaboration opportunities.

Breed accountability into information gathering and management.

Outcomes & Outputs:

User-friendly central data portal to supply access to robust information about water resources and the responsibilities and actions of Federal resource agencies.

Greater understanding by States, NGOs, river basin commissions and others about the Federal role in water resources management.

Enhanced collaboration across the Federal agencies for water resources management.

Joint budgets across Federal agencies for shared goals.

Enhanced support to states for water resources development and management.

Website reflecting increasing number of "hits" month after month.

Number of contributors grows by 5% monthly.

Federal partners and states express 85% satisfaction with FSTB.

Joint budgets presented to OMB across Federal agencies to achieve common or aligned goals.

Home Page

Raise awareness of critical infrastructure issues to National level.
Promote and promulgate a national water resources vision.
Enact innovative financing mechanisms and public/private partnerships.
Develop a leadership/education strategy to raise awareness of water needs.

Water Resources Infrastructure Upgraded to "B+"

- Critical water infrastructure is protected or rehabilitated.
- Critical water resources infrastructure delivers planned benefits longer.
- Public-private partnerships to benefit critical infrastructure grow.
- Increase in ratings of infrastructure from D or D- to B+
- Increase in the number of public-private partnerships dedicated to developing water resources infrastructure or protecting critical infrastructure.

THE POLITICO

WRDA 2020 Enacted and Fully Funded Upfront

The President of the United States signed a WRDA authorizing $20 billion of project that will contribute over $100 billion to the economy and will restore key environment resources.

Actions/Steps leading to this event included:

1. Continued implementation of 3-3-3.
2. Regular new starts and resumptions for feasibility studies.
3. Revised and updated guidance and processes for conduct of feasibility studies in planning, engineering, real estate and project management.
4. Full implementation of regional business centers.
5. Continue Planner capability initiatives.

Outcomes:

1. Capable Army planners utilize modern processes, including 3-3-3 to deliver Chief of Engineers Reports to support authorization.
2. Seamless process for new start feasibility studies.
3. USACE Planner training at 90% levels.

4. 60% of Planners certified at top level.
5. CW Policies in Engineering, Real Estate, Project Management and Planning fully revised and integrated.
6. MSCs fully operational as regional business centers and workload moved seamlessly to workforce at the regional and enterprise levels.

Army Times

COLA drop

Key to National Security:

WATER

Actions: Develop a USACE/CW concept of water security based on having robust inventory of water information; Develop the Federal Support Toolbox; Develop and conduct training for managers and employees based on water concept and tools; Liaison with the Army about Water Security.

Outcomes: Enhanced sense of safety based on water security concept and actions and a common understanding about this concept; enhanced skills to keep CW/USACE and America safe.


QUESTIONS ?

Due to increased competition for limited federal discretionary spending now and into the future, as well as increasing complexity of water resource management issues, it is imperative that all funding for water resource management projects, not only federal funds, be used as effectively and efficiently as possible. A watershed or systems budgeting approach will consider the priorities and funding capabilities of federal, tribal, state, and local entities should enable development of improved comprehensive solutions to these contemporary water resource management issues.

DESCRIPTION:

USACE is seeking to transform the Civil Works Budget Development process as one of the four Civil Works Transformation pillars (focus areas). Civil Works budget development transformation seeks to: 1) improve the justification and defense of budget allocations; 2) incorporate integrated water resources management concepts into the budget development framework, as appropriate; 3) implement a watershed budget development process, while continuing to produce a performance-based budget; and 4) communicate transformational budget development processes to both internal and external audiences.

USACE is implementing the Civil Works budget development transformation as a multi-year effort – moving forward to a more top-down, program-based, goal-focused budgeting approach to enable communicating the value of CW program to the Nation. Development of these investment options will include collaboration with and input from community, state, federal, Tribal and non-governmental stakeholders, thereby developing the broad-based support and leverage of all resources for the watershed/system programs, projects, and activities.

CURRENT STATUS:

The initial step was to identify contributions of the Civil Works program towards a set of national priorities/goals and objectives. The second step was to define multi-year program/business line goals, as well as annual program/business line objectives that support the national priorities/goals and objectives. MSCs were directed to develop a pilot “watershed-based budget” within their geographic boundaries, defined as a sustainable, multi-year set of prioritized and performance-based project-level investments. The FY14 MSC pilot watershed/system budget will enable HQUSACE to evaluate different approaches for formulation of future budget development guidance.

COST AND SCHEDULE:

No additional costs have been identified to support these more programmatic and watershed/systems approaches, as USACE continues to move towards more integrated water resource management. The current schedule associated with development of the budget development transformation envisions applying lessons learned in the review of the ongoing pilots into recommendations for improving the development of future Budgets for Administration and Congressional review, when appropriate.

Since 1824, the U.S. Army Corps of Engineers has met the Nation's civilian infrastructure needs, as well as providing for the national defense in keeping with the concept of President Thomas Jefferson, who envisioned a body of engineers in the Army available to take on work of "a civil nature" as well as military work. In the early days, the civil works mission centered on navigation in rivers and harbors as a means to unify the Nation and connect it to world markets – a mission stemming from the commerce clause of the Constitution and subsequent Supreme Court decisions allowing federal regulation of, and improvements on, navigable waters. Throughout the years, successive Congresses and Administrations have assigned more missions, largely related to water, until today the U.S. Army Corps of Engineers touches the lives of nearly every American in a variety of ways – some very visible, some less so, but all enormously important. Among them:

- **Cheaper, cleaner transportation:** The 12,000 miles of waterways and 239 locks maintained by the Corps move one-sixth of the Nation's freight, at a cost in dollars and fuel half that of rail and one-tenth that of trucks – reducing congestion on our highways and railroads, energy use and greenhouse gas emissions.
- **Links to the global marketplace:** USACE maintains 178 major harbors (250,000-plus tons of commerce a year). These handle nearly 1 billion tons in imports and more than half a billion tons in exports, with a total value of more than $1.6 trillion and millions of U.S. jobs that depend on our international trade, plus more than 950 million tons of domestic cargo. USACE also maintains 748 smaller harbors, mostly for recreation, fishing and "harbors of refuge."
- **Flood losses prevented:** Although no dam, levee, floodwall, or other project can entirely eliminate the risks of flooding, since the Corps began its flood risk management work in 1928, every $1 spent on projects has prevented nearly $7 in damages (both adjusted for inflation).
- **Clean, economical energy:** The Corps is the Nation's largest producer of hydropower. The 75 plants at its dams provide nearly one quarter of the Nation's hydroelectric power, or about 3 percent of its total electric supply. In areas of the country where hydropower is abundant, such as the Pacific Northwest, power costs are far lower than average. This renewable energy will be available as long as the sun shines and rain falls, and provides $1.5 billion a year to the Department of Treasury in power sales. There are also 90 non-federal power plants at Corps projects, and USACE is looking for potential additional sites.
- **Outdoor recreation:** The Corps is the Nation's largest provider of outdoor recreation services. Americans make 370 million visits a year to Corps recreation areas at 422 Corps lakes and rivers. Ninety percent of our recreation areas are within 50 miles of a metropolitan area, and the Corps estimates that 10 percent of the U.S. population visit a Corps site at least once each year. These visitors spend $18 billion on trip expenses and durable goods annually, including $8 billion in communities around Corps lakes.
- **Restoration of aquatic ecosystems:** The Corps has taken on massive ecosystem restoration projects, such as the Everglades and Coastal Louisiana.
- **Regulation of waterways and wetlands:** The U.S. Army Corps of Engineers' regulatory program authorities include Section 10 of the Rivers and Harbors Act of 1899 (RHA), Section 404 the Federal Water Pollution Control Act, as amended in 1972 (commonly known as the Clean Water Act), and Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972. Under these authorities, Corps authorization is needed for work performed in, over or under a navigable water of the U.S.; for the discharge of dredged or fill material into waters of the U.S., including jurisdictional wetlands; and for the

transportation of dredged material to the ocean for disposal. In addition to evaluating permit applications for these types of activities, the Corps' regulatory program assists landowners and permit applicants in determining the presence of federally regulated bodies of water on their property. The Corps regulatory program engages on a highly diverse suite of public and private proposals that involve work in or discharge of fill material in waters of the U.S. Evaluations include large-scale traditional and renewable energy projects, public water supply and transportation projects, commercial and residential developments, and mining of critical resources for myriad commercial uses, in addition to numerous small landowner proposals to build driveways, shore protection, and single-family homes. The program has an estimated impact of $220 billion on the nation's economy and through appropriate regulation and compensatory mitigation ensures protection of aquatic resources. In FY 2011, the Corps processed about 63,100 jurisdictional determinations and made decisions on more than 81,000 permit applications.

- **Emergency preparedness and response:** The Corps provides emergency response to natural disasters under Public Law 84-99, which covers flood control and coastal emergencies. It also provides emergency support to other agencies, particularly the Federal Emergency Management Agency (FEMA), under Public Law 93-288 (the Stafford Act) as amended. Under this latter authority, the Corps, in coordination with FEMA, works directly with state authorities in providing temporary repair and construction of roads, bridges, and utilities, temporary shelter, debris removal and demolition, water supply, etc. In 2011, the Corps responded to three times the average number of natural disasters. These included historic floods on the Mississippi and Missouri Rivers, tornadoes in Alabama, Mississippi and Missouri, hurricanes and more. Some 2,400 Corps members deployed to assist with response and recovery efforts.
- **Support to national defense:** About 11,000 Corps civilians have served and supported U.S. reconstruction efforts in Iraq and Afghanistan since 2001. They, in turn, have been supported by thousands of Corps members stateside who provide expert consulting through “reachback” service, and who take up the workload for the deployed employees.

Today, the Corps includes more than 8,000 engineers, 2,000 biological, social and natural scientists and another 13,000 supporting staff dedicated to these civil works missions.

Funding

The regular appropriation for Civil Works activities of the U.S. Army Corps of Engineers in FY 2012 came to $4.997 billion. Of this, $1.48 billion (29 percent) was allocated for flood risk management, $1.83 billion (37 percent) for navigation, $945 million (19 percent) for environmental and regulatory activities, $243 million (5 percent) for recreation, $192 million (4 percent) for hydropower, $119 million (2 percent) for emergency management, and $191 million (4 percent) for other activities. The Civil Works program also received $1.724 billion under the Disaster Relief Appropriation Act of 2012 for repair and rehabilitation of projects affected by the 2011 Floods.

Strategy

The Corps civil works strategy emphasizes safe and resilient infrastructure, sustainable water resources and marine transportation systems and life cycle maintenance of its flood risk management, harbors and inland waterway systems.

As USACE moves forward to budget for future civil works programs, we are seeking to move from just planning individual project solutions to more collaborative systems-based approaches ~~arrangements~~ with other federal, state, tribal, local and non-governmental agencies to research and plan basin-wide or regional sustainable water resources solutions to the spectrum of water problems. At the same time we are improving our ability to plan for reasonably foreseeable changes to water supply, storm patterns and sea level rise that may occur due to climate change and to inject more corporate and private responsibility for the risks encountered in their own decisions to build or invest. Finally, the Corps is moving not only toward more efficient, effective management of its huge inventory of facilities, but also to seek additional financing options ~~funding sources from the users of~~ to support the infrastructure ~~the~~ systems it maintains, including better proportions between the amount necessary to maintain these systems and the amounts contributed by major system users, the use of public-private partnerships, and more efficient systems management.

For the U.S. Army Corps of Engineers (Corps) to continue improving its delivery of quality projects and products for the Nation, we must maintain technical competence and continually assess the methods used to deliver products and services. Maintaining technical competence is especially important and challenging given the global challenges and workload variability.

A key component of insuring delivery of high quality products in an efficient and effective manner is with the use of Methods of Delivery (MOD). The use of MOD will help insure that we continue to develop the appropriate capability and capacity of technical expertise that is sustainable. MOD addresses both the organizational structure and the business processes used to deliver our products and projects. The Corps has historically relied primarily on Districts that provide a full range of services, complemented by contracts through the private sector to deliver our products. Districts are a solid foundation for delivering work when they can maintain needed technical competency and capacity while meeting mission execution requirements. However, there are current and future situations that drive consideration for an enterprise approach to accomplishing some of these efforts.

The Corps currently makes use of various methods of delivery, such as the Centers of Standardization established as part of MILCON Transformation. Other examples include our Centers of Expertise such as the Cost Engineering Center, Planning Centers of Expertise and the Hydroelectric Design Center. As part of our corporate review following Hurricane Katrina, the leadership took a hard look at our technical competencies and our project delivery processes to insure that there is continuous improvement of delivery of quality projects and products. That assessment led to a more formal and strategic approach of evaluating organizational methods of delivery..

DESCRIPTION:

The Methods of Delivery initiative is a deliberate and strategic effort to assess our organization and project delivery processes used on critical and core mission functions, and when appropriate, make adjustments. The overall effectiveness and efficiency of the Corps will be considered in the analyses of potential changes to methods of project delivery; as well as improvements to critical functions such as partner and stakeholder care, cost, quality, and project delivery schedules. The goal is to ensure that the Corps is positioned to deliver high value products, services and infrastructure to the nation in an environment of austere budgets and dynamic workload.

A method of delivery may be regional or national. The delivery system will entail a physical center, at a district location for example, and utilize virtual resources during a transition phase. No changes will be recommended without a deliberate, risk-based assessment of the local and national implications of the change in collaboration with our regional offices. Additionally, teams headed by senior staff have been established at HQUSACE to coordinate efforts, develop processes, and monitor progress of all Civil Works Transformation initiatives.

CURRENT STATUS:

Our method of delivery efforts to date, have focused on three critical areas: Dam Safety production centers, Inland Navigation Design, Deep Draft Navigation Economics, and Energy Sustainable Design/Life Cycle Cost.

At this point in time, each focus area is at different stages of development; however, the intent is to implement some form of design or production center(s) for each within the next six months. The Deep Draft Navigation Planning/Economics Center of expertise is currently operational. The Dam Safety Production Centers were identified this spring and will be operational by October 2012. Each MSC is responsible for a dam safety production center except for the Pacific Ocean Division, who has chosen to partner with the Northwestern Division for a single center within those two regions. Regional Centers for Energy Sustainable Design/Life Cycle Cost have been identified and will be formalized by September 2012. Inland Navigation Design is still in the assessment/planning phase.

COST AND SCHEDULE:
All costs associated with the methods of delivery assessments and implementation will be performed within existing budget appropriations. The implementation is an ongoing long term effort.

SUMMARY

The U.S. Army Corps of Engineers (USACE) Flood Risk Management program is transitioning to focus more broadly on managing both *floodwaters* to reduce the probability of flooding and *floodplains* to reduce the consequences of flooding. The National Flood Risk Management Program (NFRMP) was formalized with implementation guidance to the field in October 2009.

The NFRMP's objective is to foster open and collaborative mitigation planning, response and recovery efforts, both internally within the USACE programs activities and initiatives and externally with our federal, state, local and tribal partners. We achieve this objective by providing the public and decision makers with current and accurate flood risk information at the national, watershed, state, tribal and local levels; identifying and assessing all flood risk reduction infrastructure hazards; and improving public awareness and understanding of flood-related hazards and risk. The NFRMP establishes points of contact in each USACE district, division and its Headquarters.

The NFRMP promotes the concept that flood risk management is a shared responsibility between the various levels of government, the private sector and private citizens, recognizing that the no single agency in federal, state or local government has the authorities or resources needed to manage flood risk alone. Each agency or group has the ability to take different steps to bring down flood risk to themselves and the Nation. The NFRMP enables internal and external collaboration to better manage our Nation's flood risk. The NFRMP promotes an interdependent, life-cycle flood risk management approach that integrates and synchronizes mitigation activities, preparation and training activities, response activities and recovery activities into a holistic suite of solutions and programs

CURRENT ONGOING ACTIVITIES

Silver Jackets Program - This program supports USACE participation on an interagency state-led team in each state with representatives from the state National Flood Insurance Program coordination office, the state hazard mitigation office, Federal Emergency Management Agency (FEMA), and the Corps, at a minimum. Often, no single agency has the complete solution; however each may have one or more pieces to contribute. The Silver Jackets team is the forum where all relevant agencies come together with the state to collaboratively plan and implement that interagency solution. Through partnerships, Silver Jackets optimizes the multi-agency use of federal resources by preventing duplication among agencies and leveraging state / local / Tribal resources, including data / information, talent and funding. There are currently 35 active state teams, while efforts to offer a team to the remaining 15 states are ongoing. In FY2011 and FY2012, the Silver Jackets program initiated a series of pilot projects to demonstrate the benefits and value of the interagency approach.

Federal Interagency Floodplain Management Task Force (FIFM-TF) - The Administration's emphasis on consistent, collaborative and effective government programs, and the need to respond to new economic and environmental challenges has renewed effort to unify the government's

approach to floodplain management. The task force is co-chaired by Honorable Jo-Ellen Darcy, Assistant Secretary of the Army for Civil Works and Mr. Dave Miller, Federal Insurance and Mitigation Administration Administrator. Its purpose is *"to enhance the health, safety, and welfare of the public by reducing flood losses and protecting the natural environment."* The FIFM-TF has completed a work plan, which identifies ten major activities to be undertaken to improve flood risk management in the Nation. The first of these activities, an assessment of federal programs and policies relating to flood risk management, has recently been completed. Based on the findings of this study, along with other recent studies of federal programs and policies, recommendations for policy changes to improve flood risk management are being considered by the FIFM-TF.

Intergovernmental Flood Risk Management Committee - Although this committee is no longer active, the Corps and FEMA intend to continue and broaden this collaborative effort to include other stakeholders and partners to share information regarding floodplain and flood risk management and identify areas of alignment or misalignment among federal and state programs.

Flood Recovery Interagency Task Forces - Three interagency task forces have recently been established after flood events as means to fully engage state and federal agencies in the challenging post-flood recovery process. The Interagency Levee Task Force (ILTF) is in response to the June 2008 flooding centered largely in the Upper Mississippi River Basin and is comprised of representatives from five states and seven federal agencies. The Interagency Recovery Task Force was established in response to the May-June 2011 flooding centered largely in the Lower Mississippi River Basin and is comprised of representatives from seven states and ten federal agencies. The Missouri River Flood Task force was established in response to the October 2011 floods and brought together federal, state, local and tribal entities that cover eight states. The task forces play an integral role in the post flood recovery process for their respective regions and generated many innovative strategies and products to ensure a highly communicative, effective and efficient flood recovery effort.

International Flood Risk Management Activities - USACE participates in activities with other governments to share experiences and further flood risk management capabilities. Recent activities include sponsoring a session at the 2012 World Water Forum on flood risk management solutions suitable for developing countries, publishing a jointly-developed report entitled *"Flood Risk Management Approaches as Being Practiced in Japan, Netherlands, United Kingdom, and United States"* (2011), acting as an international advisor to the government of Japan and the World Bank in documenting lessons learned from the 2011 Great East Japan Earthquake and tsunami, conducting staff exchanges and developing an international levee handbook with a consortium of professionals from six countries.

Flood Risk Management Related to Levees with Vegetation - Three major activities are underway relating to managing vegetation on levees with the goal of reducing flood risk. These activities include efforts by the USACE Engineer Research and Development Center on recent issuance of a report on research into the effects of woody vegetation on levees, and moving forward with a scope of work for collecting case histories and experiences with vegetation throughout USACE. Secondly, a revised system-wide improvement framework (SWIF) policy allowing levee sponsors the opportunity to implement comprehensive interagency approaches to identify solutions while optimizing resources and prioritizing improvements and corrective actions based on the risks they pose has been issued. The SWIP policy was immediately put in use upon issuance. Thirdly, the draft policy for requesting a variance to USACE vegetation management standards was posted for a second time in the Federal Register. Since the completion of the comment period, the National Marine Fisheries Service has requested further discussions at the national level. At this time, issuance of a final vegetation variance policy has been delayed until these discussions and review of the public comments have been completed.

USACE is developing a new strategy to address the challenge of wisely managing its portfolio of aging Civil Works infrastructure and fulfilling our various mission requirements given the emerging tightened budget constraints. Our legacy approach is clearly unsustainable.

The degraded water resources infrastructure has been many decades in the making and is the result of several factors. First, much of the USACE's water resources infrastructure was built during the period of 1930—1980, and many structures have reached or exceeded their design life. Second, operating demands on the USACE's infrastructure have grown and changed dramatically over the last 30 years. Funding available for maintenance, repair, replacement, rehabilitation, and new investments has remained flat in nominal terms and declined in real terms. Third, constrained Federal spending limits how to fully address the challenges of aging infrastructure. Finally, external factors, such as shifting demographic patterns, increasing climate variability, and globalization, are placing more and new demands on an already stressed infrastructure.

DESCRIPTION:
The USACE Infrastructure Strategy will lay out the strategic foundation for long term sustainability of the nation's CW infrastructure. USACE must develop a sustainable portfolio based on integrated water resources management, collaboration with our partners and stakeholders, sustainable funding, and increased efficiency to provide reliable value to the Nation. Key components of this strategy include:

- Life Cycle System/Infrastructure Management and Relevancy – Assure future systems reliability through risk management, alternative financing and funding prioritization shaped by Civil Works planning, engineering and decision making.
- Innovative/Alternative Financing – Provide safe and reliable infrastructure by expanding the current funding/financing available for Water Resource Infrastructure solutions.
- Civil Works Decision Making – Construct decision framework and process that enables a cross-cutting systems and watershed approach, supported by user friendly decision tools
- Strategic Communication – Communicate the Value to the Nation of our infrastructure, and listen to the needs of the stakeholders resulting in a unified understanding and objectives supported by action at all levels.

CURRENT STATUS:
Progress has been made in all four areas listed above. Worldwide research of asset management best practices, innovative financing strategies and applicable opportunities, beta testing of decision making tools, development of strategic communication messages, life cycle infrastructure template development and strategies to determine infrastructure relevancy are efforts in various stages of completion.

COST AND SCHEDULE:
All costs associated with the methods of delivery assessments and implementation will be performed within existing budget appropriations. The implementation is an ongoing long term effort.

Civil Works Planning Modernization

As of: 20 August 2012

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**

Planning Modernization is one of the four pillars (focus areas) of the Civil Works Transformation initiative which addresses all aspects of the USACE Civil Works project delivery cycle. Planning Modernization is focused on improving the delivery of quality planning products in order to make timely and sound decisions regarding our Nation's water resources demands. The modernization emphasizes execution, instills accountability and improves the organizational and operational model regionally and nationally to ensure consistent quality products. The effort will improve planner knowledge and experience through additional mandatory training, professional certification, and an update of planning processes and planning guidance.

DESCRIPTION:
The top four Planning modernization performance priorities are:

- Improve Planning Program Delivery and instill Civil Works wide accountability
  - Goals include aligning the Planning program with National priorities, delivering concise and quality products on time and within budget, rewarding and incentivizing responsive execution, and strengthening collaborative relationships. Key actions include complete reclassification of investigations, continuing resets of old studies, completing high priority planning studies, tracking metrics and assuring accountability, coordinating across all functional areas to improve execution, and working with partners, other agencies & stakeholders to build & foster relationships.
  - USACE recently issued guidance to implement several actions that should help modernize the planning process (http://planning.usace.army.mil/toolbox/library/MemosandLetters/USACECWPlanningCapabilityTraining.pdf). The new planning paradigm is focused on risk-based scoping to define the levels of risk associated with water resources alternatives. This will involve defining the appropriate levels of detail for investigations so that recommendations for authorization can be captured, succinctly documented and completed in a timely manner. This scoping will rely on the current USACE planning fundamentals – ensuring the right level of quality engineering, environmental and economic analysis – and will incorporate appropriate levels of review, with the aim to be more flexible and scalable. Some measures under the modernization efforts include the 3x3x3 rule:
    - All feasibility studies will be scoped with a target goal of completion within three years.
    - The target cost for a feasibility study will be no greater than $3 million.
    - The study team will use all three levels of the vertical team.
    - The target length for the main report of the feasibility study will be 100 pages or less.
    - Any schedule or budget exceeding these guidelines will require Headquarters, USACE approval.
  - The current feasibility study portfolio has been further reduced from 365 to 214 pre-authorization studies.
  - A series of Planning Bulletins (http://planning.usace.army.mil/toolbox/guidance.cfm?Option=Type&BL=None&Type=PB&Sort=Default) and a Planning SMART Guide (http://planning.usace.army.mil/toolbox/smart.cfm) have also been developed and issued.

- Develop a sustainable National & Regional Planning operational and organization model
  - Goals include developing consistent, adaptable and resilient processes to assign highly complex work to the most experienced planners. Key actions include PCX mission analysis, implementation of the Deep Draft Navigation Planning Center of Expertise (PCX) Economics Production Center (February 2012), and enhancing Planning product delivery through regional business centers.

- Improve Planner Knowledge and Experience
  - Goals include building Planning capability to support a transformed Civil Works Program, revitalizing and modernizing training programs across CW functional areas, developing and supporting sustainable Planning career paths and define clear professional standards, enhancing knowledge sharing through the most efficient & effective technologies, and broadening Planner experiences and provide opportunities for challenging and meaningful work. Key actions include developing a comprehensive Planning Community of Practice (PCoP) training and development strategy, continuation of the Planning Associates Program, implementing a Planner Certification Program, developing a rapid-delivery training program, significantly improving the planning website, and utilizing webinars consistently and effectively.
  - The Planning Community of Practice website was first developed in June 2011 and can be found at www.corpsplanning.us
  - Guidance on mandatory Planner Training was issued in March 2012 focusing on accelerated completion of the Planning Corps Curriculum by 2015. Guidance can be found at http://planning.usace.army.mil/toolbox/library/MemosandLetters/USACECWPlanningCapabilityTraining.pdf

- Modernize Planning Guidance and Processes
  - Goals include transforming the current feasibility study process to be more responsive to current water resources needs, revising and refresh all planning guidance, and developing tools, processes and procedures to enable more efficient study delivery. Key actions include implementation of a National Civil Works Pilot Program, applying lessons-learned across all Planning, providing planning support throughout Civil Works, issuing a baseline update of the Planning Guidance Notebook (PGN), updating the review process (EC 1165-2-209 (include App H)), and increasing the number of model agreements (more delegated approvals).

COST AND SCHEDULE:
All costs associated with the planning modernization and implementation will be performed within existing budget appropriations and implementation is a long term effort.

ACCOMPLISHMENTS:
- Issued Feasibility Study Execution Guidance Memorandum
- Reduced Active Feasibility Study Portfolio by One Third
- Resetting Feasibility Studies
- Completed 21 Chief's Reports Post WRDA 2007
- Incorporated Feasibility Study Execution Guidance into Budget Guidance and Corporate Venues for Accountability
- Implement National Civil Works Pilot Program
- Issued Contributed Funds Guidance
- Issued Guidance on Non-Profit Sponsors
- Issued Project Streamlining (Review of Studies by others)
- Planning SMART Manual for Conduct of Feasibility Studies (http://planning.usace.army.mil/toolbox/smart.cfm)
- Reissued Environmental Operating Principles
- Issued Planning Bulletins (http://planning.usace.army.mil/toolbox/guidance.cfm?Option=Type&BL=None&Type=PB&Sort=Default)
- Planning Toolbox Website (www.corpsplanning.us)
  Mandatory Training Guidance for Planners Issued

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The U.S. Army Corps of Engineers (USACE) Regulatory Program authorities include Section 10 of the Rivers and Harbors Act of 1899 (RHA), Section 404 of the Federal Water Pollution Control Act, as amended in 1972 (commonly known as the Clean Water Act (CWA)), and Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972. Under these authorities, Corps authorization is needed for work performed in, over or under a navigable water of the U.S.; for discharge of dredged or fill material into waters of the U.S., including wetlands subject to USACE jurisdiction; and for transportation of dredged material to the ocean for disposal. In addition to evaluating permit applications for these types of activities, the Corps Regulatory Program assists landowners and permit applicants in determining the presence of federally regulated waters on their property. For example, permit actions can include traditional and renewable energy projects, public water supply and transportation projects, commercial and residential developments, mining of critical resources for a myriad of commercial uses, in addition to numerous small landowner proposals to construct driveways, shore protection, and single-family homes. The mission of the Regulatory program is to protect the Nation's aquatic resources, while allowing reasonable development through fair and balanced permit decisions. The program has an estimated impact of $220 billion on the Nation's economy. In FY 2012, the Corps expects to process over 100,000 jurisdictional determinations and permit decisions.

Nationwide Permits

Nationwide and Regional General Permits account for the majority of CWA authorizations. Nationwide Permits (NWPs) are issued by HQUSACE on a national basis every five years for activities that are similar in nature and will have no more than minimal adverse environmental effects, individually or cumulatively. The process for the reauthorization of the NWPs, which involves agency coordination and public comment, began in FY 2011. After completion of interagency coordination, the Office of Management and Budget (OMB) cleared the NWPs and they were published in the *Federal Register* with an effective date of 19 March 2012. Each Corps district also developed and published regional conditions to ensure the NWPs will have no more than minimal adverse effects in their district. The NWPs serve to improve efficiency and effectiveness of the Regulatory program.

Jurisdiction

Supreme Court decisions in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers et al*. (SWANCC) (2001) and *Rapanos v. U.S.* and *Carabell v. U.S.* (*Rapanos-Carabell*) (2006) affected Corps jurisdiction over waters of the United States. USACE and the US Environmental Protection Agency (USEPA) issued joint guidance to the field in 2003 and 2008 respectively regarding implementation of these decisions. In 2011, the agencies proposed guidance that would clarify how waters of the U.S. are identified. The agencies also continue discussions regarding amending their regulations defining “waters of the United States.”

The 1987 Corps of Engineers Wetlands Delineation Manual (1987 Manual) provides the methodology for delineating wetlands for purposes of Clean Water Act §404 jurisdiction. Ten Regional Supplements to the 1987 Manual have been developed to reflect regional differences in wetland characteristics with the last of the Supplements being published in final version in 2012. The 1987 Manual is being updated by a USACE-led interagency team comprised of representatives from USEPA, the Natural Resources Conservation Service (NRCS), and the US Fish and Wildlife Service (USFWS) to clarify its relationship with the Regional

Supplements, to eliminate obsolete information, and to address emerging issues not considered when it was originally written.

Science and Technology

On 11 June 2009, the Corps signed a Memorandum of Understanding (MOU) with USEPA and U.S. Department of the Interior (DOI) titled Implementing the Interagency Action Plan on Appalachian Surface Coal Mining. In this MOU, the agencies committed to stronger environmental review on surface coal mining in Appalachia, and identified assessing cumulative effects as a priority. During FY11, the Regulatory Program developed a cumulative effects analysis (CEA) framework document that includes statutes, regulations and guidance to conduct CEAs. IWR used this framework to develop a CEA tool for assessing aquatic resource impacts in the Appalachian Surface Mining Region. HQ and IWR finalized development of the CEA tool for southern West Virginia in June 2011, and received positive feedback from various non-profits and academia. The CEA tool has been implemented in Huntington, Louisville and Nashville Districts for use in southern WV and eastern KY, and future expansion of the tool to Virginia, northern West Virginia, Tennessee, Ohio and other states within the Appalachian surface coal mining region is planned. This tool is proving to be a valuable asset for our project managers in the districts where it has been implemented.

In July 2010, ERDC published the *Operational Draft of the Regional Guidebook for the Functional Assessment of High Gradient Ephemeral and Intermittent Streams in Western West Virginia and Eastern Kentucky*. This science-based, rapid and repeatable hydrogeomorphic (HGM) protocol is currently being used to assess the function of streams and to support mitigation decisions in West Virginia and Kentucky. Validation of the protocol is currently underway with a final publication date anticipated in March 2013. Pending availability of funds, the protocol will be expanded into other states and into perennial streams in the Appalachian region.

Regulatory Compliance with Infrastructure Executive Order 13604

Regulatory will continue to comply with Executive Order 13604, Improving Performance of Federal Permitting and Review of Infrastructure Projects, and will ensure that identified nationally/regionally significant projects are being evaluated and tracked throughout the Regulatory process in coordinated efforts with other Tribal, federal, state, and local partners. The Regulatory Program ensures efficiency and effectiveness throughout the review of these projects consistent with our regulations, and helps to track these projects using a transparent Dashboard system.

Regulatory Involvement in Domestic Energy Proposals

The Regulatory Program has continued its focus and commitment on processing applications for actions associated with energy proposals, including cooperation with other federal agencies and expediting review while ensuring compliance with laws and regulations. The Program has reviewed actions associated with a wide variety of energy proposals - wind, hydrokinetic (tidal and wave), oil and natural gas exploration, surface coal mining, and solar power. In addition, natural gas proposals including hydraulic fracturing and horizontal drilling in Marcellus Shale, located beneath Pennsylvania, New York, Ohio, West Virginia and adjacent states, and Fayetteville Shale, located beneath Arkansas and adjacent states, have increased dramatically. Regulated activities in jurisdictional waters of the U.S. include the creation of ponds, installation of pipelines, roads, well pads, pumps or intakes in waterways, and damming or diverting streams to create water supply ponds for these activities.

Civil Works Transformation

As of: 20 August 2012

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**

Why Transform the Civil Works Program?

The Civil Works program faces a myriad of challenges which are prompting swift transformation in our business model. To meet current and future challenges and address the water resources needs of our nation, the U.S. Army Corps of Engineers (USACE) has initiated an effort to transform its Civil Works program with the imperative to improve performance and responsiveness; increase customer satisfaction, public trust and confidence; improve readiness; and maintain a competitive edge.

Transformation will promote enhanced capabilities and greater involvement, ownership, concurrence and commitment among internal USACE team members, local sponsors and partners. Shared learning and enhanced understanding of mutual challenges can provide creative alternatives and sources of funding, and important, sustained feedback. It will set a clear direction for the CW program to meet the Nation's current and emerging water resources needs.

Transformation Target Areas

Transformation fosters a better and smarter way of working for the Nation. To deliver the best possible Civil Works products and services to the Nation, USACE needs to …

- Modernize the project ***planning process*.**
- Enhance the ***budget development process*** through a systems-oriented watershed approach, collaboration and innovative financing.
- Evaluate the current and required portfolio of water resources projects through a smart ***infrastructure strategy*** to deliver solutions to water resources problems.
- Improve ***methods of delivery*** to produce and deliver critical products and services through water infrastructure and other water resources solutions.

A New and Modernized Planning Paradigm

- Streamline the project planning process to produce concise Chief's Reports faster and at lower cost.
- Reinforce linkage of planning with USACE functions and organizational elements vertically and horizontally.
- Build risk into assumptions and reduce or manage risk associated with decision options and levels of service.
- Upgrade planning expertise through continual training and updated guidance.
- Use more sophisticated tools and methods to prioritize water resources solutions.

A More Logical and Integrated Budget

- Develop programs and budgets to produce healthy watersheds in measurable terms through a Logic Development Model and sophisticated analytic and reporting tools.
- Integrate goals and priorities across national, regional, and local levels.
- Allocate resources and make tradeoffs to balance CW Business Line outcomes.
- Link performance to Business Lines and national priorities through a holistic systems view to integrated water resources management.
- Budget for a full project life-cycle.
- Include horizontal and vertical teams and external stakeholders to develop budget guidance.
- Seek alternative funding sources and innovative financing options.

A Long-Term Strategy for Infrastructure

- Set three clear decision points for making investment decisions:
    - new starts (planning)
    - new starts (construction)
    - recapitalizing or divesting
- Define and evaluate the value of "critical" infrastructure.
- Set a strategy to sustain, rehabilitate, divest, or repurpose USACE's portfolio of water resources infrastructure.
- Manage assets through their full life cycle using a systems approach.
- Integrate and balance priorities across Civil Works Business Lines.
- Seek innovative financing.

Enhanced Methods of Delivery

- Use a logical process to identify and retain core competencies to ensure high technical quality.
- Streamline business processes and organizational structures.
- Link technical capabilities to desired levels of service and high standards.
- Ensure consistent approaches throughout USACE.
- Improve operational management of USACE water infrastructure.
- Assess how well methods of delivery meet strategic goals and national objectives.
- Enhance and maintain technical skills and competencies to meet current and future demands.
- Reduce risks.

The CW Transformation will produce demonstrable results that matter to USACE team members, water resources stakeholders, and the American public. It will …

- Promote strategic partnerships and alliances.
- Demonstrate leadership and innovation in developing water policy.
- Deliver comprehensive and lasting solutions.
- Expect, represent and communicate high standards of technical excellence.
- Innovatively use and leverage fiscal resources.
- Lead in the development, application, and transfer of technologies.
- Effectively and innovatively operate water resources infrastructure across a broad portfolio of business practices and processes.
- Avoid needless redundancy and over-specialization.
- Make a positive difference for Americans and their communities.

For more information, see www.usace.army.mil, or contact Ada Benavides at ada.benavides@usace.rmy.mil.

Contingency Operations

Leader's Emeritus

COL Tom Smith, USACE G3
Mr Ray Alexander,
Deputy – Office of Homeland Security

13 SEP 2012

US Army Corps of Engineers
BUILDING STRONG®


Midwest Drought


COCOM Support


Kootenai River Basin

Agenda

- Introduction
- Summary of 2011/2012
- Operations
  - ►USACE Authorities
  - ►Stafford Act Response
  - ►Support to DOD
- Initiatives/ Emerging Issues

Emerging USACE Priorities

Defend and Protect our Nation

- ✓ Support the CENTCOM Commander and Ambassador in **winning the current fight.** Support **COCOM Commanders**' security activities around the globe in support of the Chairman's Strategic Direction.
- Support the Army and the Nation in achieving our **energy security and sustainability** goals – reducing energy dependence, increasing energy efficiency, and adopting renewable and alternative energy sources.
- Develop a **USACE 2020** Vision and Implementation Plan by the end of CY 2012 that nests with (or complements) Army 2020.
- Strengthen and improve teamwork in the **Joint Engineer Force** to achieve Joint Force 2020.

Develop and Manage Our Nation's Resources

- **Transform Civil Works** to deliver the best possible products and services to the Nation by:
  - Modernizing the project **planning process**.
  - Working with the Administration, Congress, and our internal team to enhance and refine the **budget development process** through a systems-oriented watershed approach, collaboration, and innovative financing.
  - Evaluating the current and required portfolio of water resources projects through a smart **infrastructure strategy**.
  - Improving **methods of delivery** to produce and deliver critical products and services on schedule.
  - Engaging other governmental and non-governmental partners in working toward **National and Local priorities**.

Design and Transform USACE for the Future

- Build strong people and teams through **leader development** and **talent management**.
- Streamline **USACE Business and Governance processes**.
- Partner with the **Installation Management Command** at all echelons to deliver and maintain enduring installations and contingency basing.
- ✓ Improve **strategic engagement** to build and maintain trust and understanding with customers and teammates .
- ✓ Support the **Engineer Regiment** to ensure 1) the Army learns the proper lessons from war and 2) the Army properly designs, shapes, prepares, and organizes the Engineer Regiment to meet future requirements.
- ✓ Enhance **interagency disaster response and recovery** capability.
- Ensure we can maintain and advance DoD and Army critical enabling technologies.

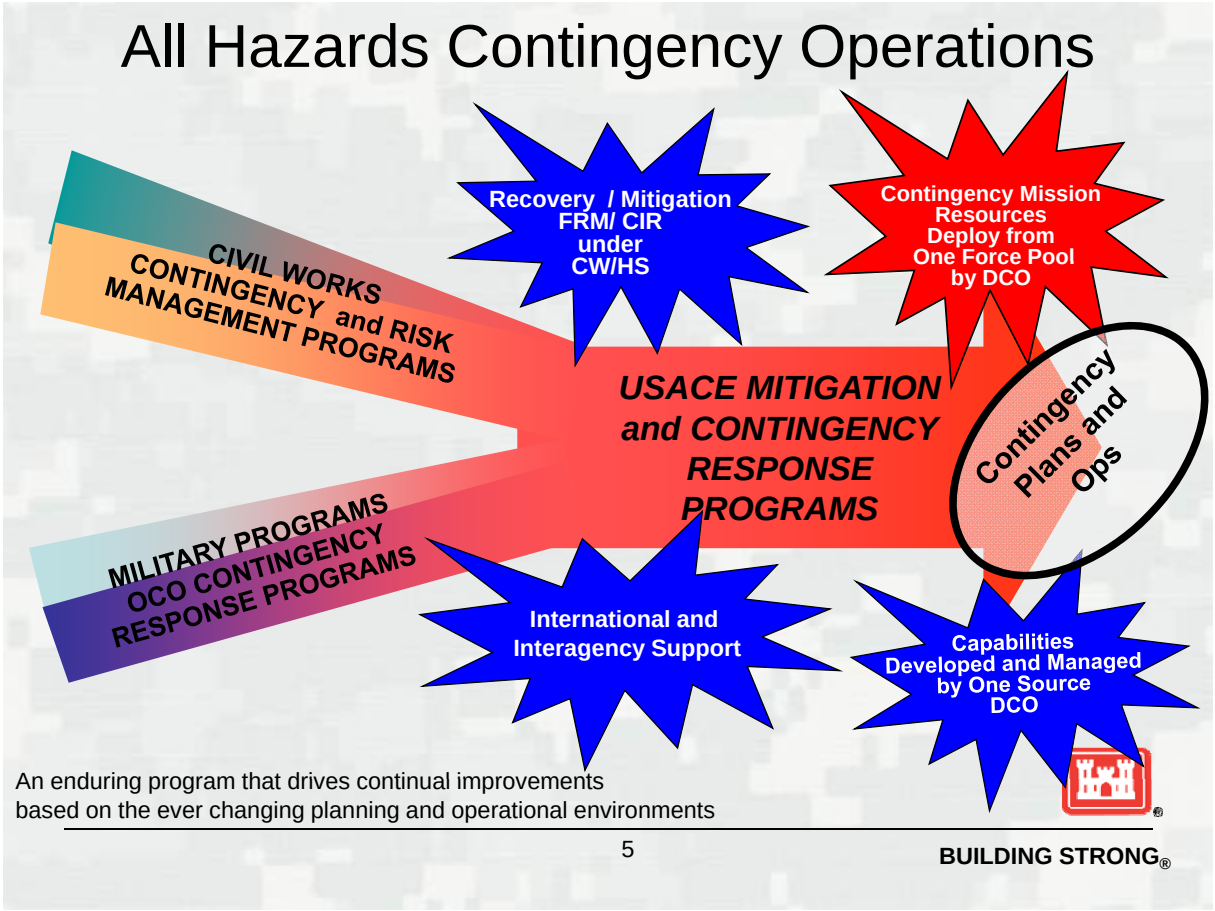
Contingency Operations

One Corps Serving the Army and the Nation

PEACE — Spectrum of USACE Operations — WAR

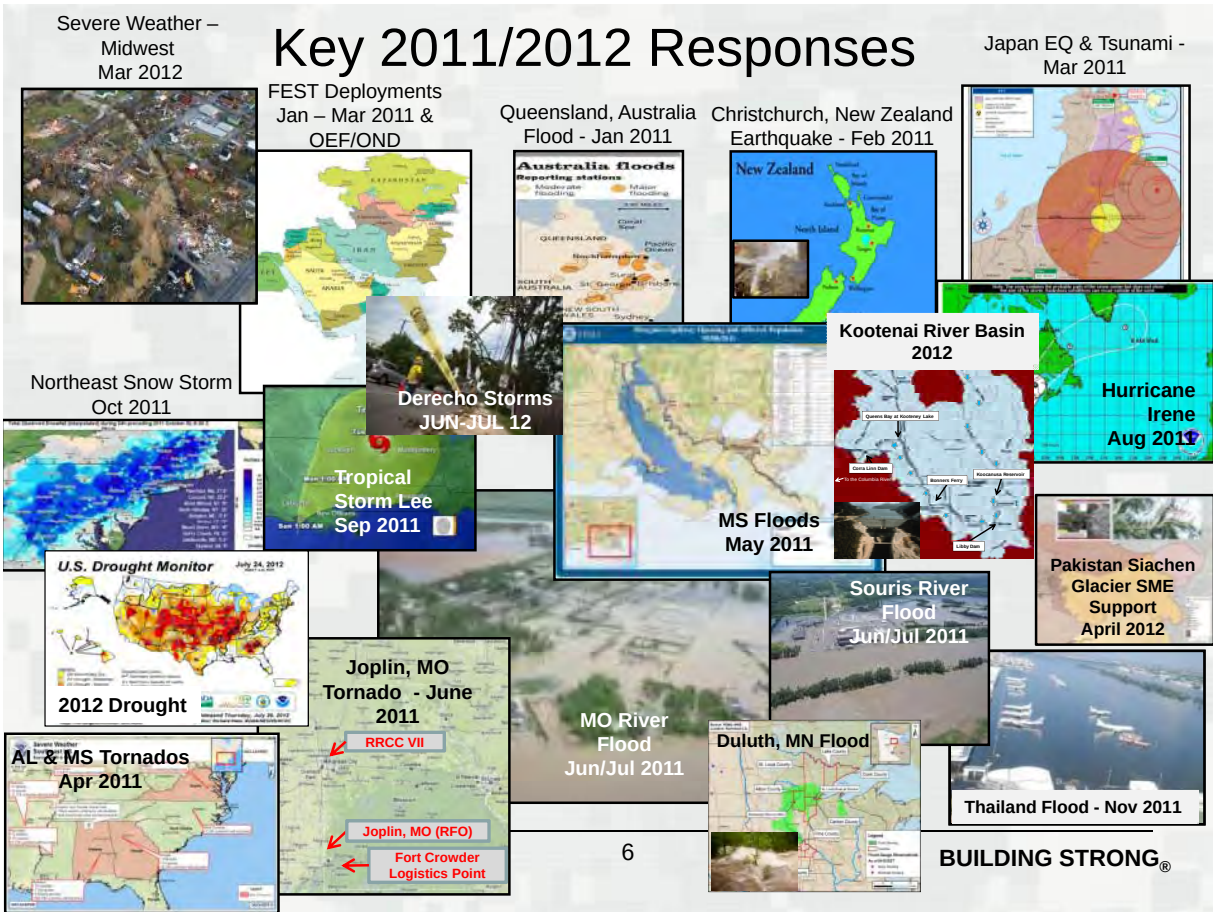
WATER RESOURCES	ENVIRONMENT	INFRASTRUCTURE	DISASTERS	WARFIGHTING
Creating synergy between water resource development and environment	Restoring, managing and and enhancing ecosystems, local and regional	Building and sustaining the critical facilities for military installations and the public	Responding to local, national and global disasters	Providing full spectrum engineering and contingency support

All Hazards Contingency Operations



An enduring program that drives continual improvements based on the ever changing planning and operational environments

Key 2011/2012 Responses



USACE All Hazards Response

U.S. Army Corps of Engineers Civil Authorities

Flood Wall Williamson, Ks

Civil Works Authorities

Reservoir Operations
Dam / Lock Operations

Public Law 84-99
(Flood Control & Coastal Emergency Act of 1955)

Disaster Preparation
Emergency Operations
Rehabilitation
Water Assistance
Advance Measures
Hazard Mitigation

Support to Department of Homeland Security and Federal Emergency Management Agency

Stafford Act PL 93-288
(National Response Framework)

Disaster Preparation
Coordinating Agency ESF #3

Public Works and Engineering
Primary Agency ESF #3
Support Agency ESF #6, ESF #9, ESF #14

Support to the Geographic Combatant Commands

Support to USFOR-A

Key Resolve, UFG

Overseas Operations
Iraq / Afghanistan
Civil - Military Engagement

Domestic Support to NORTHCOM / ARNORTH

Field Force Engineering

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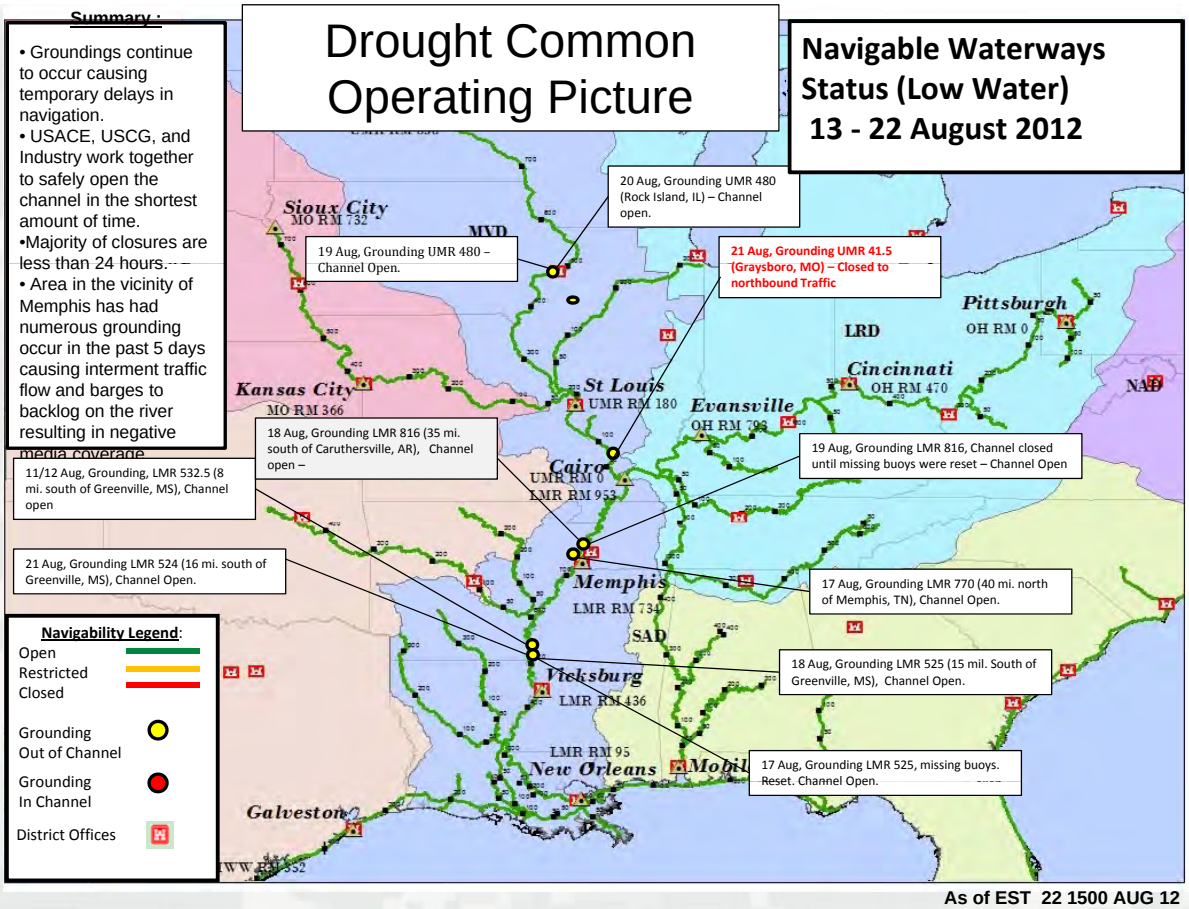
Drought Common Operating Picture

Navigable Waterways Status (Low Water) 13 - 22 August 2012

Summary :

- Groundings continue to occur causing temporary delays in navigation.
- USACE, USCG, and Industry work together to safely open the channel in the shortest amount of time.
- Majority of closures are less than 24 hours.
- Area in the vicinity of Memphis has had numerous grounding occur in the past 5 days causing interment traffic flow and barges to backlog on the river resulting in negative media coverage

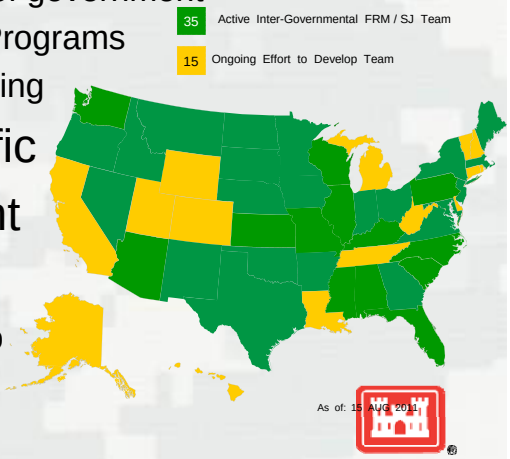


As of EST 22 1500 AUG 12

Silver Jackets

"Operationalizing" Inter-Agency Flood Risk Management

- State-led (voice of our ~~customers~~ Partners)
  - States set priorities for Interagency Federal Support
- Interagency Method of Delivery
  - Collaboration across agencies/levels of government
  - Universal/Tailorable for all Agencies/Programs
  - Leverage resources, talent, data, funding
- Continuous, not project specific
- Life Cycle – Risk Management
- Watershed Perspective
  - State teams facilitate regional, state to state flood risk management



Levee Repair:
2011 Mississippi and Missouri River Floods

2011

Mississippi River:

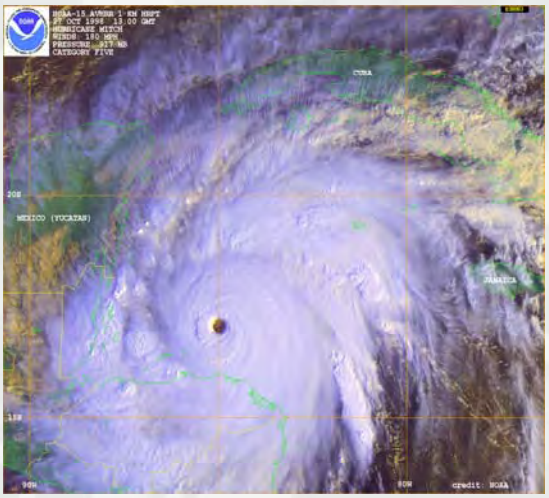
Missouri River:

2012

2012

USACE Authorities and Activities
PL 93-288 "The Stafford Act"

- Defines the Federal Multi-agency Disaster Response System
- Activates to Augment State and Local Capabilities
- Plans and Executes Immediate, Comprehensive Help to Save Lives and Protect Property
- The "National Response Framework" Integrates 27 Federal Agencies & Departments Plus the Red Cross



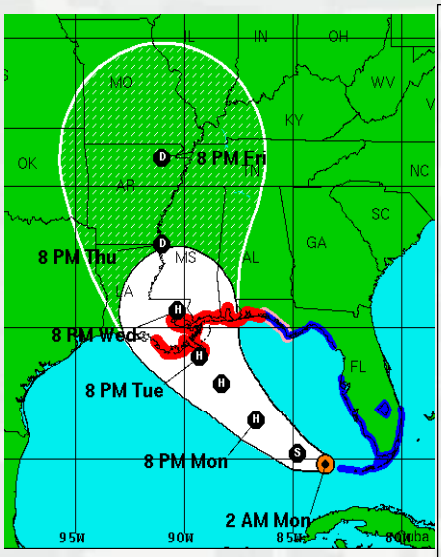
A Federal Partnership for Civil Disaster Crisis Response

Operational Update - Hurricane Isaac – 27 Aug 12

Situation:
- TS Isaac has entered the Gulf of Mexico.
- Major rainfall in southern Florida up to 15 inches total
- Track prediction to make landfall in LA or MS Tuesday/Wednesday as a Hurricane
- Current sustained winds are 55mph with strengthening to a hurricane by late today.
- Governors of LA,MS,AL have declared emergencies

FEMA Activities:
- NRCC will be 24/7 today
- FEMA Regions IV and VI activated
- FEMA conducts a daily VTC at 1230 hours

USACE Activities:
- Conducting daily 0900 briefings and 1500 Conference Calls.
- FEMA VTC at 1230
- NRCC activated (TL & 2 ATL)
- Deploying ESF 3 TLs & ATLs to various nodes (see chart to follow)
- 2 Power PRTs deploying



Division	FCCE	FEMA MA
SAD	$60K	$1.34M
MVD	$110K	$850K
Other	$25K	$28K
TOTAL	$195K	$2.22M

SAD Activities:
- SAD Conference calls scheduled for 0800 daily.
- ESF 3 TL/ATL to Region IV RRCC Atlanta, GA

SAJ Activities:
- EOC Level II Activation.
- SAJ LNO at SEOC, Tallahassee

SAM Activities:
- EOC Level II Activation.
- Emergency Power for MS, SWT PRT
- Mobilizing at ISB Maxwell AFB

MVD Activities:
- MVD on 1500 Conference calls.
- ESF 3 TL/ATL to Region VI RRCC Denton, TX

MVN Activities:
- EOC Level II Activation.
- HSDRRS closures, dependent on weather and coordination with locals
- LGLs begin with Parishes today

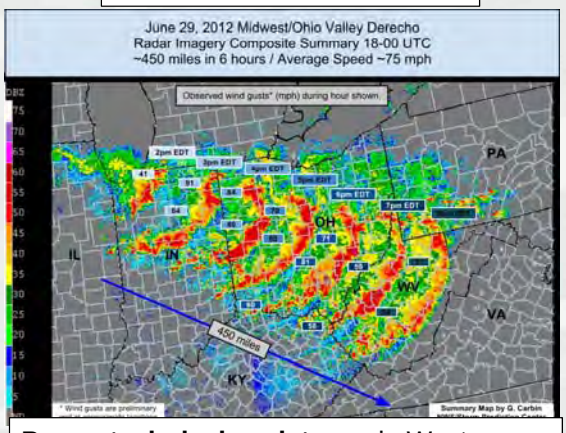
MVK Activities:
- EOC Level II Activation.
- MVK LNO to MEMA today
- MEMA requesting 22k sandbags

Emerging Response Activities:
Capacity Building

Hurricane Irene: September 2011

Debris technical assistance at local level in NY, and New England States

Derecho: June 2012



Power technical assistance in West Virginia ISO WV National Guard installation of generators

COCOM/ASCC Integration

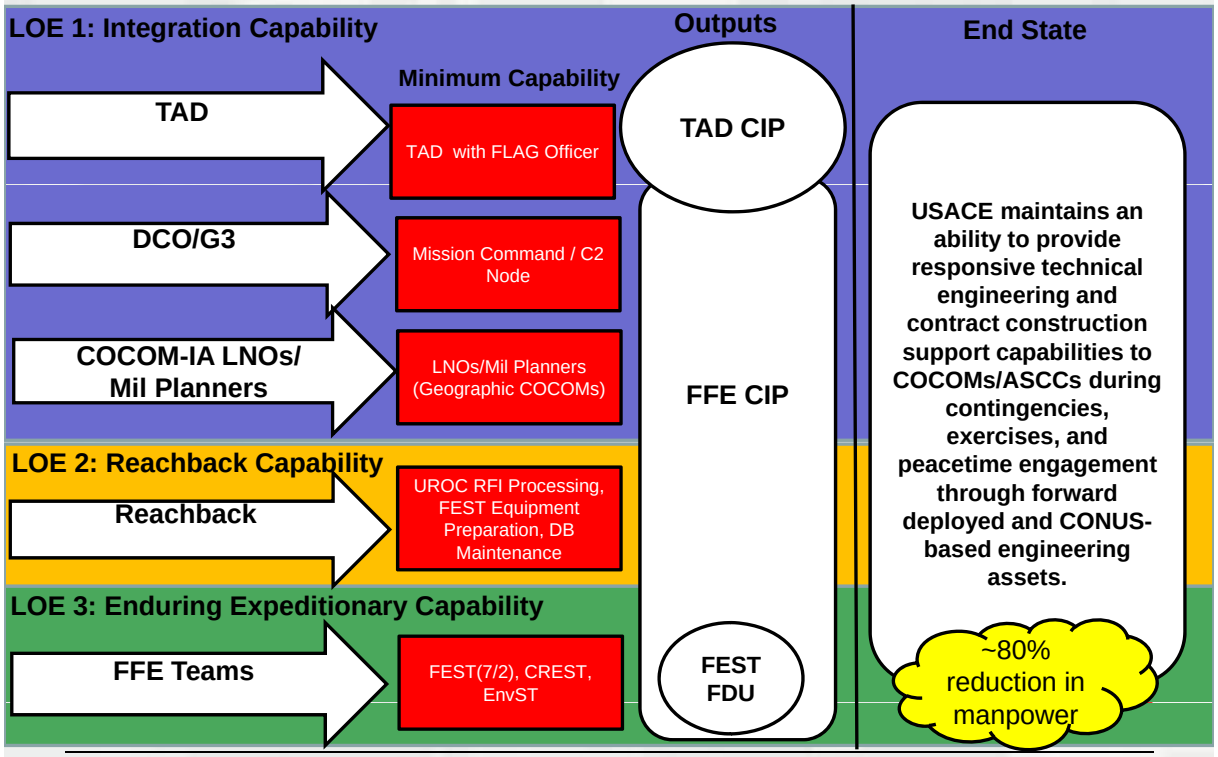
On-going Activities:
- OEF Support:
  - OCO Sourcing;
  - FEST pre-deployment oversight
- TAD-FFE Way Ahead
- LNO Sitreps
- Monthly LNO Tele-conference
- COCOM Integration Portfolio
- COCOM Focused Updates
- COCOM Exercises

Initiatives:
- Engineer Common Operating Picture
- Publish ER codifying roles and responsibilities for COCOM support

Initiatives/Emerging Issues

- TAD/Field Force Engineering Post OCO
- Preparation of Cyber Threat
- National Recovery Framework

Expeditionary Engineering Lines of Effort



Expeditionary Engineering (FFE) 2015

Preserves the core integration capabilities of mission command/C2, forward engagement, readiness, and oversight.

- TAD retained as operating division, DS to CENTCOM
- LNOs and military planners retained at MSCs aligned with geographic COCOMs to provide forward planning and readiness oversight.
- HQ aligns with non-geographic COCOMs.
- DCO/G3 retains mission command, training and readiness oversight, and co planning capability.

Integration

Preserves base level of reachback Capability to:

- provide RFI support
- maintain VTC bridges and satellite
- operate REDi database
- train FFE teams on equipment

Reachback

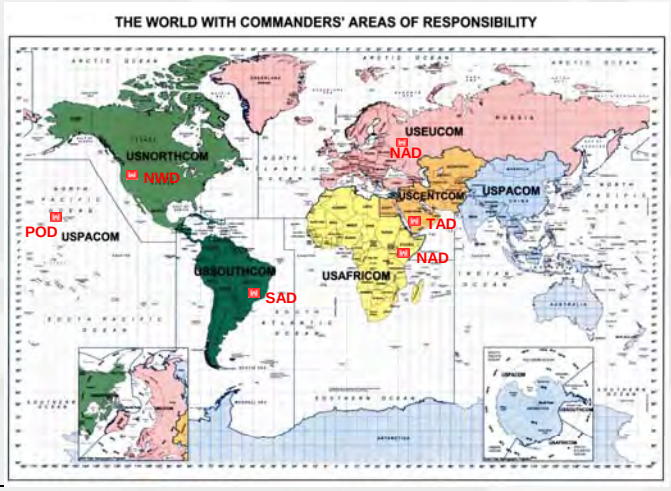
Deployable Teams:

- 8 x FEST-A (Hybrid)
- 8 x EnvST
- 7 x CREST
- Contingency Districts/HQ Aug Cell

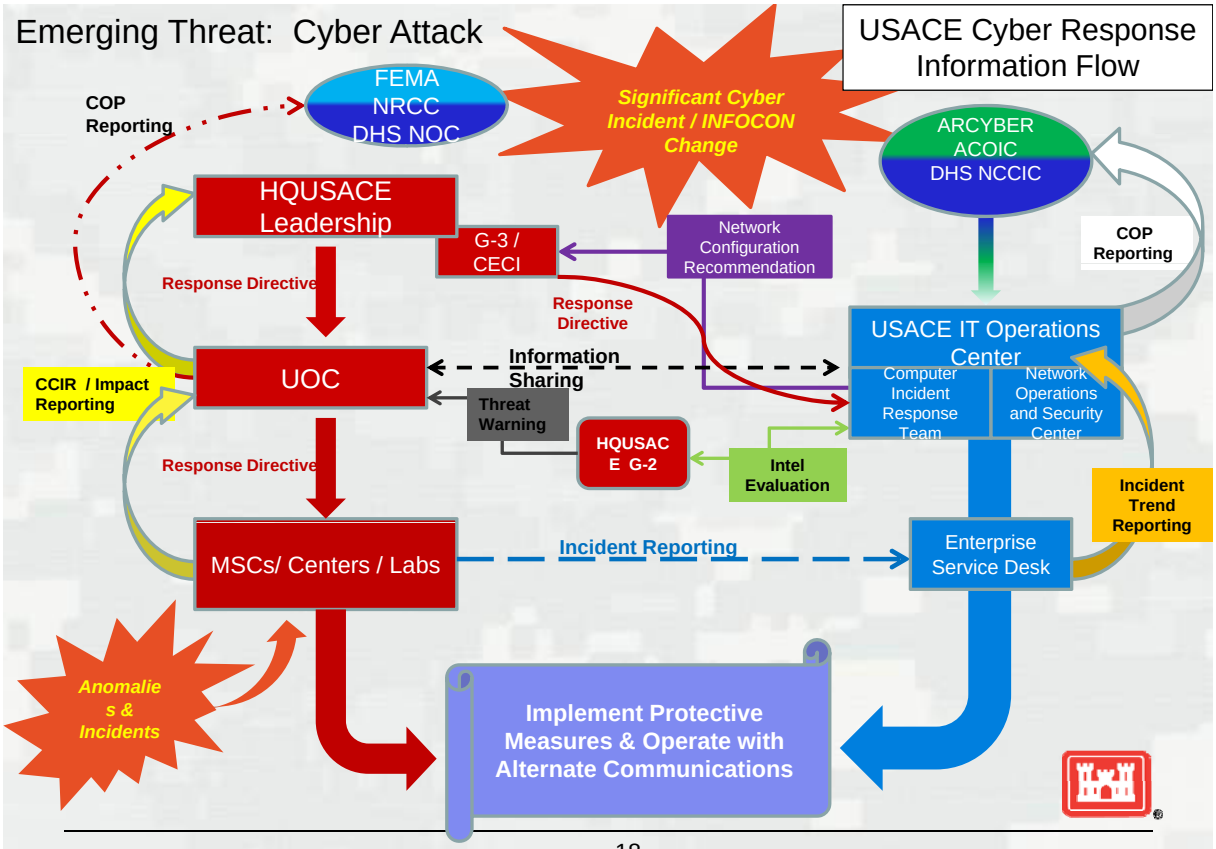
Expeditionary

FFE Concept Plan Attributes:

- Provide technical engineering support to deployed forces
- Provide readiness oversight of Hybrid FEST Teams.
- Embedded planning capability with select COCOM/ASCC
- MSC key role in manning of FEST Teams.
- Base technical engineering reachback capability with support required for significant requirements.

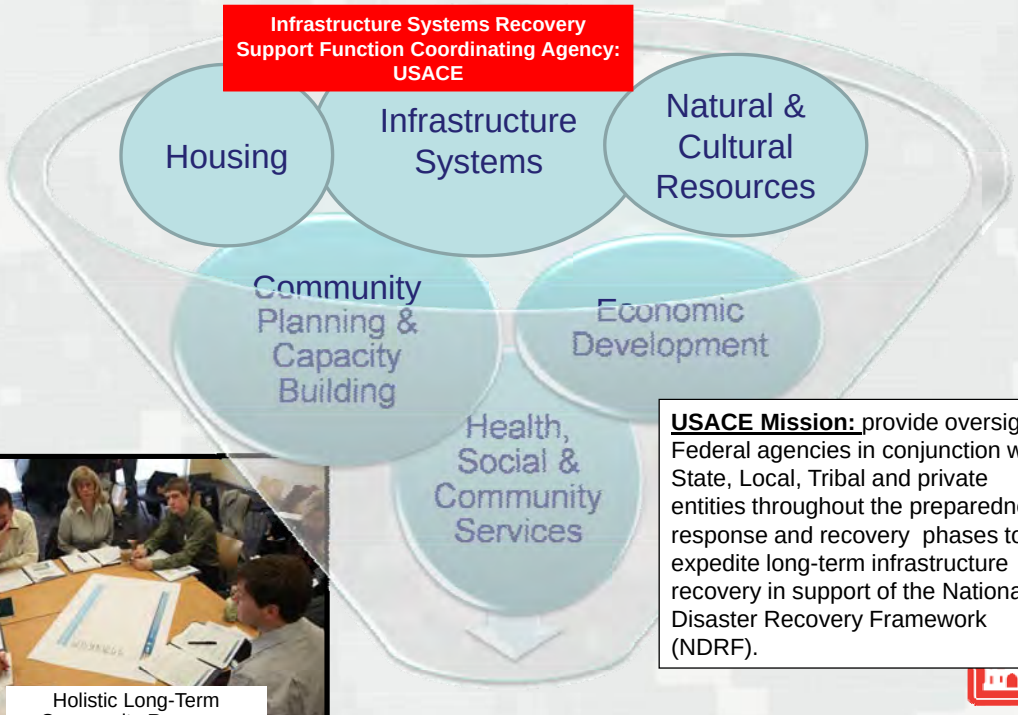


Emerging Threat: Cyber Attack



National Disaster Recovery Framework: Recovery Support Functions

Infrastructure Systems Recovery Support Function Coordinating Agency: USACE



Holistic Long-Term Community Recovery

USACE Mission: provide oversight of Federal agencies in conjunction with State, Local, Tribal and private entities throughout the preparedness, response and recovery phases to expedite long-term infrastructure recovery in support of the National Disaster Recovery Framework (NDRF).

DCO/G3 Major Muscle Moves

Sustain OCO Sourcing

AFCS Program Way Ahead

Implement Army Emergency Management

COCOM Support: Engineer COP

COOP OPLAN/ DEVOLUTION

All Hazards Contingency Response:

Flood Fight, Response, and Recovery:
Koutenai River Basin

Tornado:
Alabama, Joplin, MO

Hurricane Irene, Isaac

Midwest Drought Summer 2012

Derecho July 2012

International Support:
Pakistan Flood
Japan EQ
New Zealand EQ
Thailand Flood

Readiness for International Disaster Response

Transition Expeditionary Engineering Way Ahead (TAD/FFE)

FEST Support to OEF

FFE Training POI Update

Cyber Threat

National Disaster Recovery Framework

Doctrine Development

USACE Force Mgmt Actions: Grade Plate, MP/CW CIP

FEST-A/M Collective Training Enhancement

Research and Development (R&D)

From Science to Solution

Mr. Steve Cary

Deputy Director
USACE R&D

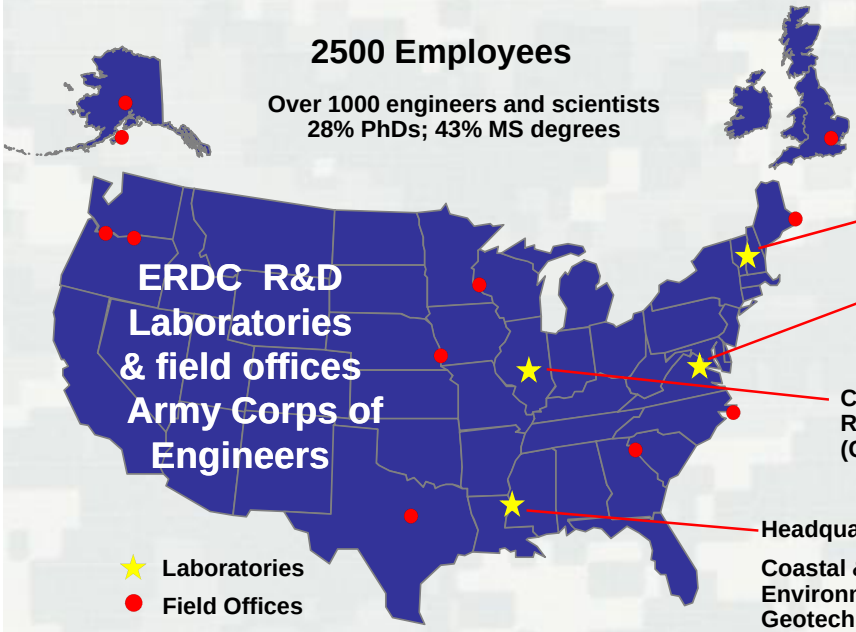
September 2012

US Army Corps of Engineers
BUILDING STRONG®

US Army Engineer Research and Development Center

2500 Employees

Over 1000 engineers and scientists
28% PhDs; 43% MS degrees



Cold Regions Research & Engineering Laboratory (Hanover, NH)

Topographic Engineering Center (Alexandria, VA)

Construction Engineering Research Laboratory (Champaign, IL)

Headquarters (Vicksburg, MS)

Coastal & Hydraulics Laboratory
Environmental Laboratory
Geotechnical & Structures Laboratory
Information Technology Laboratory

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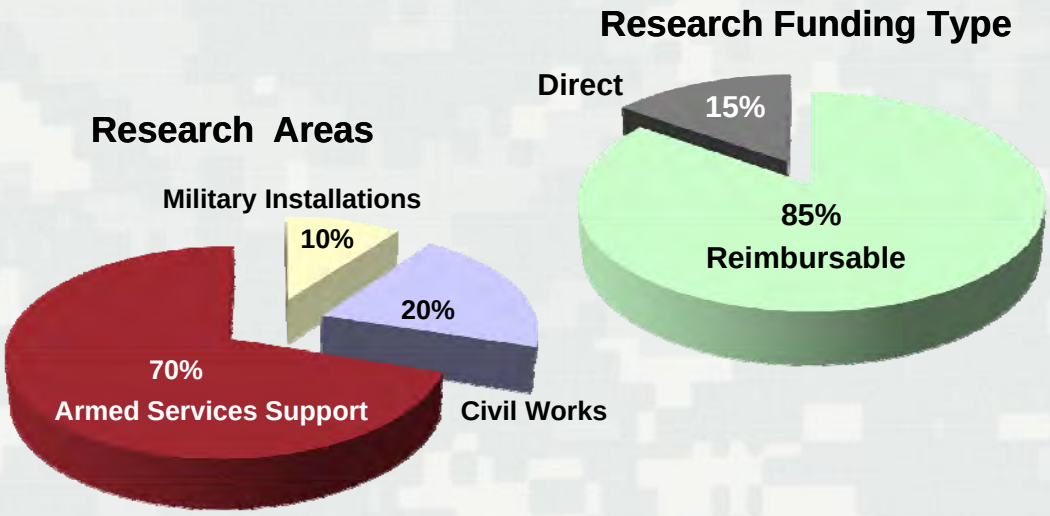
ERDC Program



$2 Billion Total FY 12 Funding

BUILDING STRONG®

Supporting the USACE Campaign Goals

Goal 1

Deliver support to combat, stability, and disaster operations through forward deployed and reach back capabilities.

Goal 2

Deliver enduring and essential water resource solutions through collaboration with partners and stakeholders.

Goal 3

Deliver innovative, resilient, sustainable solutions to the Armed Forces and the Nation.

Goal 4

Build and cultivate a competent, disciplined, and resilient team equipped to deliver high quality solutions.

Empowering the Campaign Plan through R&D

BUILDING STRONG®

Goal 1: Support to Combat, Stability and Disaster Operations

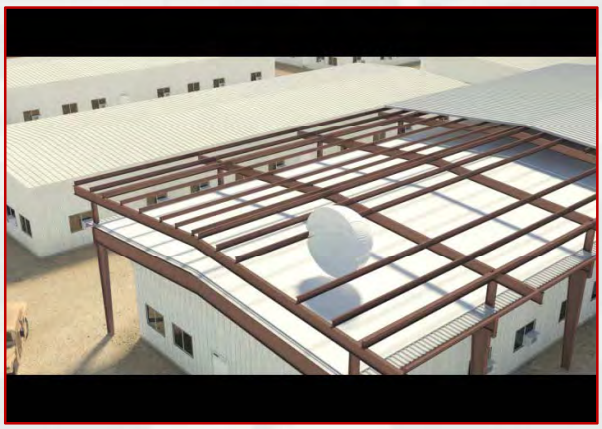


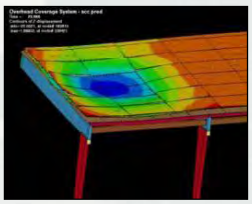



BUILDING STRONG®

Force Protection

Overhead Protection for Emerging Threats




- Overhead Protection defeats blast and fragmentation from rockets and mortars.
- Computational Fluid Dynamics (CFD) to understand complex blast loads
- Finite Element Method (FEM) for dynamic structural response
- Field evaluation to validate structural response & protection

BUILDING STRONG®

Force Protection Technology Transition

"Thanks for your help and support. This is a favored document by NTC and the rotational unit that is currently on the ground and deploying to theater from here."
-Center for Army Lessons Learned (CALL)

AT Planner

Rated 4-stars by over 300 Army Training Network users

Small-Base Leader Entry Control Point Guide

3,300+ Copies Distributed

Modular Protective System
NSN: 5410-01-566-6439, MPS Kit
NSN: 5410-01-566-6493, MPS Starter Kit

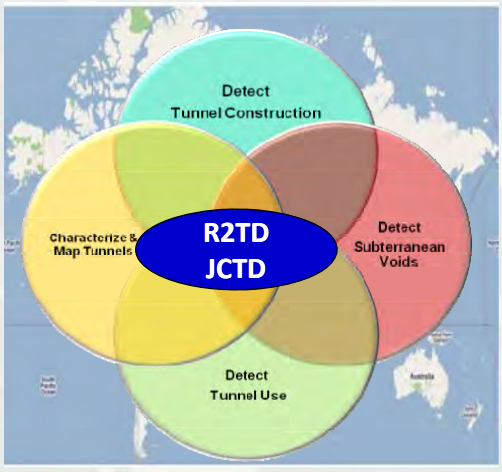
BUILDING STRONG®

Rapid Reaction Tunnel Detection

"Hamas weapons caches are overflowing and receiving a steady revenue licensing illicit tunnels connecting Gaza to Egypt." **- UK Guardian**

Our Response: Develop and transition a capability to detect, classify, exploit, and remediate clandestine, purpose-built tunnels illegally entering the U.S. and foreign battlefields

200 cross-border tunnels found since 1990



"…We have achieved our dream of securing our border."
- MG Fouad Abdel Halim El Sayed
Advisor to the Egyptian Minister of Defense

2011 Army R&D Award

BUILDING STRONG®

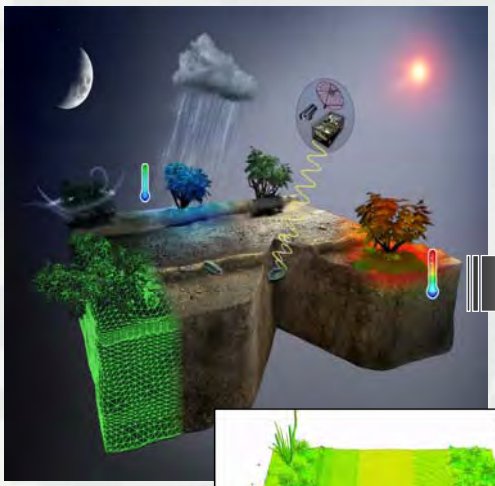
Solutions for IED Detection, Defeat, and Deterrence

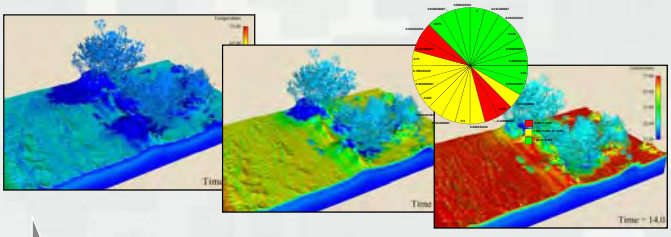
"Hard Impact" anti-blast technology protecting MRAPs from culvert IEDs

BUILDING STRONG®

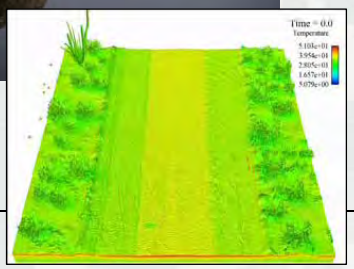
Sensor Development Support

High-fidelity models to predict and improve performance of Current and Future Force sensor systems for surface and near-surface target detection within complex geo-environments





Geometric representations of vegetation indigenous to a specific geo-environment



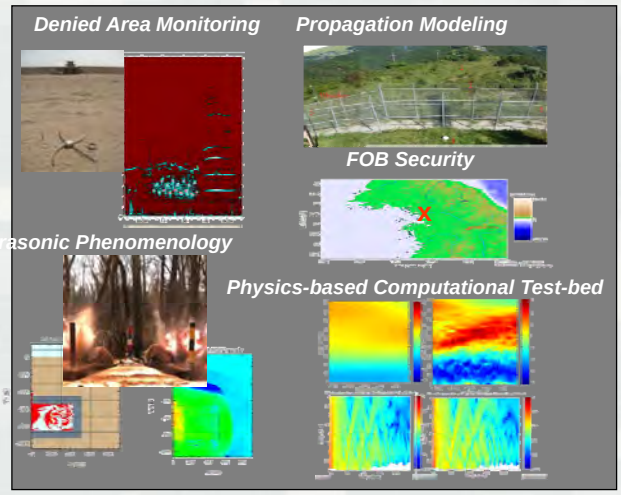
Simulated LADAR Sensors

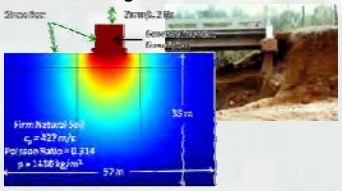
BUILDING STRONG®

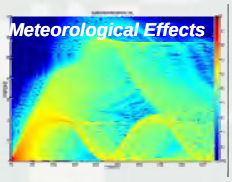
Infrasound

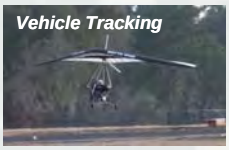
Pioneering use of infrasound signatures to monitor structures of interest such as bridges and dams for damage or capacity.

- **Border Security - Monitoring of vehicle/personnel mobility, cultural activities, and industrial sources**
- **Future Forensic Studies - Providing tactical information where traditional ISR assets for monitoring fail**
- **Regional Assessment of Targets - Capability to numerically simulate complex impulsive and structural infrasonic sources for regional assessment of strategic targets**







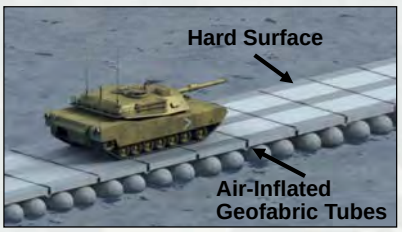


BUILDING STRONG®

Force Projection – Sea Ports

Developed lightweight/rapidly-installed causeway that allows Joint High-Speed Vessel (JHSV) to use austere ports worldwide

Survives 20-ft Waves



Can Traffic M1 Abrams Main Battle Tanks

Defense Logistics Technology Implementation of the Year Award

BUILDING STRONG®

Rapid Open Geospatial User Environment (ROGUE)

Joint Capability Technology Demonstration (JCTD)

- **Improve SOUTHCOM, PACOM, and other COCOM commanders' ability to enhance security and stability activities**
- **Facilitate Theater Engagement Strategies relative to HA/DR operations within a COCOMs AOR**
- **Enhance the free and open flow of geospatial information between HQ elements and Soldiers at the Tactical Edge**

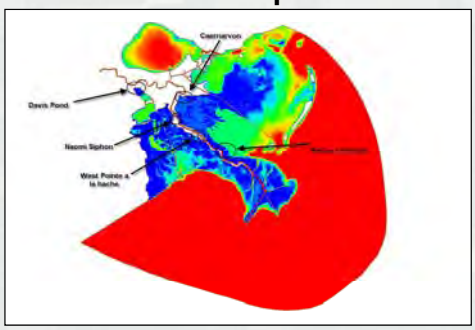
BUILDING STRONG®

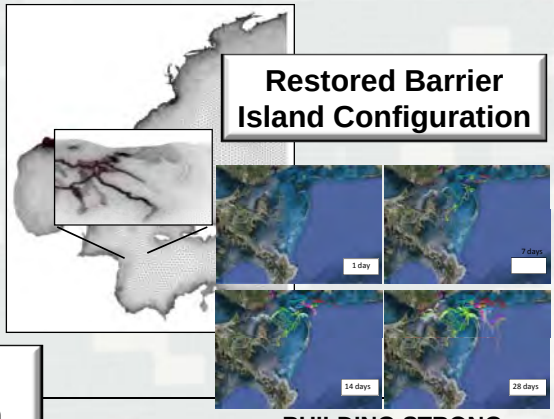
Disaster Response

Portable Lightweight Ubiquitous Gasket (PLUG)

Blue Roof Data Collection

BP Oil Response





Restored Barrier Island Configuration

BUILDING STRONG®

USACE Reach Back Operations Center

200+ kits deployed
encrypted audio/visual data
by commercial satellite

24/7 ERDC Operations

"The [UROC] work being performed at ERDC is saving soldiers in Afghanistan every day."
- COL Rick Kaiser, Commander 20th EN Brigade

1-877-ARMY-ENG
601-634-2439 (Commercial) • 312-446-2439 (DSN)

601-634-3485 (VTC Support) • 312-446-3485 (DSN)

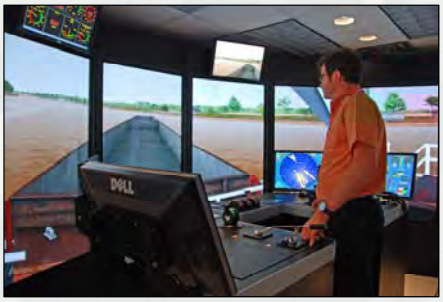
Email: uroc@usace.army.mil
SIPR Email: uroc@usace.army.smil.mil

Warfighter Website: https://ffetraining.usace.army.mil

4000+ Reachback Requests Annually

BUILDING STRONG®

Goal 2: Enduring and Essential Water Resource Solutions



Navigation

Flood and Coastal Storm Damage Reduction

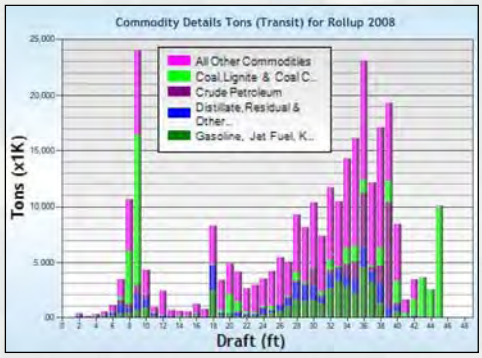
Environment

Regional/Watershed Solutions

BUILDING STRONG®

Advanced Navigation Technologies

Channel Portfolio Tool



Lock Operations Management Application

BUILDING STRONG®

Invasive Species

Swim Performance Studies of Carp for Electrical Barrier Settings

Armored Catfish threatening levees

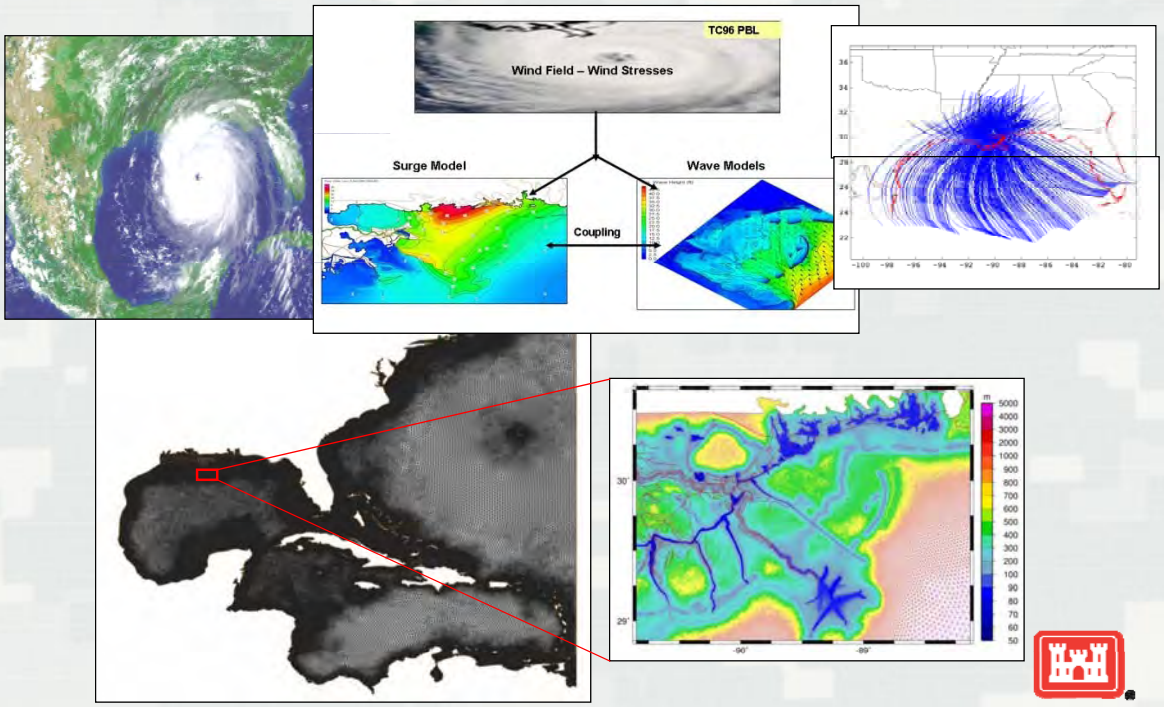
Registered new herbicides with USEPA and developed new use patterns for managing resistant populations.

Chemical/mechanical control followed by restoration in areas affected by Phragmites in Great Lakes Restoration Initiative

Biocontrol Agents

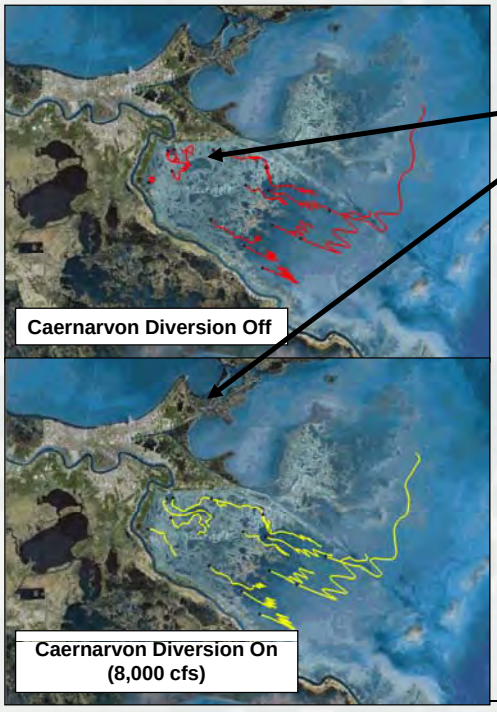
BUILDING STRONG®

CSTORM Model State of the Technology

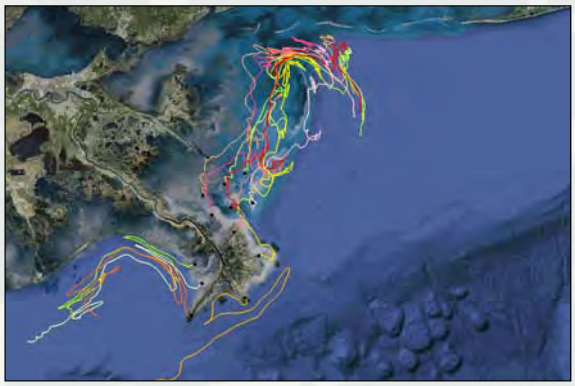


BUILDING STRONG®

SWWRP/ADH Simulations
Caernarvon Diversion: Oil Spill Response



Simulation shows localized effects of increased velocity. Released water travels less than half the distance through the marsh.

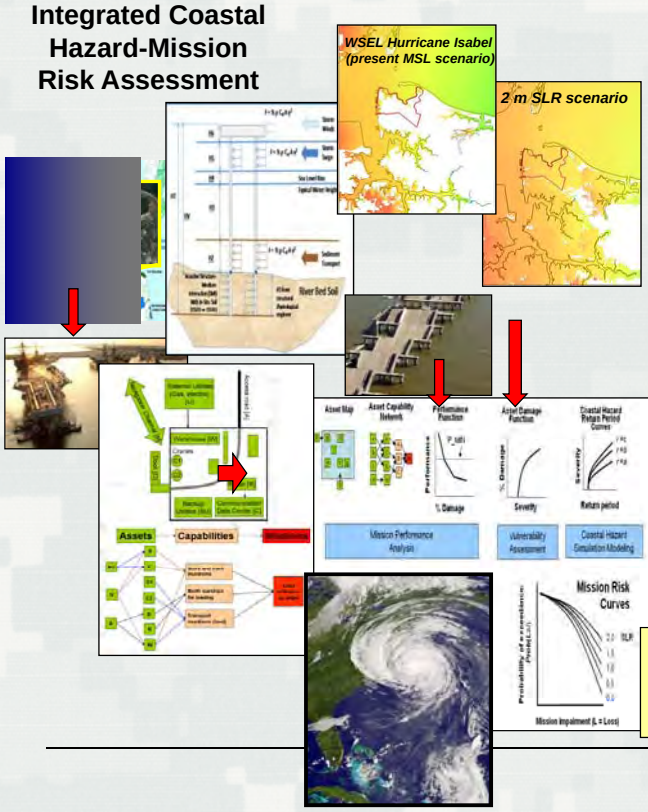


Oil Spill Response
28-day ADCIRC Simulation

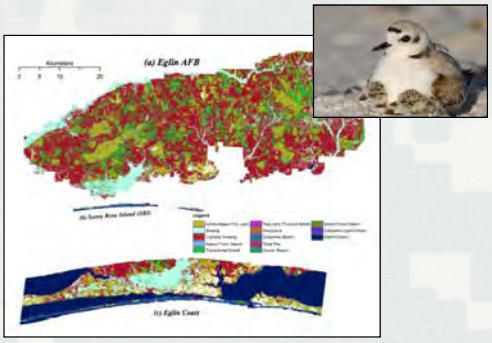
BUILDING STRONG®

Climate Change Studies

Integrated Coastal Hazard-Mission Risk Assessment



T&E Response to Climate Change and Operational Risks to Mission



Identify training windows with low vulnerability risk for biodiversity

Goal : Integrate multi-scale climate, land use, and ecosystem information into a systematic tool set

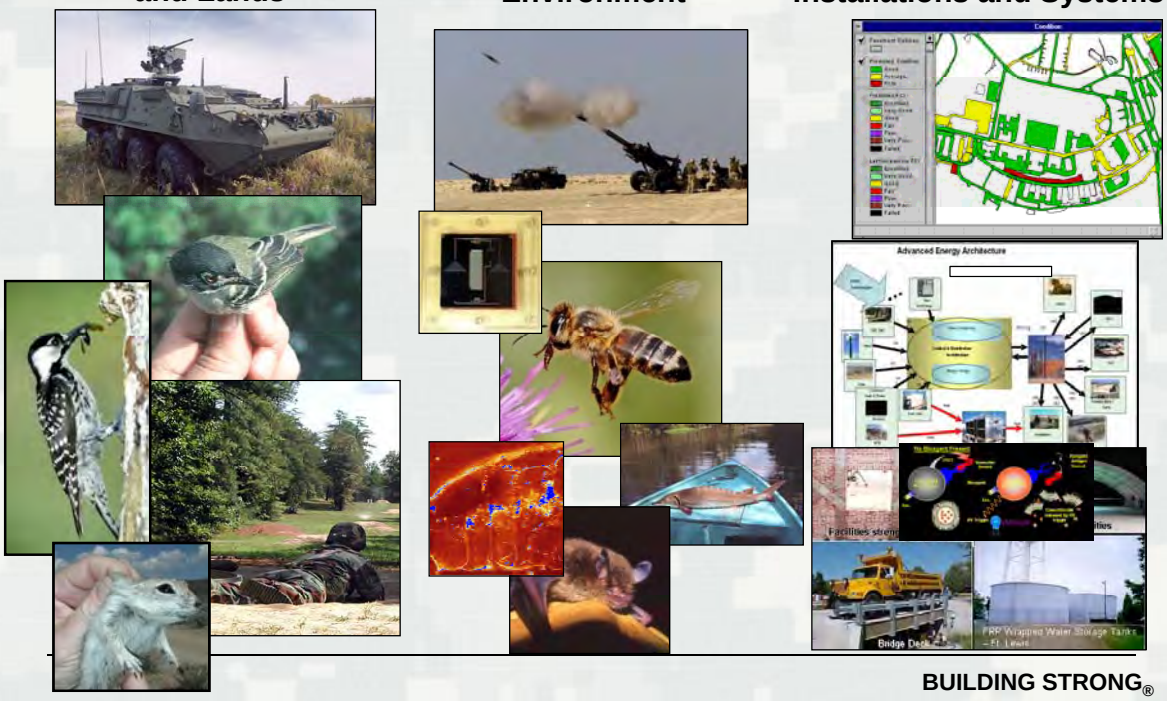
BUILDING STRONG®

Goal 3: Operationalizing Sustainability

Sustainable Ranges and Lands

Materials in the Environment

Adaptive, Resilient Installations and Systems

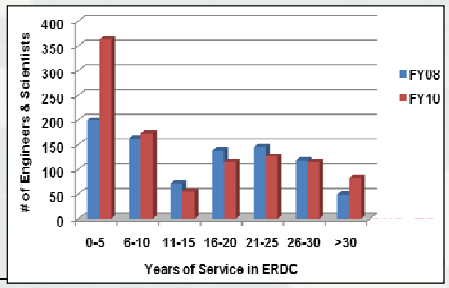


BUILDING STRONG®

Goal 4: Building a Competent Team to Deliver Quality Solutions

Campaign to Renew Ourselves

- 240+ E&S hires in FY10-12 *(avg. GPA 3.61)*
- Performance Mgt /Career Development Coaching for supervisors
- Financial Wellness and Retirement Planning training for workforce
- Over 300 students from 70 universities in 30 states in FY11 student programs
- Extensive STEM student outreach



BUILDING STRONG®

World Class R&D Facilities

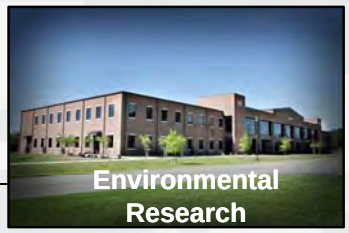
DoD Supercomputer Center
1 of 5 in DoD

Rapid Repair Levee Breach System

Large-Scale Blast Simulation

Hazardous & Toxic Waste Center

Ice Engineering



Knowledge Hub Video Demonstration

BUILDING STRONG®

ERDC

Innovative solutions for a safer, better world

http://www.erdc.usace.army.mil

BUILDING STRONG®

Discussion

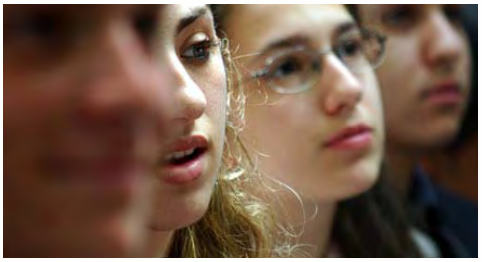
2020 Workforce

Pat McNabb
Deputy Director, Human Resources
HQ USACE
13 September 2012

FUTURE WORK: By 2020

Agency Job Opportunity Announcement

Job Title: Civil Engineer
Department: Department of the Army
Agency:U.S. Army Corps of Engineers
Job Announcement Number:SWGJ12711857JHD



- There will be 104,400 job openings for civil engineers from 2010 to 2020 with 94,000 graduates
- Growth rate in STEM grads from 2010 to 2020 is only 0.8% annually
- U.S.-based employers will need 30 million new college-educated workers in the next decade while only 23 million young adults are expected to graduate
- Leaders will be promoted into positions as much as a decade earlier than previous generations
- Millennial Generation will make up ½ of the workforce by 2014

FUTURE WORK: Changing Work

•Most people don't think they need to be in an office to be productive
•Employees in 2020 workplace will communicate, collaborate, and connect with one another across the globe using the latest form of social media
•83% of hourly paid US workers say flexibility was important when deciding to take their current job
•Increasingly powerful mobile phones are replacing laptops as the main work device; allowing work from anyplace, anywhere

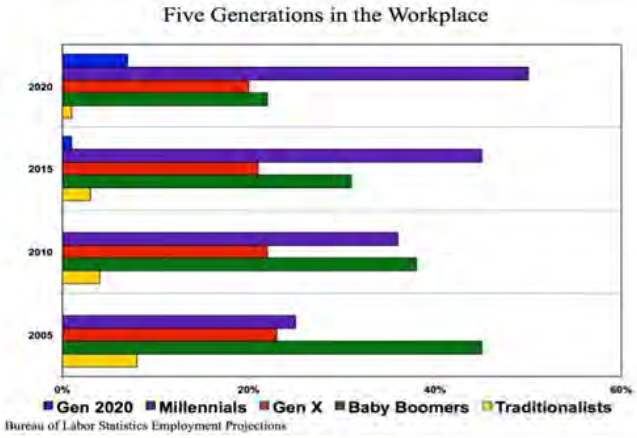
SKILLS FOR 2020 LEADERS

- Collaborative mindset
- Team development
- Tech savvy
- Globally-focused and culturally attuned
- Future-facing

THE DAILY NEWS

January 1, 2020 THE WORLD'S FAVORITE NEWSPAPER - Since 1879

Demographic Shifts in 2020!



By Jeanne C. Meister and Karie Willyerd

Demographic shifts with regard to the age, race and gender of employees across the world mean that the 2020 workplace does not look like the 2010 workplace. In the United States, the 2020 workplace is half female, 63 percent Caucasian (down from 82 percent in 2010), and nearly one-third Hispanic.

FY12-3 Civilian Hiring Stats

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**

USACE is the employer of choice, attracting and retaining disciplined, competent and professional talent, delivering innovative solutions now and into the future.

FY12-3 Beg Strength			FY12-3 End Strength		
Perm	Temp	Total	Perm	Temp	Total
33800	2093	35893	33783	3187	36970

SOURCE: BOXI HQ ACPERS, 201203 (EOM Mar 2012) and 201206 (EOM Jun 2012); USACE Cmd w/USACE ACTEDS; Active Indicator 1 or 2; APPR only

Fill Time

	FY12-3	FY11	FY10
Total Fill Time	74.7	93.20	103.18
Average Days to Fill	38.8	53.21	54.61
Recruit/Fill Actions w/Referral List or Vacancy Announcement	1077	4798	6044

Source: CHRA, 9 July 2012

Closed Recruit/Fill Actions

	FY12-3 R/F New Hires			FY12-3 R/F from w/in USACE			FY12-3 R/F Totals		
FY12-3	PERM	TEMP	TOTAL	PERM	TEMP	TOTAL	PERM	TEMP	TOTAL
April	109	344	453	351	207	558	460	551	1011
May	133	525	658	398	304	702	531	829	1360
June	136	425	561	390	111	501	526	536	1062
Grand Total	**378**	**1294**	**1672**	**1139**	**622**	**1761**	**1517**	**1916**	**3433**

Turnover Rate (T/O = Losses/Beginning Strength)

Overall Turnover Rate	FY12-3 Beg Strength	FY12-3 Losses	FY12-3 T/O Rate	FY11 T/O Rate	FY10 T/O Rate	Non Retirement Turnover Rate	FY12-3 Losses	FY12-3 T/O Rate	FY11 T/O Rate	FY10 T/O Rate
Permanent	33800	668	1.98%	7.53%	7.07%	Permanent	330	0.98%	4.01%	3.98%
Temporary	2093	354	16.91%	81.60%	91.98%	Temporary	354	16.91%	81.39%	91.69%
Total	**35893**	**1022**	**2.85%**	**13.20%**	**13.69%**	**Total**	**684**	**1.91%**	**9.93%**	**10.83%**

Non-Retirement/Retirement Permanent Turnover Rates

Non-Retirement/ Retirement	FY12-3	FY12-2	FY12-1	FY11-4	FY11-3	FY11-2	FY11-1	FY11	FY10	FY09
Non-Retirement	0.98%	0.91%	0.88%	1.11%	0.96%	0.99%	0.95%	4.01%	3.98%	3.97%
Retirement	1.00%	0.64%	1.39%	0.88%	0.75%	0.84%	1.04%	3.52%	3.08%	3.29%
Grand Total	**1.98%**	**1.55%**	**2.27%**	**1.99%**	**1.71%**	**1.82%**	**2.00%**	**7.53%**	**7.07%**	**7.26%**

Note: Turnover Rate = Losses / Beginning Strength; Beginning Strength: Appropriated Fund, Active Indicator 1,2 only; includes ACTEDS Interns; Source: BOXI HQ ACPERS; Losses: Appropriated Fund Losses; does not include losses from USACE to ACTEDS; Source: BOXI Productivity

Last Updated: 9 July 2012

Retention Rates

Retention of FY09 New Hires as of 30 June 2012 (on board after 34-45 months):

Series	Perm	On-Board 30Jun12	% Retained	Series	Perm	On-Board 30Jun12	% Retained
Gen Nat Res Mgt and Bio Sci (401)	222	185	83.33%	Contracting* (1102)	270	160	59.26%
Eng Tech* (802)	150	119	79.33%	Realty* (1170)	71	55	77.46%
Construction Control Tech (809)	204	148	72.55%	Lock & Dam* (5426)	87	72	82.76%
Civil Eng* (810)	971	821	84.55%	Non-MCOs	2586	1712	66.20%
Mechanical Eng* (830)	146	117	80.14%	**Grand Total**	**4804**	**3464**	**72.11%**
Electrical Eng* (850)	97	75	77.32%	*Mission Critical Occupations (MCOs)			

Note: Retained percentage calculated from comparison of on board USACE employees and USACE ACTEDS (BOXI HQ ACPERS) to closed recruit fill actions (BOXI Productivity)

Retention of FY10 New Hires as of 30 June 2012 (on board after 22-33 months):

Series	Perm	On-Board 30Jun12	% Retained	Series	Perm	On-Board 30Jun12	% Retained
Gen Nat Res Mgt and Bio Sci*(401)	114	112	98.25%	Contracting* (1102)	234	155	66.24%
Eng Tech* (802)	106	105	99.06%	Realty* (1170)	36	31	86.11%
Construction Control Tech* (809)	110	109	99.09%	Lock & Dam* (5426)	76	64	84.21%
Civil Eng* (810)	520	503	96.73%	Non-MCOs	2097	1443	68.81%
Mechanical Eng* (830)	97	93	95.88%	**Grand Total**	**3525**	**2689**	**76.28%**
Electrical Eng* (850)	75	74	98.67%	*Mission Critical Occupations (MCOs)			

Retention of FY11 New Hires as of 30 June 2012 (on board after 9-21 months):

Series	Perm	On-Board 30Jun12	% Retained	Series	Perm	On-Board 30Jun12	% Retained
Gen Nat Res Mgt and Bio Sci*(401)	53	50	94.34%	Contracting* (1102)	153	125	81.70%
Eng Tech* (802)	69	61	88.41%	Realty* (1170)	24	20	83.33%
Construction Control Tech* (809)	47	39	82.98%	Lock & Dam* (5426)	36	29	80.56%
Civil Eng* (810)	322	300	93.17%	Non-MCOs	1346	1105	82.10%
Mechanical Eng* (830)	38	34	89.47%	**Grand Total**	**2138**	**1805**	**84.42%**
Electrical Eng* (850)	50	42	84.00%	*Mission Critical Occupations (MCOs)			

Note: Retained percentage calculated from comparison of on board USACE employees and USACE ACTEDS (BOXI HQ ACPERS) to FYXX closed recruit fill new hire actions (BOXI Productivity)

MCO* Turnover Rates										
	FY12-3 Beginning Strength			FY12-3 Losses			Permanent T/O Rate			
Series (MCOs)	**Perm**	**Temp**	**Total**	**Perm**	**Temp**	**Total**	**FY12-3**	**FY11**	**FY10**	**FY09**
Gen Nat Res Mgt and Bio Sci (401)	2705	44	2749	40	6	46	1.48%	4.46%	4.22%	4.08%
Eng Tech (802)	1472	177	1649	24	41	65	1.63%	7.90%	7.40%	6.74%
Construction Control Tech (809)	1024	158	1182	24	24	48	2.34%	9.80%	7.20%	8.11%
Civil Eng (810)	5973	281	6254	101	34	135	1.69%	5.53%	3.75%	4.47%
Mechanical Eng (830)	799	26	825	11	7	18	1.38%	5.41%	3.66%	5.72%
Electrical Eng (850)	647	18	665	14	3	17	2.16%	5.83%	6.19%	6.05%
Contracting (1102)	1220	20	1240	34	3	37	2.79%	14.36%	14.36%	16.16%
Realty (1170)	605	61	666	12	10	22	1.98%	6.33%	7.13%	9.14%
Lock & Dam (5426)	1145	5	1150	18	1	19	1.57%	6.27%	7.04%	6.14%
MCO Total	**15590**	**790**	**16380**	**278**	**129**	**407**	**1.78%**	**6.62%**	**5.69%**	**6.15%**
Non-MCO	18210	1303	19513	390	225	615	2.14%	8.30%	8.22%	8.14%
Grand Total	**33800**	**2093**	**35893**	**668**	**354**	**1022**	**1.98%**	**7.53%**	**7.07%**	**7.26%**

*Mission Critical Occupation. NOTE: Highlighted turnover rates are higher than USACE FY overall turnover rate

Note: Turnover Rate (T/O) = Losses / Beginning Strength; Beginning Strength: Appropriated Fund, Active Indicator 1,2 only; includes ACTEDS Interns; Source: BOXI HQ ACPERS; Losses: Appropriated Fund Losses; does not include losses from USACE to ACTEDS; Source: BOXI Productivity

FY12 Civilian Demographics

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**

STRENGTH	Count	% of Workforce
Permanent Tenure	34350	92.96%
Temporary Tenure	2603	7.04%
Grand Total	**36953**	**100.00%**
GENDER		
Female	11997	32.47%
Male	24956	67.53%
GENERATION		
Traditionalist (1900-1945)	1104	2.99%
Baby Boomers (1946-1964)	19496	52.76%
Generation X (1965-1981)	11802	31.94%
Millennium (1982-2000)	4551	12.32%

EDUCATION LEVEL	Count	% of Workforce
Less than High School	240	0.65%
High School	9767	26.43%
High School Plus	6953	18.82%
College	14134	38.25%
Masters	5126	13.87%
Doctorate	732	1.98%
AVERAGE AGE	46	

DIVERSITY	Count	% of Workforce
American Indian	358	0.97%
Asian	1504	4.07%
Black or African American	3760	10.18%
Hispanic	1043	2.82%
Multiracial	722	1.95%
Native Hawaiian or Pacific Islander	101	0.27%
White	29465	79.74%

Occupation	Count	% of Workforce
Gen Nat Res Mgt and Bio Sc (401)*	2776	7.51%
Engineering Technical (802)*	1721	4.66%
Constr Control Tech (809)*	1242	3.36%
Civil Engineering (810)*	6394	17.30%
Mechanical Engineering (830)*	845	2.29%
Electrical Engineering (850)*	681	1.84%

Occupation	Count	% of Workforce
Contracting (1102)*	1218	3.30%
Realty (1170)*	718	1.94%
Lock & Dam Operator (5426)*	1203	3.26%
MCO Total	16798	45.46%
Non MCOs	20155	54.54%

*Mission Critical Occupations (MCOs)

VETERANS PREFERENCE	Count	% of Workforce
5 Point Pref*	6284	17.01%
10 Point Pref**	46	0.12%
Disabled Veteran	2459	6.65%
No Preference	28164	76.22%

RETIREMENT ELIGIBILITY***	Count	% of Workforce
Optional	6796	18.58%
Early	7920	21.65%
Not Eligible	21858	59.76%

***retrieved from WASS 201109 (EOM Sep 11)

* Honorably-discharged veteran who served in a war or designated conflict ** Spouse/widow/widower/mother of veteran with service-related disability

SOURCES: BOXI HQ ACPERS 201109 (30Sep11) Active / WASS 201109 US Direct Hire Active last updated: 6 Dec 2011

Projected FY12 Losses	Perm	Temp	Grand Total	Gen Nat Res Mgt and Bio Sc (401)	Eng Tech (802)	Constr Control Tech (809)	Civil Eng (810)	Mech Eng (830)	Elec Eng (850)	Con-tracting (1102)	Realty (1170)	Lock & Dam (5426)	Non-MCO 08XX	All Others
Involuntary Seps	70	5	**75**	5	5	7	8	1	1	2	1	2	2	41
Non-Sep Losses	1014	876	**1890**	35	206	52	210	29	28	76	33	13	211	997
Retirements	934	6	**940**	54	62	26	114	9	11	33	20	49	39	523
Voluntary Seps	818	2091	**2909**	69	298	87	194	25	23	75	28	25	101	1984
Grand Total	**2836**	**2978**	**5814**	**163**	**571**	**172**	**526**	**64**	**63**	**186**	**82**	**89**	**353**	**3545**
Note: CIVFORS No Goal Forecast with projection start date of 10-01-2011; Non-Sep losses include movement out of USACE to another Army organization														

Projected FY12 Recruitment Goal	Gen Nat Res Mgt and Bio Sc (401)	Eng Tech (802)	Constr Control Tech (809)	Civil Eng (810)	Mech Eng (830)	Elec Eng (850)	Con-tracting (1102)	Realty (1170)	Lock & Dam (5426)	Non-MCO 08XX	All Others	Grand Total
Projected FY12 Strength Increase*	20	13	9	47	6	5	9	5	9	14	132	269
Projected FY12 Losses**	163	571	172	526	64	63	186	82	89	353	3545	5814
Projected FY12 Recruitment Goal	**183**	**584**	**181**	**573**	**70**	**68**	**195**	**87**	**98**	**367**	**3677**	**6083**
*Projected FY12 Strength Increase calculated using increase of 269 from FY11 Final FTE Allocation of 35039 to FY12 final FTE Allocation of 35308												
**Projected FY12 Losses calculated using CIVFORS No Goal Forecast with projection start date of 10-01-2011												

USACE Acquisition Environment

Mr. Stuart A. Hazlett
Director of Contracting

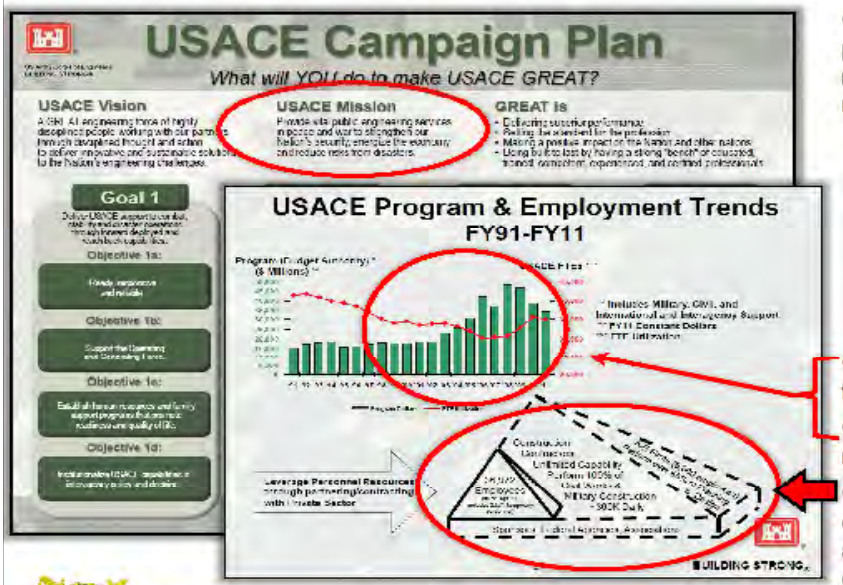
13 Sep 2012

US Army Corps of Engineers
BUILDING STRONG®

Department of the Army Inspector General - INSPECTIONS DIVISION

USACE Acquisition Environment

U.S. ARMY



- 2001-2011: Enormous pressures on USACE to execute major acquisitions beyond normal workload.
  - ➢ Katrina Response (2005)
  - ➢ Louisiana Flood Protection (2006-2010)
  - ➢ Base Realignment and Closure (2005-2011)
  - ➢ American Recovery and Reinvestment Act (2009-2011)
  - ➢ Support to Afghanistan and Iraq (2001-Present)
- USACE budgets almost tripled from 2002 to 2009.
- USACE's workforce remained relatively constant.
- To meet increased mission demand, USACE acquired additional organizational capability.

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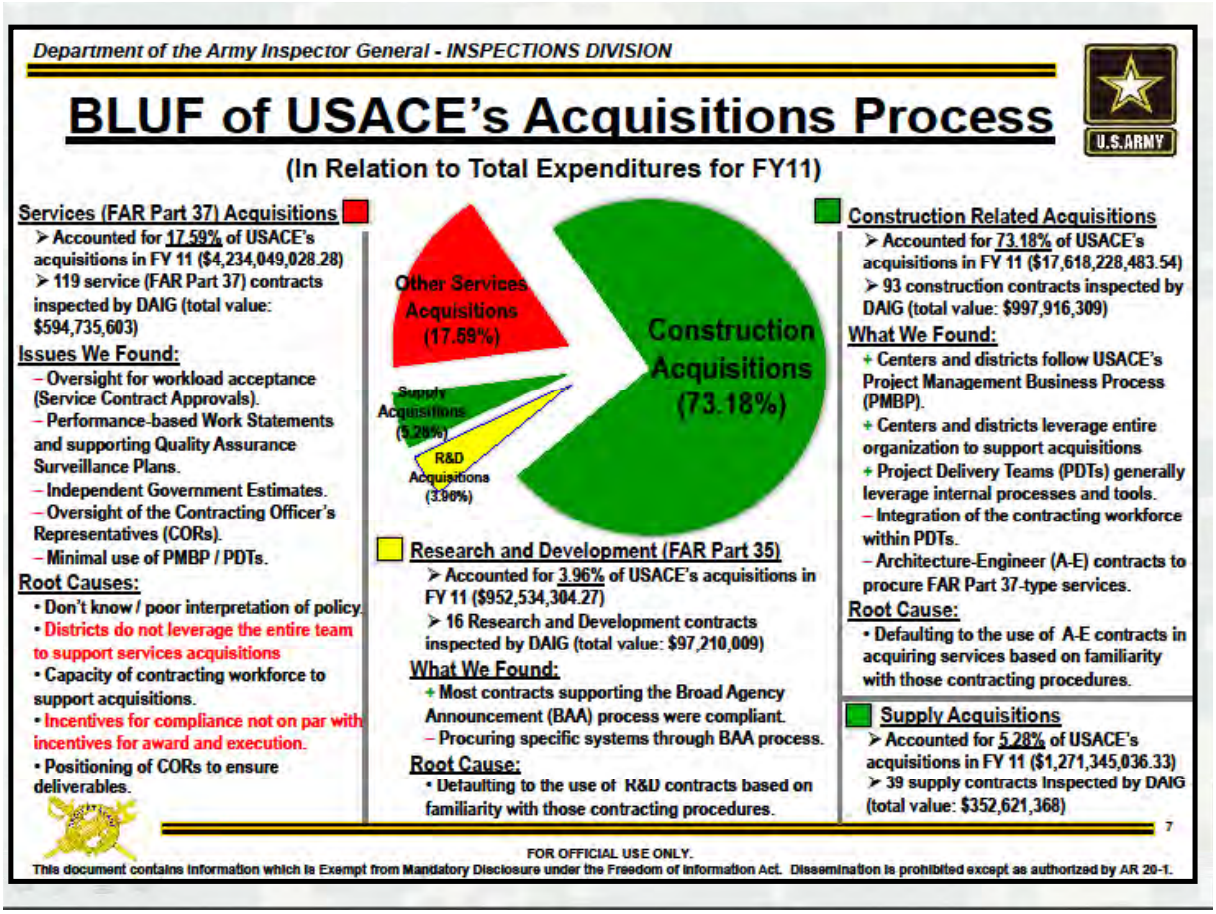


Strategic Approaches

- Educated, Experienced, & Competent Acquisition Professionals
- Deliberate Growth and Balance of our Acquisition Workforce
- Improve Buying Power Through Innovative Business Arrangements
- Leverage Existing Business Arrangements

End State

- Seamless Acquisition Support to USACE Mission
- Acquisition at USACE is a Gold Standard
- Agile and Adaptive Acquisition Workforce

Responsive and Responsible

USACE Acquisition Environment - 2020

Acquisition is an Enabler…
Not a Disabler

USACE Office of 2020 Challenges

Robert V. Kazimer
Director, Corporate Information

13 September 2012

Leaders Emeritus Meeting
Washington, DC

US Army Corps of Engineers
BUILDING STRONG®

The USACE Office of 2020

2020 is not as far away as it used to be.

Provide Enterprise IT Solutions and Aligning to the CG Priorities

CECI's vision for IM/IT is to be a lean, agile **workforce** of highly disciplined professionals using logical thought and action to deliver **innovative and sustainable** information resource and technology **solutions** that enable USACE **business processes**.

This vision aligns with the 53rd Chief of Engineers' priorities of building strong people and teams, and improving USACE Business processes to ensure enterprise success.

The Challenges to Reach the USACE Office of 2020

- Instant, reliable connectivity
- Unified communications
- Seamless security
- High powered computing
- Self monitoring / self healing systems
- Effortless collaboration
- Standardized IT solutions
- New technology is growing exponentially and is changing the way we communicate

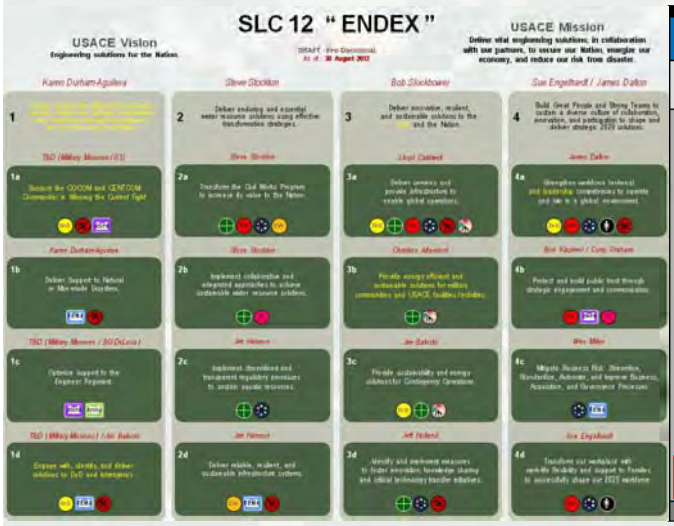
USACE 2020 Synchronization

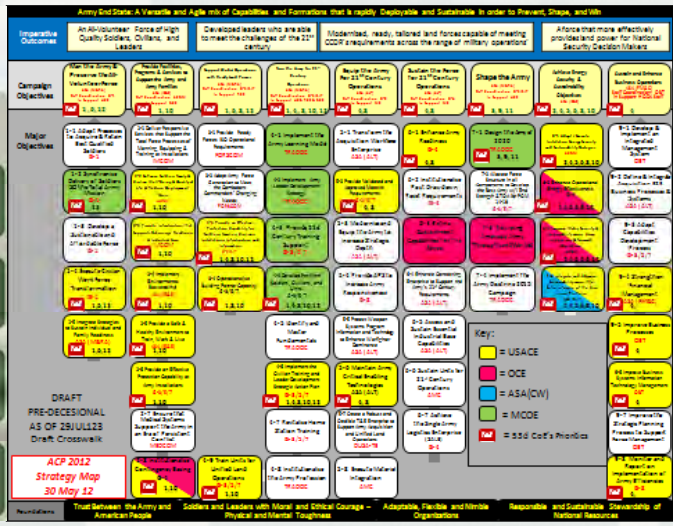
MG Todd Semonite

Deputy Chief of Engineers
Deputy Commanding General USACE

US Army Corps of Engineers
BUILDING STRONG®

Chief of Engineers' Priorities – Mapped to ACP and UCP

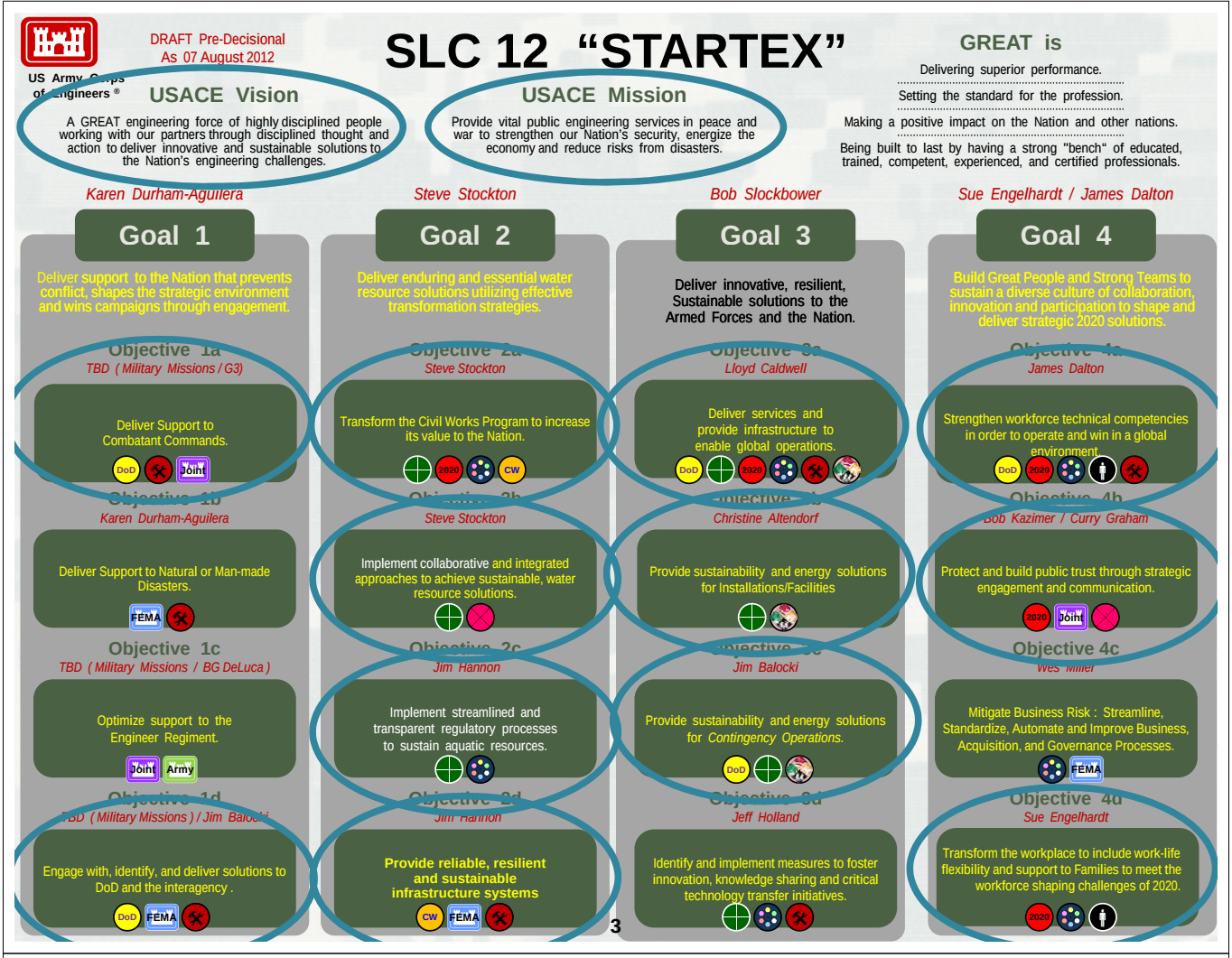




- DoD — Support the COCOM and CENTCOM Commander in Winning the Current Fight
- Support the Army and Nation in Achieving Energy Security and Sustainability Goals
- 2020 — Develop USACE 2020
- Streamline USACE Business and Governance Processes
- CW — Transform Civil Works to Deliver the Best Possible Products and Services to the Nation
- Build Strong ... People and Teams Through leader development and talent management

DRAFT
PRE-DECESIONAL
AS OF 07AUG12

- FEMA — Enhance Our Interagency Disaster Response and Recovery Capability
- Ensure critical enabling technologies
- Joint — Strengthen and Further Teamwork in the Joint Engineer Force in Support of Joint Force 2020
- Partner w/ IMCOM to Deliver and Maintain Enduring Installations and Contingency Basing
- Build Strategic Engagements with all Customers and Teammates
- Army — Support the Engineer Regiment



SLC Break-outs: USACE *Vision*

Current : **A GREAT engineering force of highly disciplined people working with our partners through disciplined thought and action to deliver innovative and sustainable solutions to the Nation's engineering challenges.**

Suggestion 1 : **A GREAT engineering force of highly skilled people working with our partners through disciplined thought and action to deliver innovative and sustainable solutions to the Nation's ~~engineering~~ challenges.**

Suggestion 2 : **A GREAT engineering force collaborating ~~of highly disciplined people working with our partners (teammates) through disciplined thought and action~~ to deliver innovative and sustainable solutions to the Nation. ~~'s engineering challenges.~~**

Suggestion 3 : **Your public engineer partner of choice.**

Suggestion 4 : **To become your public engineer partner of choice.**

Suggestion 5 : **Engineering solutions for our Nation.**

Suggestion 6 : **Engineering the future.**

SLC Break-outs: USACE *Mission*

Current : **Provide vital public engineering services in peace and war to strengthen our Nation's security, energize the economy, and reduce risks from disasters.**

Suggestion 1 : **Provide vital public engineering ~~services~~ solutions in peace and war to strengthen our Nation's security, energize the economy, and reduce risks from disasters.**

Suggestion 2 : **~~Provide~~ Deliver vital public and military engineering solutions, partnering in peace and war, to strengthen our Nation's security, energize the economy, and reduce risks from disasters.**

Recommended USACE *Vision*

Engineering solutions for the Nation.

Domestic and International / More externally focused / Shorter / Double Entendre: "Engineering" (adjective and verb)

Current : **A GREAT engineering force of highly disciplined people working with our partners through disciplined thought and action to deliver innovative and sustainable solutions to the Nation's engineering challenges.**

Recommended USACE *Mission*

Deliver vital engineering solutions, in collaboration with our partners, to secure our Nation, energize our economy, and reduce our risk from disaster.

Minor change to existing / "Deliver" stronger than "Provide" / "Solutions" stronger than "Services" / Recognizes "military" solutions

Current : **Provide vital public engineering services in peace and war to strengthen our Nation's security, energize the economy, and reduce risks from disasters.**

SLC 12 " ENDEX "

DRAFT Pre-Decisional
As of : 30 August 2012

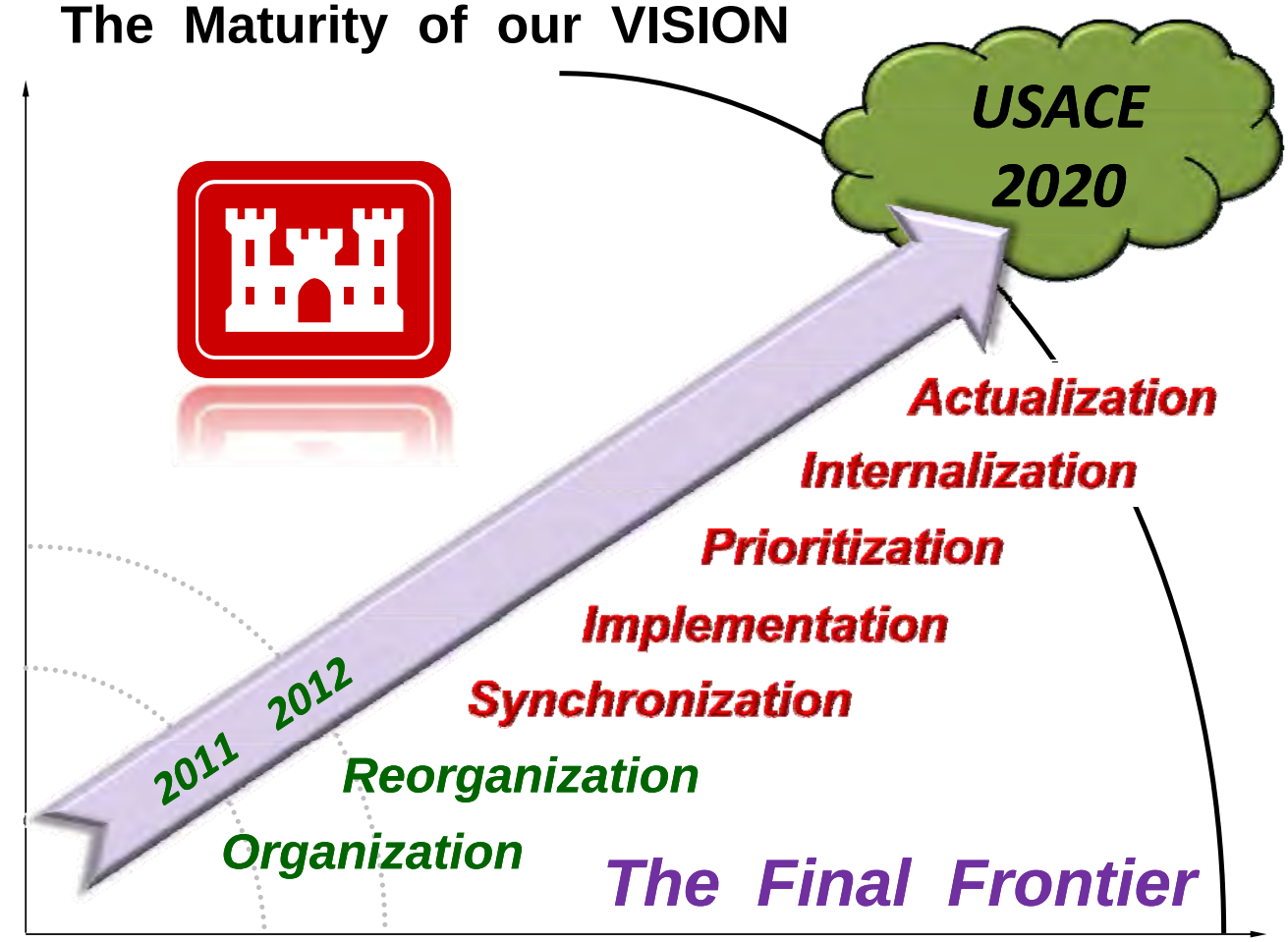
USACE Vision
Engineering solutions for the Nation.

USACE Mission
Deliver vital engineering solutions, in collaboration with our partners, to secure our Nation, energize our economy, and reduce our risk from disaster.

- Support the COCOM and CENTCOM Commander in Winning the Current Fight
- Support the Army and Nation in Achieving Energy Security and Sustainability Goals
- Develop USACE 2020
- Streamline USACE Business and Governance Processes
- Transform Civil Works to Deliver the Best Possible Products and Services to the Nation
- Build Strong ... People and Teams Through leader development and talent management
- Enhance Our Interagency Disaster Response and Recovery Capability
- Ensure critical enabling technologies
- Strengthen and Further Teamwork in the Joint Engineer Force in Support of Joint Force 2020
- Partner w/ IMCOM to Deliver and Maintain Enduring Installations and Contingency Basing
- Build Strategic Engagements with all Customers and Teammates
- Support the Engineer Regiment

Karen Durham-Aguilera	*Steve Stockton*	*Bob Slockbower*	*Sue Engelhardt / James Dalton*
1 Deliver support the Nation that prevents conflict, shapes the strategic environment, wins campaigns through engagement, and is responsive to disasters.	**2** Deliver enduring and essential water resource solutions using effective transformation strategies.	**3** Deliver innovative, resilient, and sustainable solutions to the DoD and the Nation.	**4** Build Great People and Strong Teams to sustain a diverse culture of collaboration, innovation, and participation to shape and deliver strategic 2020 solutions.
TBD (Military Missions / G3)	*Steve Stockton*	*Lloyd Caldwell*	*James Dalton*
1a Support the COCOM and CENTCOM Commander in Winning the Current Fight	**2a** Transform the Civil Works Program to increase its value to the Nation.	**3a** Deliver services and provide infrastructure to enable global operations.	**4a** Strengthen workforce technical and leadership competencies to operate and win in a global environment.
Karen Durham-Aguilera	*Steve Stockton*	*Christine Altendorf*	*Bob Kazimer / Curry Graham*
1b Deliver Support to Natural or Man-made Disasters.	**2b** Implement collaborative and integrated approaches to achieve sustainable water resource solutions.	**3b** Provide energy efficient and sustainable solutions for military communities and USACE facilities / activities.	**4b** Protect and build public trust through strategic engagement and communication.
TBD (Military Missions / BG DeLuca)	*Jim Hannon*	*Jim Balocki*	*Wes Miller*
1c Optimize support to the Engineer Regiment.	**2c** Implement streamlined and transparent regulatory processes to sustain aquatic resources.	**3c** Provide sustainability and energy solutions for *Contingency Operations.*	**4c** Streamline USACE Business, Acquisition and Governance Processes
TBD (Military Missions) / Jim Balocki	*Jim Hannon*	*Jeff Holland*	*Sue Engelhardt*
1d Engage with, identify, and deliver solutions to DoD and Interagency.	**2d** Deliver reliable, resilient, and sustainable infrastructure systems	**3d** Identify and implement measures to foster innovation, knowledge sharing and critical technology transfer initiatives.	**4d** Transform our workplace with work-life flexibility and support to Families to successfully shape our 2020 workforce.

The Maturity of our VISION



USACE Campaign Plan (UCP) Road-Ahead

TIMELINE

6-10 August = SLC 12
(Outcome: Vision / Mission / UCP Objectives / Priorities / 5-Year Outcomes)

Weekly DCG IPR's (Ongoing)
(Outcome: Shape UCP)

NLT 30 September Initiate Monthly CG IPR's
(Outcome: Approve UCP)

USACE 2020 (draft)

24-27 September = BMDC Workshop
(outcome: Actions / Strategies / Metrics)

NLT October 2012 = Publish UCP 13

December 2012 = ULC / CMR
(Outcome: UCP Synch / Goals? / Focus)

USACE 2020 (Pub)

January 2013 = MSC IPLAN

June 2013 = Publish FY14 UCP

NLT 1 October 2013 = MSC's Publish IPLANS

The Washington Post
TUESDAY, AUGUST 20, 2020

USACE Reinvents Itself!! Sets New Vision for 2028

A New Vision for an All New USACE

The US Army Corps of Engineers has rework its Vision. The old vision of A GREAT engineering force of highly disciplined people working with our partners through disciplined thought and action to deliver innovative and sustainable solutions to the Nation's engineering challenges. The new vision is simply Engineering the Future.

With the new Vision comes a new mission statement for the organization: Provide vital public engineering services (solutions) in peace and war to strengthen our Nation's security, energize the economy and reduce risks from disasters.

The US Army Corps of Engineers has also set a new list of priorities for the organization. These 12 priorities will shape the future of the organization and guide the operational function of the divisions and districts. The twelve priorities are:
(1) Support the COCOM and CENTCOM Commander in Winning the Current Fight
(2) Support the Army and Nation in Achieving Energy Security and Sustainability Goals
(3) Develop USACE 2020
(4) Streamline USACE Business and Governance Processes
(5) Transform Civil Works to Deliver the Best Possible Products & Services to the Nation
(6) Build Strong … People and Teams Through leader development and talent management
(7) Enhance Our Interagency Disaster Response and Recovery Capability
(8) Ensure critical enabling technologies
(9) Strengthen and Further Teamwork in the Joint Engineer Force in Support of Joint Force 2020
(10) Partner with IMCOM at all Echelons to Deliver and Maintain Enduring Installations and Contingency Basing
(11) Build Strategic Engagements with all Customers and Teammates
(12) Support the Engineer Regiment

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As of 11 September 2012